

#3

#### **Partners Empowering Youth**

100 North Elm Street, 2nd Floor | Waterbury, CT 06702 phone 203,754.0040 | web WaterburyBridgetoSuccess.org

April, 2015

Dear Waterbury Child and Youth Advocate,

For far too long, community agencies across the state have worked in isolation to remediate social challenges affecting low-income communities. Despite the efforts of thousands of programs in Connecticut's cities and in Waterbury, many of the state's children are still not ready for kindergarten, reading well, or graduating on time from high school, obtaining post-secondary credentials or entering the workforce with a living wage. In response and as part of a national movement, the innovative cradle to career public-private Bridge to Success (BTS) Community Partnership was formed in 2009.

Today, more than 200 individuals from more than 85 public and private organizations are working alongside youth and their families to develop community solutions, and ensure Waterbury's most vulnerable citizens are ready for school and prepared for the career of their choice. By joining forces, we ensure the city's youth – from birth to 21 – have access to the quality education and environmental support they need to become responsible adults. Together, we are building a strong bridge to connect our youth to a brighter future.

This initial Community Report Card illustrates how schools, businesses, local public and private organizations, parents and the community work together to build the bridges to help Waterbury youth succeed in school, work and life.

You are cordially invited to a Community Forum on May 27<sup>th</sup> from 5:00-7:00 PM to review and discuss the data and help determine next steps. Please feel free to contact us with any questions or if you are interested in getting more involved with the BTS Community Partnership.

Sincerely Yours,

Christine S. Bianchi, MSW, LCSW

Chair, BTS Community Partnership

Lori Hart

**Executive Director, BTS Community Partnership** 





2015 Community Report Card

Waterbury youth succeed in school, work and life

WaterburyBTS.org

# It Takes a Partnership

The Bridge to Success (BTS) Community Partnership is the first "cradle to career" partnership in Connecticut. In 2009, Waterbury's local public and private organizations, families and volunteers concluded that improving the lives of the city's children and youth cannot be done easily, quickly, or with a few good programs; rather, it takes a community-wide commitment to make a significant difference. A cradle to career youth plan was implemented to assure that Waterbury's youth succeed. A partnership of parents, the office of the mayor, public schools, foundations, religious organizations, social service agencies, and others united to improve the lives of the city's most vulnerable children and their families. The partnership's common agenda is to assure that Waterbury's youth succeed in school, work and life.

#### **Parent Focus**

"I'm a dad. I have a personal interest in ensuring that what we do for the community is done right. What BTS is doing is right and will give kids the opportunity to succeed."



Dolton James describes the impact of BTS as the "elimination of duplicated efforts." He noted that in the past, "volunteers were working with a finite set of resources toward accomplishing the same goals, but without collaboration, therefore, literally wasting time and money."

**Dolton James, PhD**, Parent and past BTS Community Council chair



# **Aligning Partner Efforts**

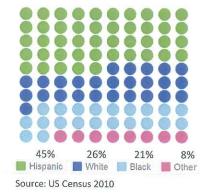
Dr. James notes that "funders want the best possible use for their donations. Aligning resources to people best suited for the work and known for their contributions and capabilities creates better results. Results are also now more accurately measured. Families receive more help, and have a stronger voice because of their partnership with BTS. Partners can describe cultural issues on a broad level and have established relationships with schools. This means that individual children, who may be struggling, do not fall through the cracks. Coordinating policies between schools and community partners creates a seamless transition so that, when children leave school, their learning continues in after-school programs, aligned with the same work they began at the start of the school day."

# Waterbury's Community Context

"In diversity there is beauty and there is strength"

-Dr. Maya Angelou

BTS partners are from diverse backgrounds, and the organizations they represent are diverse in their missions and scopes. All 85 partner organizations work together so that Waterbury's youth succeed. Waterbury has many economic and social challenges, as reflected in its unemployment rate of 9.3%, its poverty rate of 23%, and with 82% of children being low income\*. The partnership addresses these challenges and assures the city's youth succeed.



Waterbury population ages 0-18

\*Defined by eligibility for free and reduced lunch

# Our Partnership - 85 member organizations

- Acts 4 Ministry, Inc. All Our Kin, Inc.
- American Savings Foundation
- The Bible Church of Waterbury Boy Scouts of America – CT Rivers Council Boys & Girls Club of Greater Waterbury Brass City Charter School Brass City Harvest Bristol Hospital Parent & Child Center
- ◆ BW STOP
- Catholic Charities

Central Naugatuck Valley Regional Action Council

Children's Community School

Christ Community Church of Greater Waterbury

City of Waterbury - Bureau of Recreation

- City of Waterbury Department of Health
- City of Waterbury Office of the Mayor
- Community members
   Concepts for Adaptive Learning
- Connecticut Community Foundation CPEP

CT Dance Theater

- CT Junior Republic
   Department of Children & Families
- Easter Seals of Greater Waterbury
- Family & Children's Aid
   Family Services of Greater Waterbury
   Favor, Inc.
   Flanders Nature Center
- Girl Scouts of CT

Girls, Inc.

Governor's Prevention Partnership

Granville Academy

Greater Waterbury Autism Speaks

Greater Waterbury YMCA

Gtr Waterbury Area Alumnae Delta Sigma Theta

Hispanic Coalition of Greater Waterbury

Junior Achievement

KaMs Kiddie Korner

Kids Against Hunger Waterbury

KidsTown

The Leever Foundation

Literacy Volunteers of Greater Waterbury

Living Faith Christian Church

Loyola Development Corporation

Madre Latina

Mattatuck Museum

Naugatuck Valley Community College

Neighborhood Housing Services of

Waterbury

New Opportunities, Inc.

Northwest Regional Workforce

Investment Board

Northwestern CT AHEC

Nutmeg Big Brothers Big Sisters

Palace Theater

- Parents
  - Planned Parenthood of CT
- Rainbow Academy LLC Rivera Memorial Foundation Safe Haven of Greater Waterbury

- Saint Mary's Health System Save Girls on F.Y.E.R. Inc. Shakesperience Productions, Inc. Shop-Rite Silas Bronson Library
- StayWell Health Care, Inc.
   Stone Academy
   Taking Action in Waterbury
   Together We Shine
- UConn

The Ungroup Society

- United Way of Greater Waterbury Unity Dance Ensemble
- Waterbury Hospital
   Waterbury PAL
- Waterbury Public Schools
   Waterbury Public Schools Career Academy
   Waterbury Public Schools Kingsbury School
- Waterbury Public Schools Wilson Family Resource Center

Waterbury Regional Chamber of Commerce

- Waterbury School Readiness Council Waterbury Symphony Orchestra - Bravo Waterbury!
- Waterbury Youth Council
- Waterbury Youth Service System, Inc.
- Webster Bank

Wellmore Behavioral Health

- WOIC & Young Civic Learners Women's Inspirational Network Workplace Success Group, LLC
- Designates partners who serve as members of the BTS Community Council providing vision and strategic direction. Community Council seats are advertised to the public and elections are held to fill terms of 1-3 years.

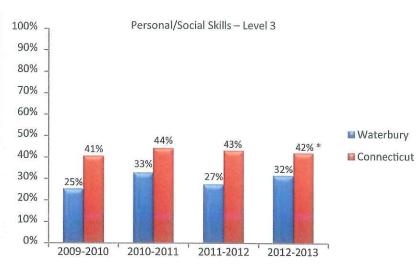
# **Community Indicators**

Community partners have agreed to monitor five indicators of child and youth success. These indicators are similar to those of cradle to career communities across the country. The following pages show each indicator, illustrate programs and services our community partners provide, and introduce you to some of our community leaders.

# Indicator 1: Personal/Social Skills (Level 3)

#### Early Learning & Development

# INDICATOR: 32% of Waterbury's kindergarten students scored at the highest level on personal/ social skills in 2012 • Students who score high on personal/social skills are more likely to play and work well with other children, resolve conflicts peacefully, and follow classroom routines



Data Source: CT Department of Education – CT Education Data and Research (CEDaR)

\*State data for 2012-2013 – preliminary data is included. The Kindergarten Inventory is administered during the fall of each school year.

# **Partner Story**

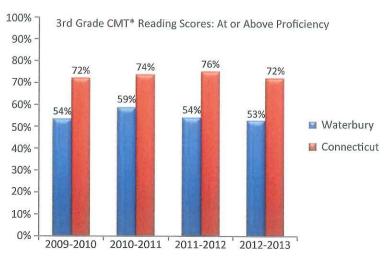
Many BTS partners, like The Rainbow Academy, "help preschoolers transition from home to school, fostering the social skills necessary to move from being the center of their parents' attention to being a member of a peer community. Small classes with plenty of attention from professional teachers and volunteers, such as foster grand-parents, are integral to giving the children the attention they need while they develop empathy for fellow students. Parents are encouraged to help in classroom activities and chaperone field trips, where they see their children learn to interact cooperatively and reinforce positive behavior at home." The importance of early education is evident when students leave quality early education sites and bring good self-esteem and a positive attitude to their next level of education, kindergarten.



Barbara P. Jones, Rainbow Academy and a member of the BTS Community Council

Indicator 2: Third grade CMT Reading Scores

**Early Literacy** 



Data Source: CT Department of Education - CEDaR

\*CMT = Connecticut Mastery Test. This test was the standard state-wide assessment administered to students in grades 3-8 through 2013. BTS will select a replacement to assess 3rd grade reading scores.

INDICATOR: Percentage of children in grade 3 at or above proficiency on the reading portion of the Connecticut Mastery Test (CMT)

 Early reading proficiency is a cornerstone of school success; children need to read well so they can learn and master other academic areas

# **Partner Story**



Julissa Crespo, Waterbury Public Schools and chair of the BTS Early Care & Education workgroup

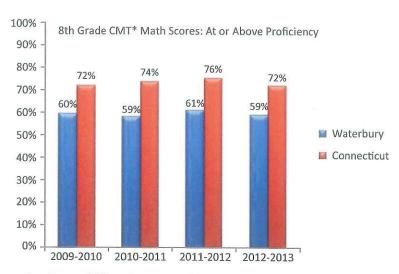
Reading at, or above, proficiency in third grade is one of the most important predictors of school success, but every year a large percentage of children miss this crucial milestone. It's important to start early with our pre-K students, teaching them the basics of reading from the very start, so they are reading at grade level by third grade. To encourage early literacy skills, early education providers ask open-ended questions to encourage vocabulary development, use descriptive language and show children words that are printed on business and street signs, billboards, and other places in addition to books. "We support parents in helping improve their children's reading skills by hosting family literacy nights and maintaining a continuous dialogue. Early education partners hosted a book fair at a local bookseller, where members of the community volunteered to read to families and participate in activities throughout the weekend. This event was an effective way to engage parents and deliver the message of how important it is to read to their children. Parents saw first-hand how fun and easy it can be to open a book and spend time reading, every day, with their children."



# Indicator 3: Eighth Grade CMT Math Scores

# **Academic Success through Youth Development**

# INDICATOR: The percentage of children in grade 8 who have scored at or above proficiency on the math portion of the CMT • Higher academic performance in 8th grade math helps to ensure that students are prepared for more advanced math courses in high school and graduate on time



Data Source: CT State Department of Education - CEDaR

\*CMT = Connecticut Mastery Test. This test was the standard state-wide assessment administered to students in Grades 3-8 through 2013. BTS will select a replacement to assess middle school success.

# **Partner Story**

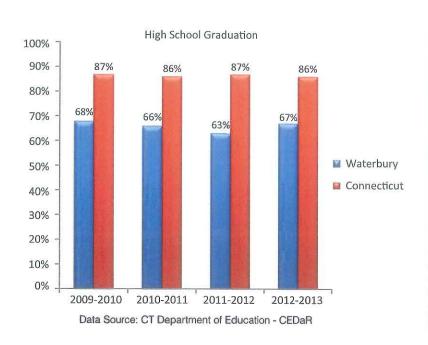
Manny Martinez explains, "Our Power Hour program is designed to improve youth study skills, especially in the area of math. The program features fun-with-a-purpose activities such as brainteasers and math problems that incorporate a Science, Technology, Engineering and Math (STEM) component. Before they actually produce an object on the 3D printer, they use different disciplines such as science and engineering, to understand the work behind printing something like a checker piece that children can later use in the game room. Older students get a boost of self-confidence when helping younger students." Parents are invited to volunteer in the program and participate in special events, such as attending a speaker series in which local principals describe why homework is an important ingredient in learning, and how they can partner with the teachers to help their children succeed.



Manny Martinez, Boys and Girls Club of Greater Waterbury and vice chair of the BTS Positive Youth Development workgroup

# **Indicator 4: High School Graduation Rates**

Youth Development



# INDICATOR: The percentage of youth who graduate from high school four years after entering grade 9 Children who graduate from high school are more likely to continue their education and be employed

# **Partner Story**



Junior Republic and chair of the BTS Positive Youth Development workgroup

Dave Burgos, believes that "Success always follows education" and that "homework assistance, college tours, development of college portfolios, and participation in programs to improve communication, coping and problem solving skills help discourage risky behavior and promote high school completion. Students talk about and explore career options in a job club and discover work readiness skills and employment opportunities in the summer, finding new possibilities in hands on lessons." The question. "What am I going to do when I leave high school?" is not just about job, but also relationship goals. "Youth develop a sense of hope and purpose, modeling what it is David Burgos, Connecticut like to be a good friend, sibling, parent, or spouse, and changing negative cycles. Building self-esteem and resilience helps them aspire to a bright future and make the right decisions to achieve their dreams."

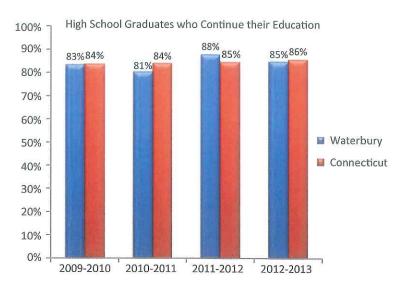


# **Indicator 5: Secondary School Education**

#### Job and Career Readiness

INDICATOR: Percentage of Waterbury public school students who graduate from high school and report plans to continue their education

 Students who move on to post-secondary education are more likely to be employed and become productive members of society



Data Source: CT State Department of Education - CEDaR

# **Partner Story**

Cathy Awwad notes "Children and youth who participate in our program develop a new vision of their futures, changing their perceptions about what it means to have a job. The program exposes the children to a variety of jobs available in every industry sector. Students may be aware that doctors and nurses work in a hospital, but we demonstrate that these facilities are miniature cities, and people work there as pharmacy technicians, respiratory therapists, drug and alcohol counselors, IT staff, bookkeepers, maintenance personnel, and much more."



Catherine Awwad, Northwest Regional Workforce Investment Board and chair of the BTS Workforce Development workgroup

"Educational opportunities promote a sense of possibility, describing options ranging from a four-year degree to an apprenticeship, to encourage the children to think of education as a life-long and worthwhile pursuit. Through discussion with staff, and the ability to meet local business owners and manufacturers, students find work more appealing as they broaden their impression of what it means to show up at a job every day. They also develop a sense of what it means to offer an employer soft skills such as punctuality and dependability. Most importantly, students develop a real sense that they can receive a paycheck in exchange for doing something they enjoy. They realize they can feel proud and excited about their futures."

# **Strategies: Best Practices**

BTS embraces best practices. The Partnership has tailored, customized and adopted best practices from each of these national and local initiatives to assure Waterbury's youth succeed in school, work and life.



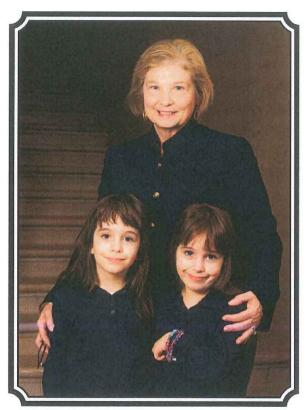
\* Waterbury was the first cradle to career partnership in Connecticut, and the first to earn StriveTogether Emerging Community status

Working together, Waterbury BTS partners coordinate services and resources to maximize outcomes. Eighty-five local public and private organizations representing over 200 individuals now partner on the following strategies:

- 1. Promoting grade-level reading
- 2. Promoting positive youth assets and development
- 3. Supporting parents/caregivers as their child's first teacher
- 4. Promoting exposure and access to post-secondary education and careers

Selected local strategies are outlined on the following pages.

FACT: Attendance matters from the first day of school until the last day. Students who are chronically absent are less likely to succeed in school.



Anne Marie Cullinan, Waterbury Public Schools and member of the BTS Community Council with Lena and Layla Maghfour, students who attend Carrington Elementary School

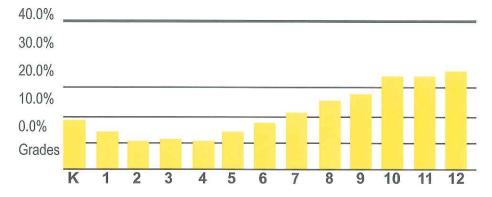
# **Strategy: Attendance Matters**

The schools can't do it alone. The schools and the community are working in a partnership, side by side, to increase school attendance:

- Community organizations and programs like Gear Up, Restorative Justice, and the Truancy Clinic reinforce the high value of school attendance and focus on finding solutions for children, youth and families
- English, Spanish and Albanian School Success Pledge Cards encourage families to encourage reading and school attendance
- School leaders set measurable goals to reduce chronic absenteeism
- Data dashboards are used for up-to-the-minute data reporting on students
- · Students receive positive group rewards in classes with the best attendance
- Full-time social workers in all schools visit homes to help families cope with and develop solutions to attendance barriers
- Attendance is tracked and displayed in school lobbies and reviewed by schools and the community to help determine action
- Waterbury Public Schools' Positive Behavioral Interventions and Supports (PBIS) rewards good things kids do each day at school, like helping a fellow student tie his shoes, or listening politely to instructions



#### Chronic Absenteeism by Grade: 2013-14



Data Source: Waterbury Public Schools

# When do Absences Become a Problem?

When Do Absences Become a Problem?

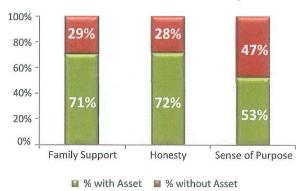


Note: These numbers assume a 180-day school year. Graphics created by Attendance Works

# Strategy: Building Child and Youth Assets

The 40 Developmental Assets\* are "developmental vitamins" or positive experiences and qualities that help to ensure youth become healthy adults. BTS monitors the 40 Developmental Assets that Waterbury's youth possess, and discusses those results with community partners. The graphs below show the percentage of youth who possess each of the seven priority Developmental Assets that the city's youth identified as areas of strength, and opportunities for improvement.

#### **Youth Identified Asset Strengths**



#### Youth Identified Opportunities

**Safety:** Young person feels safe at home, school, and the neighborhood.

**Self-esteem:** Young person reports having high self-esteem.

**Restraint:** Young person believes it is important to avoid sexual activity, alcohol and other drugs.

**Adult role models:** Parent(s) and other adults model positive, responsible behavior.

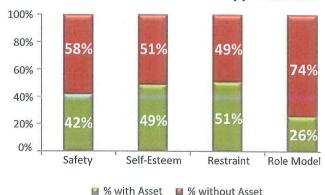
#### Youth Identified Strengths

**Family Support:** Family life provides high levels of love and support.

**Honesty:** Young person tells the truth even when it is not easy.

**Sense of Purpose:** Young person reports that "my life has a purpose."

#### **Youth Identified Asset Opportunities**



Data Source: Profiles of Student Life: Attitudes and Behaviors administered in 2013

\*The 40 Developmental Assets framework was developed by the Search Institue - www.search-institute.org



Glenis Vialva, Waterbury Youth Service System and BTS Positive Youth Development workgroup partner

# **Partner Story**

Glenis Vialva, notes that after school programs like Linking Academics to Life "offer a diverse set of skills that build assets in middle and high school children. Before visiting the state capital, students prepare, then debate the selected topic in small breakout sessions in Hartford, and finally present their opinions to legislators. Elected officials reported that this feedback was instrumental in influencing how they voted on new legislation. Students feel a sense of purpose and know their input counts. They are invited to participate on youth councils and city focus groups to share their point of view and participate in moving community efforts forward."

# Strategy: Addressing Disparities

# Taking a closer look

Identifying disparities in community indicators and measures can help to identify vulnerable students and guide community and school interventions to be more strategic.

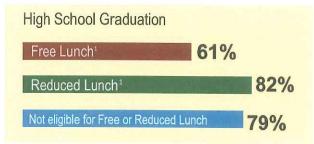
#### **Gender Disparity**

In 2013, a higher percent of girls were at or above proficiency on the 3rd grade CMT.

# 3rd Grade Reading Female 55% Male 50%

#### **Economic Disparity**

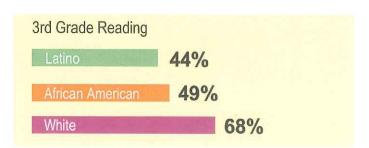
In 2013 students qualifying for free lunch were least likely to graduate from high school within four years.



<sup>&</sup>lt;sup>1</sup> Free Lunch: annual income <\$26k for a family of 3 Reduced Lunch: annual income <37k for a family of 3

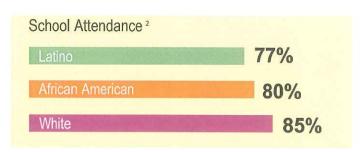
#### Racial/Ethnic Disparity

In 2013 a lower percentage of Latino and African American students reached proficiency on the reading portion of the 3rd grade CMT, graduated from high school within four years, and attended school regularly.





**High School Graduation** 



<sup>&</sup>lt;sup>2</sup> School attendance indicates the percent of students who attended school regularly and were not chronically absent (missing 18 or more days of school).



60%

# Parents and Youth in Action



Ivette Melendez, Waterbury Youth Council and member of the BTS Community Council

Volunteering for the BTS youth council while in high school, Ivette had the opportunity to evaluate projects for grants, and see how results make a difference in the community, especially in the areas of guiding and acting as adult role models, improving self-esteem, and resolving conflict peacefully. She commented, "The 40 Developmental Assets are important because they build a person's character."

"I am proud to have a voice in making things better for Waterbury's youth."

"It is critical that BTS and its partners demonstrate and reinforce positive youth development. Extracurricular activities include painting or playing a musical instrument, but participants can learn more than artistic techniques, they can gain confidence and the language to say no to drugs, or how to make new friends. Learning how to look another person in the eye, or speak to more than one person at once, is critical. We need a way to teach kids how to have conversations, avoiding negative results like fights and suspensions."

Parent Rubis Collado is enthusiastic about BTS and its programs because she has seen a change in her community.

"Parents are more engaged and there are more resources to help those trying to raise children in these challenging times. BTS is helping me so much to grow as a parent, citizen, mom, and professional."

As a parent liaison, Rubis has seen the lines between school and home blur as members of the community attend evening events to celebrate literacy or culture. She feels that BTS has empowered the community, creating opportunities like book fairs and forums where she and others can find mentors and share information.

"The Bridge to Success Community Partnership is like a dream come true."

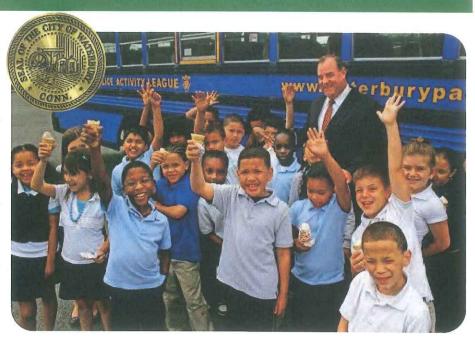
She said that "Hope has replaced frustration, by developing volunteers and creating unity in the community, because a small group of people is much more powerful than one person trying to do everything for everyone. Everyone has different gifts and resources. When we hold hands together, it's amazing what we can do."



Rubis Collado, Career Academy parent liaison and parent

"Waterbury's Bridge to Success (BTS) Community Partnership is to be commended for keeping the focus on the City's children and youth - our future citizens. My office is an advocate for youth-empowerment and community - focused initiatives. This public/private BTS Partnership is one of Waterbury's nationally-recognized assets focusing on assuring the City's youth succeed in school, work and life. Together, we are building a strong bridge to connect our youth to a brighter future."







"The Waterbury Public School system is pleased to be a BTS Community Partner. The Waterbury Blueprint for Change — Moving Forward for Student Success, details the strategies and action steps to improve teaching and learning in the Waterbury schools. The Blueprint for Change was developed with input from all segments of the community, and was designed to assure that Waterbury children and youth receive a quality education that prepares them to be successful in graduating from high school, and in meeting the challenges ahead in the colleges or careers of their choice. BTS supports the full implementation of the Blueprint for Change. Through the BTS Community Council and BTS Work Groups, families are encouraged to continue to work closely with the schools and community. And, by joining forces, we ensure the City's youth, from cradle-to-career, have access to the quality healthcare, education and support they need to become successful adults."

Dr. Kathleen M. Ouellette, superintendent of Waterbury Public Schools





# How Can You Take Action?

Subscribe to the BTS Weekly Newsletter: call (203) 754-0040 or email: info@WaterburyBTS.org, or visit our website: www.WaterburyBTS.org

#### Youth

- Find your voice and be heard for what you believe in
- Join a youth group
- Participate in after school activities
- Mentor or refer other young people who need help



#### **Parents / Caregivers**

- Be an active participant in your child's learning
- Read to and with your children
- Make sure your children attend school every day
- Be positive when communicating to your children
- Have conversations with children and youth, and ask about their day
- Encourage your children to graduate from high school, dream big and strive to go to college

#### **Community Members**

- Learn about the 40 Developmental Assets and help nurture children in your neighborhood, place of worship
- Encourage children and youth to attend school every day
- · Sign up to be a mentor
- Encourage youth to be involved in community activities and organizations

#### Teachers

- Learn about the 40 Developmental Assets
- · Nurture the children and youth in your class
- Encourage healthy nutrition and physical activity in and out of the classroom
- Develop and tie activities to literacy
- Encourage your students to graduate from high school, dream big and strive to go to college

#### **Community Organizations**

- Become a BTS partner
- Join a workgroup
- Forward the BTS weekly newsletter to your staff and colleagues

### Faith Community Encourage children to

- Encourage children to attend school every day
- Encourage parents and children to read together

#### **Philanthropic Organizations**

- Become a BTS partner
- Support BTS backbone operations
- Support BTS partner organizations

#### More resources may be found on these websites:

www.bornlearning.org www.reachoutandread.org www.readtogrow.org www.rif.org www.attendanceworks.org www.search-institute.org www.abc-of-fitness.com www.waterburybridgetosuccess.org

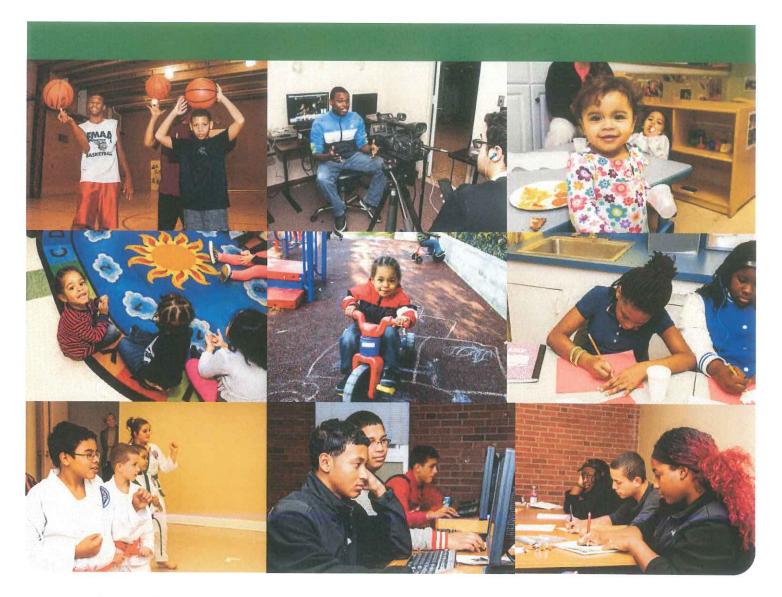


Contact Us:

Phone: (203) 754-0040

Email: info@WaterburyBTS.org

Web: WaterburyBTS.org



# Thank You to Our Generous Funding Partners

who understand it takes a partnership to assure Waterbury's youth succeed in school, work and life.

American Savings Foundation

Corrine G. Levin Fund

Connecticut State Department of Education

Connecticut Community Foundation

Connecticut Community Foundation Women's Fund

Children's Fund of Connecticut

Easter Seals of Greater Waterbury

Federal Home Loan Bank of Boston

Friends of BTS

Grossman Family Foundation

Ion Bank Foundation

Leever Foundation

Office of the Mayor and City of Waterbury

Parents and other community members

StayWell Health Center

Thomaston Savings Bank Foundation

United Way of Greater Waterbury

Watertown Foundation

Wellmore Behavioral Health - ChildFIRST

William Caspar Graustein Memorial Fund

Phone: (203) 754-0040 • Email: info@WaterburyBTS.org • Web: WaterburyBTS.org



Waterbury Bridge to Success Community Partnership



@WaterburyBTS



The Tobacco Research in Youth Group at Yale University School of Medicine is conducting a study to understand perceptions about modified risk tobacco products in adolescents. This study will use a brief anonymous survey administered at your child's school one day this spring during

Brief anonymous surveys will be administered at your child's school. The purpose of the survey will be to assess use of, and beliefs about, the risks and harms of current and new modified risk tobacco products (e.g. e-cigarettes, hookah, etc.), effective messages conveying risk information regarding current and new tobacco products, the impact of tobacco industry marketing practices on tobacco use behaviors, and marketing channels used to seek and communicate information about tobacco and health issues. We will also ask some questions about use of alcohol and marijuana. Students may choose to participate in this survey regardless of whether or not they use tobacco, alcohol or marijuana.

We will make every effort to insure your child's confidentiality. This survey is anonymous, and we will not be collecting your child's name anywhere on the survey. We will not share any information from the survey with either school personnel or you. We will not collect any information from your child that will make it possible to trace his/her responses back to him/her.

There are minimal risks/inconveniences associated with participation and your child can choose not to participate in the survey. Those children who do not want to participate can read or study during survey administration. If the research team believes that continuing in the study would be harmful to your child's physical or mental health, they will end your child's participation in the study.

If you do not want your child to participate, please call Dr. Dana Cavallo of Yale University at 203-974-7607 by \_\_\_\_\_\_. If we don't hear back from you by this time, we will assume that your child has permission to participate.

If you have any questions about the study, please contact:

Dana Cavallo, Ph.D. (Project Director)

Suchitra Krishnan-Sarin, Ph.D. (Principal Investigator)

203-974-7607

203-974-7595

(HIC# 1207010580)

For Office Use Only							
	and the same						3

We are trying to learn about tobacco use. Please complete this survey even if you do not use any tobacco products.

This survey is being conducted as part of a research study at Yale University. This survey is completely voluntary, and if you do not wish to participate you may turn in a blank survey. Whether or not you choose to participate in the survey will have no effect on your grades, or your relationship with your teachers or school.

# In order to protect your confidentiality, please do not put your name anywhere on this form.

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Please fill in the bubble next to the FIRST LETTER of your	(	ЭС	ΟJ	00	0	X
middle name. (Fill an "X" in if you do not have a middle	(	O C	ОК	O F	₹ 0	Υ
name)	(	ЭE	ΟL	0.8	0	Z
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	ž.	) G	ON	O L	)	
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Please fill in the bubble next to the <b>SECOND</b> LETTER of your		) C	ΟJ	00		
last name. (For example, if your last name is Smith, fill in "M")	(	O C	ОК	O F	( O	Y
	(	ЭE	OL	O S	0	Z
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	(	) G	ON	ΟL	J	
	O 1	07	, o	13	O 19	O 25
	O 2	0.8	3 0		O 20	O 26
	O 3	0.9	0	15	O 21	O 27
	O 4	0 1	10 O	16	O 22	O 28
November 25th, fill in "25")	O 5	O 1	11 0	17	O 23	O 29
	O 6	0 1	12 O	18	O 24	O 30
	O31					

	Page 2 of 12			
1. How old are you? years old	10. Does one or more of your parents smoke cigarettes?			
2. What grade are you in now? O 6th grade O 10th grade O 7th grade O 11th grade O 8th grade O 12th grade O 9th grade	O No O Yes, both of my parents smoke cigarettes O Yes, but only my mom O Yes, but only my dad O Other:			
3. What is your sex?  O Male O Female	11. How would your mother react if you smoked a cigarette?			
4. How would you describe yourself? (Select all that apply)  ☐ White (Caucasian) ☐ Black or African American	O Strongly disapprove O Disapprove O Neither disapprove nor approve O Approve O Strongly approve  12. How would your father react if you smoked a cigarette? O Strongly disapprove O Disapprove O Neither disapprove nor approve O Approve O Strongly approve			
<ul> <li>☐ Hispanic/Latino</li> <li>☐ Asian</li> <li>☐ American Indian or Alaska Native</li> <li>☐ Native Hawaiian or other Pacific Islander</li> <li>☐ Middle Eastern</li> <li>☐ Other</li> </ul>				
5. Does your family own a car, van or truck?  O No O Yes, one O Yes, two or more				
6. Do you have your own bedroom for yourself?  O No O Yes	13. Have you ever tried a cigarette, even just 1 or 2 puffs?  O Yes O No			
7. During the past 12 months, how many times did you travel away on a vacation with your family?  O Not at all O Twice O Once O More than twice	How old were you when you first tried a cigarette, even just 1 or 2 puffs?  years old  O I never smoked even just 1 or 2 puffs			
8. How many laptops/computers does your family own?	15. Have you smoked at least 100 cigarettes in your lifetime?			
O None O Two O One O More than two	O Yes O No  16. Which of the following describes how you think of			
9. Are you eligible for the free lunch program at your school?  O No O Yes O I don't know	yourself? O Nonsmoker O Smoker O Social Smoker O Social Smoker O Someone who tried smoking			

17. If one of your best friends offered you a cigarette, would you smoke it?	23. What type of cigarettes did you smoke in the <u>past</u> 30 days?
O Definitely not O Probably yes	O I did not smoke in the past 30 days
O Probably not O Definitely yes	O Menthol cigarettes
	O Regular cigarettes
18. How many of your friends smoke cigarettes?  O None  O Most	O Both menthol and regular cigarettes
O A few O All	O I don't know
O Some	24. If menthol cigarettes did not exist, would you still smoke cigarettes?
19. How would your friends react if you smoked a	O I do not smoke
cigarette?	O Yes
O Strongly disapprove	O No
O Disapprove	
O Neither disapprove nor approve	
O Approve	
O Strongly approve	
20. Do you think that in the future you might experiment with cigarettes?	
O Definitely not O Probably yes	
O Probably not O Definitely yes	
21. During the <u>past 30 days</u> , on how many days did you smoke a cigarette (even just 1 or 2 puffs)?	
O None O 6-10 days	
O 1 day O 11-20 days	
O 2 days  O 21-28 days	
O 3-5 days O Every day	
O 3-3 days O Every day	
22. When you smoked in the <u>past 30 days</u> , how many cigarettes did you smoke per day?	
O I did not smoke in the past 30 days	
O Less than one cigarette per day	
O 1 to 5 cigarettes per day	
O 6 to 9 cigarettes per day	
O About 1/2 a pack per day	
O About 1 pack per day	
O About 1 and 1/2 packs per day	
O Two packs or more per day	
p p	

E-cigarettes are battery-powered and produce vapor instead of smoke. There are many types of e-cigarettes. E-cigarettes can be bought as one-time, disposable products, or can be bought as re-usable kits with a cartridge. These cartridges come in many different flavors and nicotine concentrations. Some people refill their own cartridges with "juice," sometimes called "e-juice	
Cigarillos and filtered cigars are smaller than traditional cigars. Some are the same size as cigarettes, and some come with plastic or wood tips	
Traditional cigars contain tightly rolled cured tobacco that is wrapped in a tobacco leaf.	
Smokeless tobacco is commercially available in foil packets/sachets and tins. It is consumed by placing a pinch of the mixture in the mouth between the gum and cheek and gently sucking and chewing. The excess saliva produced by chewing may be swallowed or spit out.	
Hookahs are water pipes that are used to smoke specially made tobacco that comes in different flavors.	

	Have you ever TRIED?	How many days of PAST 30 DAYS did	out of the you use
a. E-cigarettes	O Yes O No		# days
b. Cigarillos (short, narrow cigars)	O Yes O No		# days
c. Cigars	O Yes O No		# days
d. Smokeless tobacco	O Yes O No		# days
e. Hookahs	O Yes O No		# days
f. Blunts (cigars filled with marijuana)	O Yes O No		# days
O Cigar		-	
O Cigarillo O Cigar	O Other		
hy did you try a cigarillo (short narrow o ☐ I have never tried a cigarillo	☐ It is healthier than cigarettes	T ALL THAT APPLY)	
		T ALL THAT APPLY)	
☐ I have never tried a cigarillo ☐ Good flavors ☐ Low cost	☐ It is healthier than cigarettes ☐ It is cool ☐ I can change the amount of tobacc	·	
☐ I have never tried a cigarillo ☐ Good flavors ☐ Low cost ☐ Curiosity	☐ It is healthier than cigarettes ☐ It is cool ☐ I can change the amount of tobacc ☐ I can change the wrapper	·	
☐ I have never tried a cigarillo ☐ Good flavors ☐ Low cost ☐ Curiosity ☐ My friends use it	☐ It is healthier than cigarettes ☐ It is cool ☐ I can change the amount of tobacc	·	
☐ I have never tried a cigarillo ☐ Good flavors ☐ Low cost ☐ Curiosity	☐ It is healthier than cigarettes ☐ It is cool ☐ I can change the amount of tobacc ☐ I can change the wrapper	·	
☐ I have never tried a cigarillo ☐ Good flavors ☐ Low cost ☐ Curiosity ☐ My friends use it	☐ It is healthier than cigarettes ☐ It is cool ☐ I can change the amount of tobacc ☐ I can change the wrapper ☐ Other	·	
☐ I have never tried a cigarillo ☐ Good flavors ☐ Low cost ☐ Curiosity ☐ My friends use it ☐ My parents/family use it  www.do.you.smoke.cigarillos? (SELECT A	☐ It is healthier than cigarettes ☐ It is coo! ☐ I can change the amount of tobacc ☐ I can change the wrapper ☐ Other ☐ Uther ☐ Other ☐ I can change the wrapper ☐ Other ☐ Other	co	
☐ I have never tried a cigarillo ☐ Good flavors ☐ Low cost ☐ Curiosity ☐ My friends use it ☐ My parents/family use it  www.do.you.smoke.cigarillos? (SELECT A) ☐ I don't smoke.cigarillos	☐ It is healthier than cigarettes ☐ It is coo! ☐ I can change the amount of tobacc ☐ I can change the wrapper ☐ Other ☐ Uther ☐ Other ☐ I can change the wrapper	co	

The following ques	tions are about e-cigarette	s. Please answer even if you do not use e-cigarettes.				
	you <u>first</u> tried an e-cigarette	?				
O I never tried an e-cig	O I never tried an e-cigarette					
OR	years old					
30. If given a choice, would	you rather use an e-cigarette	or smoke a regular cigarette?				
O Neither O E-cigare	ette O Regular cigarette					
O To completely stop s	garette. king regular cigarettes, but not	5 50 259				
32. When you <u>first</u> tried an e-cigarette, did it have nicotine?  O I never tried an e-cigarette  O No						
O Yes	O I don't know					
33. Did you use e-cigarettes O I did not use e-cigare O Yes O No	with nicotine in the past 30 cettes in the past 30 days	days?  O I used e-cigarettes, both with and without nicotine in the past 30 days  O I don't know				
34. What concentration of n	icotine do you typically use?					
O I do not use e-cigare	ttes O about 18mg					
O 0mg	O about 24mg					
O about 6mg	O Other					
O about 12mg	O I don't know					
	35. How addicted to e-cigarettes do you feel?  O I never tried an e-cigarette O Somewhat addicted					
O Not at all addicted	O Very addicted					
	ls offered you an e-cigarette, O Probably yes	would you use it?				
O Probably not	O Definitely yes					
37. How would your friends O Strongly disapprove	react if you used an e-cigaret O Approve	te?				
O Disapprove	O Strongly approve					
O Neither disapprove n	or approve					

38. Which e-ci	38. Which e-cigarette flavors have you tried in the past 30 days? (Select all that apply)					
□ldon	ot use e-cigarettes					
☐ Mint (	spearmint, wintergreen, peppermint)					
☐ Menth	nol					
☐ Tobac	co					
☐ Fruit (	cherry, blueberry, strawberry, coconut)					
☐ Coffee	e (espresso, latte, cappuccino)					
☐ Candy	or dessert (chocolate, Jolly Rancher)					
☐ Spice	(clove, cinnamon, nutmeg)					
☐ Vanilla	a					
☐ Alcoho	ol (pina colada, strawberry daiquiri, bourbon, rum, brandy)					
☐ Other						
☐ I don't	know					
39. Which e-ci	garette flavor do you prefer when you use e-cigarettes? ( <u>Select all that apply</u> )					
	ot use e-cigarettes					
☐ Mint (s	spearmint, wintergreen, peppermint)					
☐ Menth	ol					
☐ Tobac	co					
☐ Fruit (d	cherry, blueberry, strawberry, coconut)					
	e (espresso, latte, cappuccino)					
☐ Candy	or dessert (chocolate, Jolly Rancher)					
	(clove, cinnamon, nutmeg)					
☐ Vanilla	· · · · · · · · · · · · · · · · · · ·					
☐ Alcoho	ol (pina colada, strawberry daiguiri, bourbon, rum, brandy)					
☐ Other						
☐ I don't	know					
10 What are th	ne reasons you use flavored e-liquids? ( <u>Select all that apply)</u>					
	t use e-cigarettes/e-liquids					
☐ They ta	aste better than a regular cigarette					
☐ They h	elp me to cut down on smoking regular cigarettes					
☐ They fi	reshen my breath					
☐ They to	aste good					
☐ They h	elp me control my appetite					
☐ They h	elp me quit cigarette smoking					
☐ Other						

41. Does one or more of your parents use	e-cigarettes?						
O Yes, both of my parents use e-ciga	O Yes, both of my parents use e-cigarettes						
O Yes, but only my mom	O Yes, but only my mom						
O Yes, but only my dad							
O Other							
42. How would your mother react if you u O Strongly disapprove	used an e-cigarette? Approve						
	Strongly approve						
O Neither disapprove nor approve							
43. How would your father react if you us	ed an e-cigarette?						
	Approve						
O Disapprove O S	Strongly approve						
O Neither disapprove nor approve							
44. Do you think that in the future you mig	4. Do you think that in the future you might experiment with e-cigarettes?  O Definitely not  O Probably ves						
O Probably not O Definitely ye	es						
5. Which of the following have you used to vape marijuana? (Select all that apply)							
☐ I never vaped marijuana							
☐ E-cigarette filled with oil							
☐ E-cigarette filled with wax							
☐ Portable vaporizer filled with dried r	narijuana (like a G pen)						
☐ A disposable e-joint, like the JuJu jo	pint						
☐ Other							
46. Have you ever used an e-cigarette to v	/ape alcohol or other substances? (Select all that apply)						
☐ I never used an e-cigarette to vape							
☐ Alcohol							
☐ Other substance(s)							
47. Where do you usually get an e-cigaret	te? (Select all that apply)						
☐ I do not use e-cigarettes	☐ I buy them online						
☐ My friend/girl-friend/boy-friend	☐ I buy them from a tobacco shop						
☐ My parents/adult family members	☐ My parents/adult family members ☐ I buy them from a vape shop						
☐ My brother/sister/cousin	☐ Other						

48. When you use an e-cigarette, who do you use it with? (Select all that apply)  ☐ I do not use e-cigarettes ☐ My parent(s)  ☐ I use it when I am alone ☐ My brother/sister/cousin  ☐ My friends	
49. When you use an e-cigarette, do you (Select all that apply)  ☐ I don't use an e-cigarette ☐ Use a device you personally own ☐ Use a device you share with someone else ☐ Take one or more puffs from someone else's device (like bumming a cigarette)	
<ul> <li>50. Did anyone ever refuse to sell you an e-cigarette from a store (for example, gas station or vape shop)?</li> <li>O I never tried to buy an e-cigarette from a store</li> <li>O Yes</li> <li>O No</li> </ul>	
<ul> <li>51. Did anyone ever refuse to sell you an e-cigarette from an online store (for example, an e-cigarette website Amazon.com)?</li> <li>O I never tried to buy an e-cigarette from an online store</li> <li>O Yes</li> <li>O No</li> </ul>	e or
52. Does the e-cigarette you usually use have tanks or cartridges to hold the e-liquid?  O I do not use e-cigarettes  O I do not use e-cigarettes with tanks or cartridges  O Tanks  O Cartridges  O I use both	
O I do not use e-cigarette tank you typically use? O I never used an e-cigarette with a tank O Less than 2mL O 2 to 5 mL O more than 5mL O Other O I don't know	
54. How often do you refill your tank or cartridge?  O I do not use e-cigarettes O More than once a day O Once a day O Every 2 to 3 days O Every 4 to 6 days O Once per week O Less than once per week O My use varies from week to week	7661



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CHORDON CONTROL CONTRO							
55. In what ways do you customize yo	our e-cigarette?	(Select all that apply)					
☐ I do not use e-cigarettes	□ I chang	e to a different tank color/change the skins on the e-cig itself					
☐ I do not customize my e-cigare	tte □I change	e the VG/PG levels in the e-liquids I use					
☐ I change the voltage	☐ I custon	nize the flavors					
☐ I change the temperature	☐ Other						
56. Where have you used an e-cigarette? (Select all that apply)							
☐ I have never used an e-cigarett		☐ Home					
☐ School (like bathrooms, cafeter		□ Work					
	ia, scriooi bus)						
☐ Public transportation		☐ In a car					
Public places where smoking is like movie theaters, malls, resta	s not allowed, aurants	☐ Other					
57. What is cool about e-cigarettes? (Select all that apply)							
□ Different flavors	☐ Can customiz	e vapor level					
☐ Can do smoke tricks	☐ Can customiz	e flavors					
☐ Lights up	☐ It is recharges	able					
☐ Can change voltage	☐ Can change to	emperature					
☐ Has no smell	☐ Other						
☐ Its shape	☐ I don't think e-	cigarettes are cool					
☐ Can customize nicotine level							
58. Have you ever used the "dripping"	' method to add	e-liquid to your e-cigarette?					
O I don't use e-cigarettes							
O Yes							
O No							
O I don't know							
59. Why do you use the "dripping" me	ethod? ( <u>Select al</u>	I that apply)					
☐ I do not use e-cigarettes	☐ It produc	ces thicker clouds of vapor					
$\square$ I've never used the dripping me	thod □ I was cu	rious about it					
☐ It makes the flavor taste better	☐ Other						
☐ It makes a stronger throat hit	L						

60.	Would	you	try	an	e-ciga	rette	ii.
-----	-------	-----	-----	----	--------	-------	-----

	Definitely not	Probably not	Probably yes	Definitely yes
a. It only came in tobacco flavor?	0	0	0	0
b. It could not be used indoors?	0	0	0	0
c. You could not do smoke tricks?	0	0	0	0
d. They did not come in fruit or candy flavors?	0	0	0	0

#### 61. Please select either TRUE or FALSE for the following statements describing the rules about smoking <u>CIGARETTES</u> in your home.

	True	False
a. No one is allowed to smoke anywhere inside your home.	0	0
b. Adults are allowed to smoke only in some places.	0	0
c. Adults are allowed to smoke anywhere inside your home	0	0
d. Children/teens are allowed to smoke only in some places.	0	0
e. Children/teens are allowed to smoke anywhere inside your home.	0	0

#### 62. Please select either TRUE or FALSE for the following statements describing the rules about using **E-CIGARETTES** in your home.

	True	False
a. No one is allowed to use e-cigarettes anywhere inside your home.	0	0
b. Adults are allowed to use e-cigarettes only in some places.	0	0
c. Adults are allowed to use e-cigarettes anywhere inside your home	0	0
d. Children/teens are allowed to use e-cigarettes only in some places.	0	0
e. Children/teens are allowed to use e-cigarettes anywhere inside your home.	0	0

#### 63. The next three questions ask you to estimate percentages. Your answers can range anywhere from 0%to 100%.

a. What percentage of males your age do you think use e-cigarettes?	%
b. What percentage of females your age do you think use e-cigarettes?	%
c. What percentage of adults do you think use e-cigarettes?	%

			Ctuanalis	Cananahad	Neither				
			Strongly Disapprove	Somewhat Disapprove	Approve n Disapprov			ngly rove	
	Cigare	ttes	0	0	0	0	(	<b>O</b>	
	E-Cigarettes		0	0	0 0		(	0	
I did not see any being	TV	Radio	Billboard	Magazines	(Gas stations, convenience stores)	Vape shops	Mall kiosks	Tobacco shops	Twitter, Instagram YouTube
sold									
	,		□ n e-cigarette a				<u></u>		
	,						<u></u>	Tobacco	Social Med (Facebook Twitter, Instagram YouTube)



The following questions are about alcohol	and marijuana use. All answers are confidential.
67. How old were you the first time you ever had a drink of alcohol  years old	72. During the <u>past 30 days</u> , how often did you have <u>5</u> <u>or more</u> drinks on one occasion? By 'occasion,' we mean at the same time or within a couple of hours of each other.
	O I did not drink in the past 30 days
O I never had a drink of alcohol	O I did not drink 5 or more drinks on one occasion in
68. Did you get drunk the first time you drank?	O 1 day the past 30 days
O I never had a drink of alcohol	O 2 days
O Yes	O 3 to 5 days
O No	O 6 to 10 days
69. How old were you the first time you got drunk from	O 11 to 20 days
drinking alcohol?	O 21 to 28 days
	O Every day
years old	73. How old were you the first time you ever tried
O I never got drunk	marijuana or hashish?
O I never had a drink of alcohol	years old
70. During the <u>past 30 days</u> , on how many days did you drink one or more alcoholic beverages?	O I never tried marijuana/hashish
O I did not drink in the past 30 days	74. How old were you the first time you got high from marijuana or hashish?
O 1 day	manjuana or nasmism:
O 2 days	years old
O 3 to 5 days	O I never got high from marijuana or hashish
O 6 to 10 days	O I nevertried marijuana or hashish
O 11 to 20 days	The Administration of
O 21 to 28 days	75. Did you get high the first time you tried marijuana or hashish?
O Every day	O I never tried marijuana or hashish
71. During the past 30 days, how many drinks did you	O Yes
typically have on a day when you drank alcohol?	O No
O I did not drink in the past 30 days	
O 1 drink	76. During the <u>past 30 days</u> , on how many days did you use marijuana or hashish?
O 2 drinks	A CONTRACT TO THE CONTRACT OF CONTRACT THE CONTRACT CONTR
O 3 to 4 drinks	O I never tried marijuana or hashish
O 5 to 6 drinks	O I tried marijuana or hashish but did not use it in O 1 day the past 30 days
O 7 to 8 drinks	O 2 days
O 9 to 11 drinks	O 3 to 5 days
O 12 to 15 drinks	O 6 to 10 days
O 16 to 18 drinks	O 11 to 20 days
O 19 to 24 drinks	O 21 to 28 days
O 25 or more drinks	O Every day

OV

We are trying to learn about tobacco use. Please complete this survey even if you do not use any tobacco products.

This survey is being conducted as part of a research study at Yale University. This survey is completely voluntary, and if you do not wish to participate you may turn in a blank survey. Whether or not you choose to participate in the survey will have no effect on your grades, or your relationship with your teachers or school.

#### In order to protect your confidentiality, please do not put your name anywhere on this form.

Please fill in the bubble next to the FIRST LETTER of your middle name. (Fill an "X" in if you do not have a middle name)

Please fill in the bubble next to the **SECOND** LETTER of your last name. (For example, if your last name is Smith, fill in "M")

Please fill in the bubble next to the DAY you were born. (If you were born on June 3rd, fill in "3". If you were born on November 25th, fill in "25")

ОВ	01	OP	OW
OC	OJ	OQ	OX
O D	OK	OR	OY
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O G	ON	OU	
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ОВ	OI	OP	OW

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OC OJ OQ OX OD OK OR OY OE OL OS OZ OF OM OT OG ON OU

01	07	O 13	O 19	O 25
O 2	8 O	O 14	O 20	O 26
O 3	09	O 15	O 21	O 27
O 4	O 10	O 16	O 22	O 28
O 5	011	0 17	O 23	O 29
O 6	O 12	O 18	O 24	O 30
O 31				

	Page 2 of 12
1. How old are you? years old	11. How old were you when you first tried a cigarette, even just 1 or 2 puffs?
<ul><li>2. What grade are you in now?</li><li>O 6th grade O 10th grade</li></ul>	years old
O 7th grade O 11th grade O 8th grade O 12th grade	O I never smoked even just 1 or 2 puffs
O 9th grade	12. Have you smoked at least 100 cigarettes in your lifetime?
<ul><li>3. What is your sex?</li><li>O Male O Female</li></ul>	O Yes O No
4. How would you describe yourself? (Select all that apply)	13. Which of the following describes how you think of yourself?
<u>(seiset air mat арыу)</u> □ White (Caucasian)	O Nonsmoker O Occasional Smoker
☐ Black or African American	O Smoker O Ex-smoker
☐ Hispanic/Latino	O Social Smoker O Someone who tried smoking
☐ Asian ☐ American Indian or Alaska Native	14. If one of your best friends offered you a cigarette, would you smoke it?
☐ Native Hawaiian or other Pacific Islander	O Definitely not O Probably yes
☐ Middle Eastern	O Probably not O Definitely yes
☐ Other  5. Does your family own a car, van or truck?	15. Do you think that in the future you might experiment with cigarettes?
O No O Yes, one O Yes, two or more	O Definitely not O Probably yes
6. Do you have your own bedroom for yourself?	O Probably not O Definitely yes
O No O Yes	16. During the past 30 days, on how many days did you smoke a cigarette (even just 1 or 2 puffs)?
7. During the past 12 months, how many times did you travel away on a vacation with your family?	O None O 6-10 days
O Not at all O Twice	O 1 day O 11-20 days
O Once O More than twice	O 2 days  O 21-28 days
8. How many laptops/computers does your family	O 3-5 days O Every day
own? O None O Two	17. When you smoked in the past 30 days, how many cigarettes did you smoke per day?
O One O More than two	O I did not smoke in the past 30 days
	O Less than one cigarette per day
9. Are you eligible for the free lunch program at your school?	O 1 to 5 cigarettes per day
O No O Yes O I don't know	O 6 to 9 cigarettes per day
	O About 1/2 a pack per day
O Yes O No O Yes	O About 1 pack per day
O 103 O 110	O About 1 and 1/2 packs per day
	O Two packs or more per day



E-cigarettes are battery-powered and produce vapor instead of smoke. There are many types of e-cigarettes. E-cigarettes can be bought as one-time, disposable products, or can be bought as re-usable kits with a cartridge. These cartridges come in many different flavors and nicotine concentrations. Some people refill their own cartridges with "juice," sometimes called "e-juice	
Cigarillos and filtered cigars are smaller than traditional cigars. Some are the same size as cigarettes, and some come with plastic or wood tips	
Traditional cigars contain tightly rolled cured tobacco that is wrapped in a tobacco leaf.	
Smokeless tobacco is commercially available in foil packets/sachets and tins. It is consumed by placing a pinch of the mixture in the mouth between the gum and cheek and gently sucking and chewing. The excess saliva produced by chewing may be swallowed or spit out.	
Hookahs are water pipes that are used to smoke specially made tobacco that comes in different flavors.	

				1					49000172
	/hat type of cigarettes did you sm 0 days?	oke in th	e <u>past</u>			cigarettes	s did not e	xist, wou	ıld you still
	O I did not smoke in the past 30 d	ays			Oldo	not smoke			
	O Menthol cigarettes			O Yes					
	O Regular cigarettes				O No				
	O Both menthol and regular cigare	ettes			THE R. LES				
5	O I don't know								
20. S	ee the picture and the description	on the le	eft page	for each	product	h			
			Į.	Have you	ever TR	RIED?			s out of the lid you use?
	a. E-cigarettes			O Yes	10	Vo			# days
	b. Cigarillos (short, narrow cigar	s)		O Yes	01	No			# days
	c. Cigars			O Yes	01	No			# days
	d. Smokeless tobacco			O Yes	01	No			# days
	e. Hookahs			O Yes	01	No			# days
	f. Blunts (cigars filled with mariju	uana)		O Yes	01	No			# days
21. W	hat is the <u>first</u> tobacco product you of I never tried any of these product O Cigarette		O Smol						
	O E-Cigarette				lled with	marijuana)			
	O Cigarillo		O Othe	r					1
	O Cigar						10		7
22. W	hich of the following products have	ve you be	en curi	ous abou	t:				
		Usin toba		Usin mariju					
	Cigarette	O Yes	O No						
	E-Cigarette	O Yes	O No	O Yes	O No				
	Cigarillo	O Yes	O No	O Yes	O No				

O Yes O No

O No

O No

O No

O Yes

O Yes

O Yes

O Yes O No

O No

O No

O Yes

O Yes

Cigar

Hookah

Blunt

Smokeless Tobacco



		and Mild)? (SELECT ALL THAT APPLY)	
☐ I have never tried a cigarillo		☐ It is healthier than cigarettes	
☐ Good flavors	First Springer Springer	☐ It is cool	
☐ Low cost	☐ I can change t	☐ I can change the amount of tobacco	
☐ Curiosity	☐ I can change t	☐ I can change the wrapper	
☐ My friends use it	☐ Other		
☐ My parents/family use it			
24. How do you smoke cigarillos? (SE ☐ I don't smoke cigarillos	ELECT ALL THAT APPLY) ☐ I add mari		
☐ I smoke them as they come in the		some of the wrapper	
☐ I add more tobacco	☐ Other		
☐ I take out tobacco			
The following questions are	about e-cigarettes. Plea	ase answer even if you do not use e-cigarettes.	
25. How old were you when you <u>first</u> to O I never tried an e-cigarette OR years old	ried an e-cigarette?		
26. If given a choice, would you rather O Neither O E-cigarette O Re	use an e-cigarette or sme egular cigarette	oke a regular cigarette?	
<ul> <li>27. How have you used an e-cigarette?</li> <li>O I never used an e-cigarette.</li> <li>O To cut down on smoking regular</li> <li>O To completely stop smoking cigarette to a light of the complete of</li></ul>	r cigarettes, but not stop co arettes.		
28. When you <u>first</u> tried an e-cigarette, O I never tried an e-cigarette	did it have nicotine? O No		
O Yes	O I don't know		
29. Did you use e-cigarettes with nicot O I did not use e-cigarettes in the p O Yes O No		O I used e-cigarettes, both with and without nicotine in the past 30 days O I don't know	

30. What concentration of nicotii	ne do you typically use?
O I do not use e-cigarettes	O about 18mg
O 0mg	O about 24mg
O about 6mg	O Other
O about 12mg	O I don't know
31. What brand(s) of e-cigarettes	did you use in the past 30 days?
1.	,
2.	
SAMONA MATERIA NA PARA PARA PARA PARA PARA PARA PARA	7
3.	
O I did not use e-cigarettes i	n the past 30 days
O I don't know	
32. If you own your own e-cigare	tte, how much did you pay for it?
\$	Control Contro
·	
33. How addicted to e-cigarettes	<del>-</del>
O I never tried an e-cigarette	
O Not at all addicted	O Very addicted
	ered you an e-cigarette, would you use it? obably yes
·	
·	finitely yes
35. Which e-cigarette flavors hav □ I do not use e-cigarettes	e you tried in the <u>past 30 days</u> ? ( <u>Select all that apply</u> )
☐ Mint (spearmint, wintergre	on nonnormint)
☐ Menthol	еп, рерреппия)
☐ Tobacco	
☐ Fruit (cherry, blueberry, sti	campain, cocount)
☐ Coffee (espresso, latte, ca	,
☐ Candy or dessert (chocola	*
☐ Spice (clove, cinnamon, no	•
☐ Vanilla	341109)
	/berry daiquiri, bourbon, rum, brandy)
☐ Other	, sarqani, saarasii, rani, sianay)
☐ I don't know	



36. Which e-cigarette flav	or do you prefer when you use e-cigarettes? (Select all that apply)
☐ I do not use e-ciga	rettes
☐ Mint (spearmint, w	intergreen, peppermint)
☐ Menthol	
☐ Tobacco	
☐ Fruit (cherry, blueb	perry, strawberry, coconut)
☐ Coffee (espresso,	latte, cappuccino)
☐ Candy or dessert (	chocolate, Jolly Rancher)
☐ Spice (clove, cinna	amon, nutmeg)
☐ Vanilla	
	da, strawberry daiquiri, bourbon, rum, brandy)
☐ Other	
☐ I don't know	
37. What are the reasons y	you use flavored e-liquids? ( <u>Select all that apply</u> )
☐ I do not use e-ciga	rettes/e-liquids
☐ They taste better the	nan a regular cigarette
☐ They help me to cu	ut down on smoking regular cigarettes
☐ They freshen my b	reath
☐ They taste good	
☐ They help me cont	rol my appetite
☐ They help me quit	
☐ Other	Signification of the state of t
38. Do you think that in the	e future you might experiment with e-cigarettes?
O Definitely not	O Probably yes
O Probably not	O Definitely yes
39. Which of the following	have you used to vape marijuana? (Select all that apply)
☐ I never vaped mari	
☐ E-cigarette filled wi	th oil
☐ E-cigarette filled wi	th wax
•	filled with dried marijuana (like a G pen)
☐ A disposable e-join	
☐ Other	t, like the dudu joint
Li Other	
10. Have you ever used an	e-cigarette to vape alcohol or other substances? (Select all that apply)
	sigarette to vape alcohol or other substances
☐ Alcohol	
☐ Other substance(s)	
(-/	469



41. Where do you usually get an			
☐ I do not use e-cigarettes	☐ I buy the		
☐ My friend/girl-friend/boy-fr	iend 🔲 i buy the	em from a tobacco shop	
☐ My parents/adult family m	embers	em from a vape shop	-
☐ My brother/sister/cousin	☐ Other		
42. When you use an e-cigarette, ☐ I do not use e-cigarettes ☐ I use it when I am alone ☐ My friends	, who do you use it w □ My parent(s) □ My brother/siste		-I
43. When you use an e-cigarette, ☐ I don't use an e-cigarette ☐ Use a device you persona ☐ Use a device you share w ☐ Take one or more puffs fro	ally own ith someone else	that apply) vice (like bumming a cigarette)	
44. Did anyone ever refuse to sel O I never tried to buy an e-ci O Yes O No		rom a store (for example, gas station or v	/ape shop)?
<ul><li>45. Did anyone ever refuse to sel Amazon.com)?</li><li>O I never tried to buy an e-ci</li><li>O Yes</li><li>O No</li></ul>		rom an online store (for example, an e-ciestore	garette website or
46. Does the e-cigarette you usua O I do not use e-cigarettes O I do not use e-cigarettes w O Tanks O Cartridges O I use both			
47. What is the size of the e-cigar O I do not use e-cigarettes O I never used an e-cigarette O Less than 2mL O 2 to 5 mL O more than 5mL		ly use?	
O Other O I don't know			

48. How often do you refill your tan	k or cartridge?	
O I do not use e-cigarettes	K of Cartilage:	
O More than once a day		
O Once a day		
O Every 2 to 3 days		
O Every 4 to 6 days		
O Once per week		
O Less than once per week		
O My use varies from week to v		
49. In what ways do you customize	_	
☐ I do not use e-cigarettes	☐ I chang	ge to a different tank color/change the skins on the e-cig itself
☐ I do not customize my e-ciga	rette 🔲 I chang	ge the VG/PG levels in the e-liquids I use
☐ I change the voltage	☐ I custon	mize the flavors
☐ I change the temperature	☐ Other	
50. Where have you used an e-ciga	ette? (Select all	that apply)
☐ I have never used an e-cigar	ette	☐ Home
☐ School (like bathrooms, cafe	teria, school bus)	□ Work
☐ Public transportation		☐ In a car
☐ Public places where smoking like movie theaters, malls, re		☐ Other
51. What is cool about e-cigarettes?	? (Select all that a	apply)
□ Different flavors	☐ Can customiz	ze vapor level
☐ Can do smoke tricks	☐ Can customiz	ze flavors
☐ Lights up	☐ It is recharge:	eable
☐ Can change voltage	☐ Can cha <u>nge t</u>	temperature
☐ Has no smell	☐ Other	
☐ Its shape	☐ I don't think e	e-cigarettes are cool
☐ Can customize nicotine level		
52. Have you ever used the "drippin	ıg" method to add	d e-liquid to your e-cigarette?
O l don't use e-cigarettes		
O Yes		
O No		
O I don't know		

53. V	Vhy do you use the "dripping" method	l? ( <u>Select all</u>	that apply)			
	☐ I do not use e-cigarettes	☐ It produce	s thicker clo	uds of vapo	r	
	$\square$ I've never used the dripping method	□ I was curi	ous about it			
	☐ It makes the flavor taste better	☐ Other				
	☐ It makes a stronger throat hit	<b>!</b>			Wilsh	
54. V	Vould you try an e-cigarette if:					
		Destru	Definitely not	Probably not	Probably yes	Definitely yes
	a. It only came in tobacco flavor?		0	0	0	0

55. If you use e-cigarettes, do you think the following things will happen? Please answer even if you are not a current e-cigarette user.

0

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0

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O

0

0

700		
a. You will look cool	O Yes	O No
b. You will get into trouble	O Yes	O No
c. You will feel relaxed	O Yes	O No
d. You will have trouble breathing	O Yes	O No
e. You will become popular	O Yes	O No
f. You will look grown up	O Yes	O No
g. You will have bad breath	O Yes	O No
h. You will get lung cancer	O Yes	O No
i. You will have a heart attack	O Yes	O No
j. You will get a chronic cough ,	O Yes	O No
k. You will get wrinkles	O Yes	O No
I. You will control your weight	O Yes	O No

b. It could not be used indoors?

c. You could not do smoke tricks?

d. They did not come in fruit or candy flavors?

56.	Please rate	how	much	you agree	or disag	gree with	the	following	statements.
-----	-------------	-----	------	-----------	----------	-----------	-----	-----------	-------------

		Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
a.	E-cigarettes are harmful to your health.	0	0	0	0	0
b.	E-cigarettes are safer than regular cigarettes.	0	0	0	0	0
C.	Breathing vapor from other people's e-cigarettes is harmful.	0	0	0	0	0
d.	E-cigarettes help to keep from gaining weight.	0	0	0	0	0

57. How do you feel about people smoking cigarettes or using e-cigarettes in indoor public places like the mall, movie theaters and restaurants?

	Strongly Disapprove	Somewhat Disapprove	Neither Approve nor Disapprove	Somewhat Approve	Strongly Approve
Cigarettes	0	0	0	0	0
E-Cigarettes	O	O	0	0	0

58.	Does your school have a policy	or rule specifically	prohibiting	E-CIGARETTE use	among students on
	school property?	-	-		· ·

O	Y	es

O No

O I don't know

59. Do you agree that your school should have a policy of rule specifically prohibiting E-CIGARETTE use among students on school property?

$\circ$	Strong	ly	agre	E
---------	--------	----	------	---

O Agree

O Neutral

O Disagree

O Strongly disagree

l did not see any being sold	TV	Radio	Billboard	Magazines	Local Stores (Gas stations, convenience stores)	Vape shops	Mall kiosks	Tobacco shops	Social Media (Facebook, Twitter, Instagram, YouTube)

# 61. Where have you recently seen e-cigarette advertisements? (Select all that apply)

f did not see any being sold	TV	Radio	Billboard	Magazines	Local Stores (Gas stations, convenience stores)	Vape shops	Mall kiosks	Tobacco shops	Social Media (Facebook, Twitter, Instagram, YouTube)

# 62. Please fill in the circle next to each sentence that best describes how you think and feel.

	Rarely/ never	Occasionally	Often	Almost Alvays/Always
a. I plan what I have to do.	0	0	0	0
b. I do things without thinking.	0	0	0	0
c. I don't "pay attention".	0	0	0	0
d. I am self-controlled.	0	0	0	0
e. I concentrate easily.	0	0	0	0
f. I like to think carefully about things.	0	0	0	0
g. I say things without thinking.	0	0	0	0
h. I act on the spur of the moment.	0	0	0	0

	1 490 12 01 12
The following questions are about alcohol	and marijuana use. All answers are confidential.
63. How old were you the first time you ever had a drink of alcohol  years old O I never had a drink of alcohol	68. During the <u>past 30 days</u> , how often did you have <u>5</u> or more drinks on one occasion? By 'occasion,' we mean at the same time or within a couple of hours of each other.  O I did not drink in the past 30 days O I did not drink 5 or more drinks on one occasion in
64. Did you get drunk the first time you drank? O I never had a drink of alcohol O Yes O No	O 1 day the past 30 days O 2 days O 3 to 5 days O 6 to 10 days O 11 to 20 days
65. How old were you the first time you got drunk from drinking alcohol?  years old O I never got drunk	O 21 to 28 days O Every day  69. How old were you the first time you ever tried marijuana or hashish?
O I never had a drink of alcohol  66. During the past 30 days, on how many days did you drink one or more alcoholic beverages?	years old O I never tried marijuana/hashish
O I did not drink in the past 30 days O 1 day O 2 days O 3 to 5 days O 6 to 10 days O 11 to 20 days O 21 to 28 days O Every day	<ul> <li>70. How old were you the first time you got high from marijuana or hashish?</li> <li>Years old</li> <li>O I never got high from marijuana or hashish</li> <li>O I never tried marijuana or hashish</li> <li>71. Did you get high the first time you tried marijuana or hashish?</li> </ul>
67. During the past 30 days, how many drinks did you typically have on a day when you drank alcohol?  O I did not drink in the past 30 days	O I never tried marijuana or hashish O Yes O No
O 1 drink O 2 drinks O 3 to 4 drinks O 5 to 6 drinks O 7 to 8 drinks O 9 to 11 drinks	72. During the past 30 days, on how many days did you use marijuana or hashish?  O I never tried marijuana or hashish O I tried marijuana or hashish but did not use it in O 1 day the past 30 days O 2 days O 3 to 5 days
O 12 to 15 drinks O 16 to 18 drinks O 19 to 24 drinks O 25 or more drinks	O 6 to 10 days O 11 to 20 days O 21 to 28 days O Every day



# WATERBURY PUBLIC SCHOOLS Meeting Minutes

#6 & 7

Group/Team:	Curriculum Committee		,
Location:	WAMS Media Center	Norms Reviewed:	Yes
Date of Meeting:	May 7, 2015	Start Time:	5:18 pm
Minutes Prepared By:	Felix Rodriguez	Finish Time:	6:23pm

Att	endance at Meeting	STATE OF THE STATE OF THE STATE OF	THE RESERVE OF THE PARTY OF THE
	Name	Position	
1	La Brown	BOE	
2	Felix Rodriguez	BOE	
3	Jose A. Ferreira	Teacher WCA	
4	Karen Harvey	BOE	
5	Ann Sweeney	BOE	
6	Cathy Awwad	BOE	
7	OR Quellette	Supt.	
8	Louis Padua	WCA PEIN.	
9	alick ArbiNI	WICH ASSISTANT PAIN.	
10	Marillera.	ČAO	
11	The all siches	WA.	
12	Var for Mill	West	
13	Lesenden	wex	
14	Mille Retano	WCA,	
15	Hoter transcen	Holyte ecleples	Corp
16	Kenneth Sirais	MFG WCA Kom	A CONTRACTOR OF THE PARTY OF TH
17	Juan Ha Hernands	BOE	
18	Tom Van Stone	BOE	
19			
20			

Purpose of Meeting – Instructional Focus:	

Meeting Notes, Decisions, Issues (May include the meeting agenda)							

# **WATERBURY PUBLIC SCHOOLS Meeting Minutes**

Meeting Notes Continued
Meeting called to order by Chair Woman Liz Brown Sitspin  WCA Principal Lou Padua opening remarks Teacher  WCA Manufacturing Strand curriculum modifications by Michael  Retains  Presented Two year college track and/or Career after High School  WCA Health Services Teacher Linda Richard  Presented WCA Health Strand curriculum seowence  Presented WCA Health Strand curriculum seowence  Nausing Assistant  Nausing Assistant  Nacical Assistant  Allied Health 2-Physical Therapy Aide  Allied Health 2-Pharmacy Technician  Health and wellness
Presented by WCA VICE Principal Nick Albini  Presented by WCA VICE Principal Nick Albini  Presented by WCA VICE Principal Nick Albini  Presented by WCA Child Development Associate CCDA)  Rithway to a Child Development Associate CCDA)  Rithway to a Child Development Associate CCDA)  Presented by WCA Childhood Education CECE)  and NVCC Early Childhood Education CECE)  And Consession on Such Information Technology Strand  Albini  Presented by WCA Principal Low Pader  Presented by WCA Principal Low Pader  Presented by WCA Principal Low Pader  Curriculum for Programming with Microcontrollers  For the WCA  Motion MADE TO MOVE INTERPORT Curriculum Committee to A WONSKINGP  Presentation by tevin Valiston, I LD  Revisions to Computers 1 and Computers II  High School Courses.  Aution to approve new curriculum by Tom Van Stonesa

Next Steps (Include action items)					
Action	Assigned to	Due Date			
First presentation - WCA -	BOE				
Second presentation - ITEMIN Waltoon -	BOE				

Next Me	Next Meeting					
Date:	5/7	/2015	Time:	5:18pm	Location:	WAMS Media Center
Agenda:	Agenda: BOE Curriculum Committee intg.					

#### Meeting Minutes guidelines:

- Publish Minutes within 48 hours of any meeting
  Minutes available to all stakeholders (binders, shared drive, e-mail, website)
- Send Minutes via email to all team members



#6 Update

#### **BOE MEETING**

May 14, 2015

RE: Requesting approval to revise Business Courses

G2,01 & G4,01

We are asking for permission to modify the current offerings to include

Google Applications that will include the entire Microsoft Package while teaching our students to engage in a web-based environment.

- The approval of GOOGLE APPS will require a modification our current business class offerings and we would like to take this opportunity synchronize the offerings district wide

Business Teachers have received initial Professional Development via Perkins funding and we plan to have ongoing PD to support our development in curriculum writing and best practices for teachers.

restlyes.



#### MICROSOFT OFFICE—MULTIMEDIA GRADES: 9-12 CREDIT: .50

This interactive course offers a working overview of Microsoft's Multimedia programs, Publisher and PowerPoint. Students will learn the basics of desktop publishing including: creating, saving and printing publications; utilizing basic publishing skills to determine how to package various publication types; drawing objects, graphics and text tools; formatting, enhancing and editing publications; working with publication designs; and customize publications and use tables. PowerPoint is a performance-based program which enables students to create computer-generated slide shows for use in presentations for classes, clubs or other activities, and to execute specific tasks which will result in an immediate improvement in their computer and communication skills. Taken with 652 Microsoft Office—Word.

\*Satisfies Waterbury Public Schools technology component for graduation

MICROSOFT OFFICE—WORD GRADES: 9-12 CREDIT: .50

This course is designed to provide students with the tools needed to use Microsoft Word 2010 in the workplace, at school, and at home, as well as the application of concepts learned. Students completing this course will be able to customize the Windows interface and use MS Word for everyday tasks. The course addresses the computer skills that would enhance students' academic success using the world-class Microsoft curriculum and software tools to tackle real-world challenges in the classroom environment. Students will learn to use the 2010 version of Microsoft Word interface, commands, and features to create, enhance, customize, share, create, and publish complex documents. Taken with 651 Microsoft Office—Multimedia.

\*Satisfies Waterbury Public Schools technology component for graduation

#### KEYBOARDING 1A GRADES: 9-12

This course is designed for the student who has had little or no exposure to touch keyboarding techniques (using QWERTY keyboard) and who needs more experience managing a PC. The student will develop keyboarding and formatting skills at a tailored pace which will prepare them for future computer courses.

CREDIT: 1.00

\*Satisfies Waterbury Public Schools technology component for graduation

#### SPREADSHEETS GRADES: 10-12 CREDIT: .50

The students will perform hands on activities using Microsoft Excel. The students will be able to create a blank workbook, navigate a worksheet, choose themes, styles, font formats, enter formulas, create charts, insert functions, sorting and filtering tables, apply conditional formatting, compare and analyze data, work with graphics and link and embed data. *Taken with 663 Databases*.

 $*Satisfies\ Waterbury\ Public\ Schools\ technology\ component\ for\ graduation$ 

#### DATABASES GRADES: 10-12 CREDIT: .50

The students will perform hands on activities using Microsoft Access. The students will be able to plan a database, analyze database objects, plan field types, add and edit records, set field properties, design queries, forms and reports, show relationships, sort query results, create queries based on more than one table, use criteria in a query, use operators and wildcards, create calculated fields, create lookup fields, create input masks. *Taken with 662 Spreadsheets*.



**COMPUTERS 2** 

This hands-on course is designed to provide students with database, internet research and web page development skills. Students will use Microsoft Access to organize, maintain, and manipulate data efficiently using a computerized database. They will also learn how the internet works, and how it can be used as an effective tool concerning research. Microsoft FrontPage, which is web-page editing software, will be utilized for creating, editing and maintaining both personal and business web-sites. \*Perkins Concentrator for Informational Technology \*Satisfies Waterbury Public Schools technology component for graduation

WORD PROCESSING 1

**GRADES: 9-12 CREDIT: 1.00** 

This course is designed to provide each student with an essential skill for survival in today's technologically competitive job market. The students will learn the basic QWERTY keyboarding technique as well as the formatting and creation of essential business documents such as resumes, business letters and reports. The class provides students with the foundations to be competitive in a technologically savvy world. \*Satisfies Waterbury Public Schools technology component for graduation

**WORD PROCESSING 2** 

Prerequisite: Word Processing 1

This course is designed for the more technologically savvy student who is interested in learning the advanced features of the Microsoft Word and Microsoft Publisher software. The course will also give students practical experience in creating web pages, tables and graphs, newspaper and flyer layouts as well as other business documents. These essential skills and formatting guidelines will serve our students well within any field or industry that they choose to enter.

**COMPUTERS 1** 

Prerequisite: Word Processing 1

This course focuses on the Microsoft Excel and Microsoft PowerPoint programs, which teach the fundamentals of spreadsheets and electronic presentations. In Excel, students will learn how to manipulate data accurately, quickly, and easily using the spreadsheet application. They will also learn how to produce charts and graphs in order to display numeric data. In PowerPoint, students will learn how to make effective presentations and learn the skills required for effective communications.

**COMPUTERS 2** 

Prerequisite: Word Processing 1

This hands-on course is designed to provide students with database, internet research and web page development skills. Students will use Microsoft Access to organize, maintain, and manipulate data efficiently using a computerized database. They will also learn how the internet works, and how it can be used as an effective tool concerning research. Microsoft FrontPage, which is web-page editing software, will be utilized for creating, editing and maintaining both personal and business web-sites. \*Perkins Concentrator for Informational Technology

**Google Apps:** is a set of free web applications provided by **Google**. These web applications include **Google** Email, **Google** Calendar, **Google** Docs, **Google** Talk (Chat), **Google** Mobile and **Google** Sites. All of these web applications offer an online alternative to traditional office suites.

To include Google Apps in the Computers 1 offerings, both Computers 1 and 2 will need to be modified.

**COMPUTERS 1** 

GRADES: 10-12 CREDIT: 1.00

Prerequisite: Word Processing 1

This course focuses on the Microsoft Excel and Microsoft PowerPoint programs, which teach the fundamentals of spreadsheets and electronic presentations. In Excel, students will learn how to manipulate data accurately, quickly, and easily using the spreadsheet application. They will also learn how to produce charts and graphs in order to display numeric data. In PowerPoint, students will learn how to make effective presentations and learn the skills required for effective communications.

**COMPUTERS 2** 

GRADES: 10-12 CREDIT: 1.00

Prerequisite: Word Processing 1

This hands-on course is designed to provide students with database, internet research and web page development skills. Students will use Microsoft Access to organize, maintain, and manipulate data efficiently using a computerized database. They will also learn how the internet works, and how it can be used as an effective tool concerning research. Microsoft FrontPage, which is web-page editing software, will be utilized for creating, editing and maintaining both personal and business web-sites. \*Perkins Concentrator for Informational Technology

- 2001 Microsoft FrontPage 2002 (version 10): Included in Office XP Professional with FrontPage (volume license only), Office XP Professional Special Edition and Office XP Developer edition.
- 2003 Microsoft Office FrontPage 2003
  (version 11): Not included in any of the Office
  2003 editions, sold separately. It was included
  with Windows Small Business Server 2003
  Premium Edition.

Note: There is no official version 4 to 8, because after FrontPage was included in some Office editions, the FrontPage version numbers followed their Office version numbers.

Nonetheless, version numbers may appear in the meta tags of HTML code generated by these versions of FrontPage.

# What's the difference between a Google account and a Google Apps account?

#### What is Google Apps?

Google Apps is a suite of Google applications that brings together essential services to help your business. This is a hosted service that lets businesses, schools, and institutions use a variety of Google products -- including Email, Google Docs, and Google Calendar -- on a unique domain (e.g., www.yourcompany.com).

For instance, if you own the domain example.com and you sign up for Google Apps services, everyone at your organization will get:

- A custom email address (user@example.com)
- Tools for word processing
- Spreadsheets and presentations
- A shared calendaring system
- Tools for creating web pages and sites for your business
- Access to a flexible intranet system
- And much, much more!

#### How is a Google Account different from a Google Apps account?

Although Google Apps and Google Accounts allow you to access several of the same Google products, they're different types of accounts. A Google Account is a unified sign-in system that provides access to a variety of free Google consumer products -- such as Gmail, Google Groups, Google Shopping List, Picasa, Web & App Activity, and Blogger -- administered by Google. Google Apps provides access to products *powered by Google* but administered by your organization.

#### Not sure what kind of account you have?

If you're able to edit your account recovery options, \$\mathbb{F}\$ then you have a Google Account. If you sign in to your account to the account recovery options page \$\mathbb{F}\$ and receive a message with details to contact your administrator, then you have a Google Apps account.

#### The Google Apps transition

We've recently transitioned Google Apps accounts to a new account infrastructure such that Google Apps accounts are able to access the majority of Google products, just like a Google Account.

## WCAHS HEALTH STRAND CURRICULUM SEQUENCE

#### CERTIFIED NURSE ASSISTANT

Grade 9	Grade 10	Grade 11	Grade 12
Algebra I	Geometry	Linear Quad	Functions Beyond Quad
English 9	English 10	English 11	English 12
World History	US History I/Civics	US History II	Psychology/Sociology
Physical Science	Biology	NVCC Prin. of the Human Body BIO H110 (3)	Chemistry
Spanish I	Spanish II	Elective (lab)	NVCC Anatomy/Physiology BIO-H211
Physical Education	Elective Microsoft/ Art/Music	Allied Health C.N.A.	Allied Health I / Allied Health II
Career Exploration	NVCC Invest. in Health Careers HLT H 103 (3)	Allied Health C.N.A.	Internship/Capstone Project

## **Associate Degree Track for Registered Nurse**

Grade 9	Grade 10	Grade 11	Grade 12	
Algebra I	Algebra I Geometry		Pre. Calculus	
English 9	English 10 English 11		English 12	
World History	US History I/Civics	US History II	SAT Math & English Prep	
Physical Science	Biology	Chemistry	NVCC Anatomy/Physiology BIO-H211	
Spanish I	Spanish II	Spanish III	Elective (lab)	
Physical Education	Physical Education  Elective  Microsoft/ Art/Music		ALLIED HEALTH II HEALTH/WELL & PHARMACY TECH.	
Career Exploration	NVCC Invest. in Health Careers HLT H 103 (3)	ALLIED HEALTH I MED. ASSISTING/PHY. THERAPY	Internship/Capstone Project	

#### Four Year College Track for Professional Health Careers

Grade 9	Grade 10	Grade 11	Grade 12
Geometry Honors	NVCC Algebra II Honors MAT H137	Pre. Calculus Honors	Stats. &Trig. Honors
English 9 Honors	English 10 Honors	English 10 Honors English 11 Honors	
World History Honors	World History Honors US History I/Civics Honors		Psychology Honors
Physical Science Honors	Biology Honors	Chemistry Honors	SAT Math & English Prep
Spanish I	Spanish II	Spanish III	NVCC Intro to Physics PHY H110 (3)
Physical Education	Elective Microsoft/ Art/Music	NVCC Prin. of the Human Body BIO H110 (3)	ALLIED HEALTH II HEALTH/WELL & PHARMACY TECH.
Career Exploration	NVCC Invest. in Health Careers HLT H 103 (3)	ALLIED HEALTH I MED. ASSISTING/PHY. THERAPY	Internship/Capstone Project

Allied Health I - Medical Assistant and Physical Therapy Aide Allied Health II - Health/Wellness and Pharmacy Technician

Revised 2-25-15

#### HLT\*H103 Investigations in Health Careers 3 cr.

This course is designed to assist students in meeting the expectations of a health care curriculum and career. The students will become familiar with the rigors of higher education and the specific skills needed to maximize their opportunity for academic and clinical success. The course will include a comprehensive overview of the duties and responsibilities associated with clinical competency. Interdisciplinary learning strategies, correlating clinical and didactic education, life management skills, work ethics, and critical thinking skills necessary for all health providers will be emphasized.

#### BIO\*H110 Principles of the Human Body 3 cr.

Open to students needing a three-credit science course in their program of study including Liberal Arts and Sciences and General Studies. This course is an introduction and survey of human anatomy and function including the digestive, circulatory, respiratory, immunological, urinary, nervous, sensory, muscular, skeletal, endocrine, and reproductive systems of the body. The course will include discussions of the evolution of the human body and its dynamic interaction with the Environment. Not open for credit to students who have passed any higher-numbered anatomy and physiology course.

#### PHY\*H110 Introduction to Physics 4 cr.

Prerequisite: MAT\*H095 or equivalent. MAT\*H137 is recommended. The course is designed for the student seeking basic introduction to the principles of physics, and offers firsthand experience on learning in a laboratory. Specific topics covered include: a review of essential arithmetic operations And systems of measurements, linear motion, conservation of energy and linear momentum, Newton's three laws of motion, gas laws, heat, light, electricity, magnetism and atomic theory, as time permits. Three hours of lecture and three hours of laboratory weekly.

#### MAT\*H137 Intermediate Algebra 3 cr.

Prerequisite: Grade of "C" or better in MAT\*H094 (Introductory Algebra) or MAT\*H095 (Elementary Algebra) or an appropriate score on a college placement exam. The main themes of Intermediate Algebra are functions, represented by tables, graphs, and rules, and problem solving. The study of polynomial functions is extended via applications involving linear functions, linear systems, and quadratic functions. Students also study exponential functions, rational functions, radical functions, and absolute value functions. Computer component required; TI-83 (Plus) or TI-84 (Plus) or online graphing utility required. This may be used as a general elective; this will not fulfill a mathematics requirement in any degree program.

# WCAHS ALLIED HEALTH C.N.A. COURSE SEQUENCE FOR C.N.A. STATE EXAM

Periods	Times	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
1	7:39 - 8:25	ALLIED HEALTH C.N.A	CLINICAL HOURS	ALLIED HEALTH C.N.A	CLINICAL HOURS	ALLIED HEALTH C.N.A
2	8:29 - 9:15	ALLIED HEALTH C.N.A	CLINICAL HOURS	ALLIED HEALTH C.N.A	CLINICAL HOURS	ALLIED HEALTH C.N.A
3	9:19 - 10:05	ALLIED HEALTH C.N.A / ELECTIVE	ALLIED HEALTH C.N.A / ELECTIVE	LAB	ALLIED HEALTH C.N.A / ELECTIVE	ALLIED HEALTH C.N.A / ELECTIVE
4	10:09 - 10:55	NVCC Human Biology	NVCC Human Biology	NVCC Human Biology	NVCC Human Biology	NVCC Human Biology
5	10:59 - 11:20	LINEAR QUAD	LINEAR QUAD	LINEAR QUAD	LINEAR QUAD	LINEAR QUAD
6	12:14- 1:00	ENGLISH 11	ENGLISH 11	ENGLISH 11	ENGLISH 11	ENGLISH 11
7	1:04 - 1:50	U.S. HISTORY 2	U.S. HISTORY 2	U.S. HISTORY 2	U.S. HISTORY 2	U.S. HISTORY 2

## WCAHS ALLIED HEALTH COURSE SEQUENCE FOR COLLEGE TRACK STUDENTS

Periods	Times	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
1	7:39 - 8:25	ENGLISH HONORS/AP				
2	8:29 - 9:15	PRE-CALC HONORS				
3	9:19 - 10:05	U.S. HISTORY 2 HONORS				
4	10:09 - 10:55	NVCC Human Biology				
5	10:59 - 11:20	ELECTIVE	LAB	ELECTIVE	ELECTIVE	ELECTIVE E
6	12:14- 1:00	SPANISH 3				
7	1:04 - 1:50	ALLIED HEALTH 1				

ALLIED HEALTH 1 (1/2 Year ) OF MEDICAL ASSISTANT & (1/2 Year) PHYSICAL THERAPY AIDE

# Grade 10 - 2015-2016

## WCAHS HEALTH STRAND CURRICULUM SEQUENCE

#### **CERTIFIED NURSE ASSISTANT**

Grade 9	Grade 10	Grade 11	Grade 12
Algebra I	Geometry	Linear Quad	Functions Beyond Quad
English 9	English 10	English 11	English 12
World History	US History I/Civics	US History II	Psychology/Sociology
Physical Science	Biology	NVCC Prin. of the Human Body BIO H110 (3)	Chemistry
Spanish I	Spanish II	Elective (lab)	NVCC Anatomy/Physiology BIO-H211
Physical Education	Elective Microsoft/ Art/Music	Allied Health C.N.A.	Allied Health I / Allied Health II
Career Exploration	Invest. in Health Careers	Allied Health C.N.A.	Internship/Capstone Project

#### Associate Degree Track for Registered Nurse

Grade 9	Grade 10	Grade 11	Grade 12	
Algebra I	Geometry	Algebra II	Pre. Calculus	
English 9	English 10	English 10 English 11		
World History	US History I/Civics	US History II	SAT Math & English Prep	
Physical Science	Biology	Chemistry	NVCC Anatomy/Physiology BIO-H211	
Spanish I	Spanish II	Spanish III	Elective (lab)	
Physical Education	Elective Microsoft/ Art/Music	NVCC Prin. of the Human Body BIO H110 (3)	ALLIED HEALTH II HEALTH/WELL & PHARMACY TECH.	
Career Exploration	Invest. in Health Careers	ALLIED HEALTH I MED. ASSISTING/PHY. THERAPY	Internship/Capstone Project	

#### Four Year College Track for Professional Health Careers

Grade 9	Grade 10	Grade 10 Grade 11		
Geometry Honors	NVCC Algebra II Honors MAT H137	Pre. Calculus Honors	Stats. &Trig. Honors	
English 9 Honors	English 10 Honors	English 11 Honors	English 12 Honors	
World History Honors	orld History Honors US History I/Civics Honors		Psychology Honors	
Physical Science Honors	Biology Honors	Chemistry Honors	SAT Math & English Prep	
Spanish I	Spanish II	Spanish III	NVCC Intro to Physics PHY H110 (3)	
Physical Education Elective Microsoft/ Art/Music		NVCC Prin. of the Human Body BIO H110 (3)	ALLIED HEALTH II HEALTH/WELL & PHARMACY TECH.	
Career Exploration	Invest. in Health Careers	ALLIED HEALTH I MED. ASSISTING/PHY. THERAPY	Internship/Capstone Project	

Allied Health I - Medical Assistant and Physical Therapy Aide Allied Health II - Health/Wellness and Pharmacy Technician

Revised 2-25-15

# Waterbury Career Academy High School

# Health Services

FY 2017-18

Health Services Curriculum Mapping

CTE Program: Health and Wellness

Textbook: ACSM's Resources for the Personal Trainer-Lippincott, Williams, and Wilkins

Week 2	Part IV: Business of Personal Training  Chapter 22- Legal Issues and Responsibilities	Demonstrate a working knowledge of current and legal issues in fitness and wellness  • Legal Terminology • Legal Responsibilities of the Personal Trainer • Discuss types of Law specific to the Personal Training profession • Ethical Considerations of Drug Testing • Sexual Harassment • Gender Equity  Suggested Activities: • Internet Research- Current Legal Issues • Skill Lab- "Mock" Drug Testing/Chain Of Custody • Budget Project • Guest Speaker- Sports Attorney	<ul> <li>Demonstrate an understanding of negligence and basic legal terms.</li> <li>Demonstrate an understanding of contract law.</li> <li>Demonstrate an understanding of labor law.</li> <li>Demonstrate an understanding of anti-trust law.</li> <li>Demonstrate an understanding of workers compensation law.</li> <li>Demonstrate an understanding of tort law.</li> <li>Demonstrate an understanding of disability laws</li> <li>Demonstrate an understanding of the athletic administrator's/coaches legal duties.</li> <li>Demonstrate an understanding of gender equity.</li> <li>Demonstrate an understanding of the requirements for and ethical issues associated with administering drug testing.</li> <li>Prepare outline and deliver a short oral presentation regarding a current and or legal issue r/t fitness and wellness</li> </ul>
Week 3	Part IV: Business of Personal Training	Identify and describe fiscal and facility development  Identify and discuss marketing strategies to attract potential clients  How to set prices/fees for training	<ul> <li>Identify various types of budgets.</li> <li>Identify sources of funding for high school/college athletics</li> <li>Identify components of a budget.</li> </ul>

	Chapter 21- Business Basics	<ul> <li>Professional Standards</li> <li>Business Reputation</li> <li>Develop business proposal</li> <li>Research funding sources</li> <li>Suggested Activities:</li> <li>Guest Speaker- Athletic Clubowner</li> <li>Examine school athletic budget and ordering procedures</li> <li>Ask school bookkeeper to discuss role in high school athletics</li> </ul>	<ul> <li>Identify requisitions and purchase orders and their use.</li> <li>Describe the process of inventory control.</li> <li>Describe the importance of a market analysis for the construction of an athletic facility.</li> <li>Identify the individuals in groups in the planning process of construction.</li> <li>Discuss the sources of funding for the construction of a facility.</li> </ul>
Week 4 & 5	Part IV: Initial Client Screening Chapter 12- The Initial Client Consultation	Define, identify and describe basic fitness, wellness, and exercise prescription and programming concepts  • Understand the critical attributes for providing exceptional customer service  • Learn the attributes of Relationship Marketing and how it pertains to the initial and ongoing appointments with the client and hospitality.  • Learn the non-verbal communication skills needed to successfully engage the client during any appointment.  • Become familiar with Client-Centered Approach to health and fitness coaching.  • Understand the elements and value of the initial client contact as a precursor to the initial client consultation. • Understand the components of the	<ul> <li>Classify health fitness standards, including components of wellness, and describe health appraisals, fitness assessments and exercise prescriptions.</li> <li>Identify lifestyle factors that improve health and increase longevity.</li> <li>Identify risk factors that may interfere with safe participation in exercise.</li> <li>Define basic nutrition and describe its relationship to health, wellness, and weight management.</li> </ul>

		initial client consultation, how to structure the appointment, and the precedence it sets for the duration of the client-Personal Trainer relationship.  • Learn strategies for recommending and selling appropriate personal training packages and obtaining client commitment.  Suggested Activities  Discussion-Traits  Guest Speaker-Personal Trainer	<ul> <li>Discuss the national</li> <li>Dietary Guidelines for Americans.</li> <li>Identify and describe the relationship between nutrition, diet and athletic performance.</li> <li>Create a nutrition and wellness research paper.</li> <li>Define body composition and its relationship to assessment of recommended body weight.</li> <li>Identify various techniques used to assess body composition</li> <li>Describe the physiology of weight loss and management</li> <li>Identify components and benefits of a lifetime exercise program and staying healthy.</li> </ul>
Week 6	Chapter 13- Screening and Risk Stratification	Define, identify and describe basic fitness, wellness, and exercise prescription and programming concepts  • To communicate the importance of standardized screenings for clients.  • To identify and describe	

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		appropriate screening			1
		components and processes.	•		
		To provide resources and			
		templates for the screening			
		process.			
		,			
		Suggested Activities			
		Client Lab Activity			
		Define, identify and describe basic			
	Chapter 14- Client	fitness, wellness, and exercise			
Week 7	Fitness	prescription and programming concepts			
	Assessments	• Understand the proper sequence of			
	,	fitness assessments.			
		<ul> <li>Present information on how to</li> </ul>			
		perform resting heart rate and blood			
		pressure.			
		<ul> <li>Present information on how to</li> </ul>	•		
		perform body composition			
		assessments: height, weight, body			
		mass index, circumferences (waist			
		and hip) skinfolds and bioelectrical			1
		impedance.			
	i	<ul> <li>Present information on how to</li> </ul>			
		perform cardiovascular assessments:			
		field tests, step test and submaximal			
		cycle ergometer tests.		•	
		<ul> <li>Present information on how to</li> </ul>			
		perform muscular fitness			
		assessments: Muscular Strength,			
		Muscular Endurance and Flexibility:			
		1-RM chest press, partial curl-up			
		and sit and reach tests			

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,		Suggested Activities Lab-Initial Assessments Guest Speaker-Registered Nurse and/or Personal Trainer Clinical Rotations-50% requirement	
Week 8 & 9	Part V: Developing the Exercise Program  Chapter 15- Program Design	Define, identify and describe basic fitness, wellness, and exercise prescription and programming concepts  • Provide the Personal Trainer with the fundamentals needed to safely and effectively design a client exercise program, using principals that are prudent to our field of expertise, and within our scope of practice.  • Review the basic physiological systems of the body to better facilitate the client's needs.  • Identify the different modes of resistance, cardiovascular, and flexibility training.  • Educate the certified Personal Trainer on communication skills and client—trainer relationships.  • Prepare the certified Personal Trainer for the first training session, as well as subsequent sessions and program variables.  Suggested Activities  Discussion- Exercise Programming  Jeopardy-PPT  Guest Speaker-Personal Trainer  Clinical Rotations-50% Requirement	Identify components and benefits of a lifetime exercise program and staying healthy.

Week 10	Chapter 17 - Cardiorespiratory Training Program	Define, identify and describe basic fitness, wellness, and exercise prescription and programming concepts  Identify the components of a cardiovascular training program.  Assess the interaction of frequency, duration, and intensity.  Describe the recommended range of training based on current research.  Suggested Activities  Lab Activity- Target Heart Rate  Clinical Rotations-50% Requirement	<ul> <li>Define cardio-respiratory endurance and the benefits of cardio-respiratory endurance training.</li> <li>Define and identify the principles that govern cardio-respiratory exercise prescription: intensity, mode, duration, and frequency.</li> </ul>
Week 11 &12	Chapter 16-Resistance Training Programs	Define, identify and describe basic fitness, wellness, and exercise prescription and programming concepts  Define resistance training principles. Review how and why resistance training should be performed. Provide direction to the Personal Trainer on how to design, evaluate, and implement resistance training programs. Provide the fundamental tools to evaluate clients' resistance training needs and progress.  Suggested Activities Internet Activity Field Trip-Fitness Center Clinical Rotations-50% Requirement	Define muscular strength and muscular endurance.

Week 13	Chapter 18 — Guidelines for Designing Flexibility Programs	Define, identify and describe basic fitness, wellness, and exercise prescription and programming concepts  • Introduce flexibility as a health-related dimension of fitness • Present three basic types of stretching (static, dynamic, proprioceptive neuromuscular facilitation) • Discuss concepts and current controversy surrounding stretching • Outline factors that influence flexibility and the response to training • Suggest safe and effective stretches to perform • Provide sample flexibility programs • Suggested Activities  Lab Activity-Flexibility/Stretching Program Clinical Rotations-50% Requirement	Define and understand muscular flexibility.
Week 14	Chapter 20 – Special Populations	Define, identify and describe basic fitness, wellness, and exercise prescription and programming concepts  Provide a description of special populations that makes them unique when compared to individuals who do not have disease  Learn how to create programs for older adults who may have co-morbidities  Develop a knowledge of cardiovascular disease  Learn how to develop programs for women who are pregnant from the first trimester to the last trimester  Learn the distinction between Type 1 and Type 2 Diabetes  Review the categories of obesity and how Personal Trainers develop lifestyle	<ul> <li>Define and understand the major risk factors that lead to coronary heart disease.</li> <li>Describe the relationship between fitness and aging.</li> <li>Define and describe factors on how to select appropriate exercise.</li> </ul>

	modification programs for them Provide the Personal Trainer with the correct tools to develop programs for clients who have been diagnosed with hypertension  Suggested Activities Lab Activity-Exercise Plan Guest Speaker- Registered Nurse and/or Personal Trainer  Clinical Rotations-50% Requirement	
Week 15 Chapter 19 — Sequencing	Define, identify and describe basic fitness, wellness, and exercise prescription and programming concepts  Provide the Personal Trainer with a "how-to" guide for the first training session as well as subsequent sessions and program variables  Review basic customer service skills as they are applied in a fitness facility and during a personal training session  Educate the Personal Trainer on communication skills and client-trainer relationships  Provide the Personal Trainer with comprehensive criteria for an optimal personal training session  Review the four phases of the personal training session: preparation, transition, workout, and review  Provide the Personal Trainer with the purpose and template for developing useful training notes for proper documentation and effective program management  Suggested Activities	<ul> <li>Develop experiences to help individuals enhance their personal health, as well as develop sound programs for others.</li> <li>Design a training program that includes various components of fitness, body composition, muscular strength, flexibility, nutrition, and weight management.</li> </ul>

		Discussion-Customer Service	
		Lab Activity-Forms	
		Clinical Rotations-50% Requirement	
Week 16	Chapter 4- Applied Biomechanics	Classify and demonstrate competence and skill in the care and prevention of athletic injuries  Introduce the concepts of levers so that there is a distinction between a 1st class lever and a 2nd class lever and a 3rd class lever.  Describe the mechanical concepts of linear work, linear power, and power.  Describe the effect of gravity acting on a weight of a lever to the left of the axis causing the muscle to lengthen.  Identify the differences between angular work and angular power.  Illustrate rotary motion at the elbow.  Explain translation and rotation that occurs at the knee.  Illustrate the concept of forcetime.  Describe the relationship between external torque, the moment of inertia and angular acceleration.  Suggested Activities  Review Box 4.1: Definitions of Common Biomechanical Terms  Clinical Rotations-50% requirement	<ul> <li>Demonstrate skills necessary to recognize the causes and preventative measures associated with athletic participation.</li> <li>Discuss selection and use of appropriate treatment modalities for athletic injuries.</li> <li>Identify acceptable selection and usage of rehabilitation and reconditioning techniques.</li> <li>Demonstrate knowledge and understanding of care and prevention of athletic injuries.</li> <li>Demonstrate basic taping and strapping techniques.</li> <li>Demonstrate application of standard first aid.</li> <li>Classify appropriate use of protective equipment.</li> </ul>

Week 17 &18	Exam Review/ Final Exams	Sign up for the Certified Personal Trainer (CPT) Certification Exam

# April 2015

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# Waterbury Career Academy High School

# Health Services

SY 2017-18

Health Services Curriculum Mapping

CTE Program: Allied Health 2-Pharmacy Technician

Textbook: Morton Publishing: The Pharmacy Technician 4<sup>th</sup> edition Workbook and Certification Review Mosby's Nursing Assistant

ExCPT Study Guide for the Exam for the Certification of Pharmacy Technicians

Time   CTE Topic   Frame   Unit/Chapter	CTE Concepts/Applications	CTE Instructional Objectives
Chapter 1- Pharmacy and Health Care	<ul> <li>The Pharmacy Profession</li> <li>Origins of Pharmacy</li> <li>Medicine thru the Ages</li> <li>20<sup>th</sup> Century Advancements</li> <li>Pharmacy Today</li> <li>Computers in Pharmacy</li> <li>Role of the Pharmacy</li> <li>Technician</li> </ul>	<ul> <li>Understanding of the History of pharmacy from ancient times through today</li> <li>Role of the pharmacists and pharmacy technicians</li> <li>Pharmacy Settings and economic environment</li> <li>Understanding the use of computers in pharmacy.</li> <li>Research and document labor market information on Pharmacy Technicians</li> <li>Understand the role of the pharmacy technician in relation to the pharmacist</li> </ul>

	Chapter 2-The Pharmacy Technician	<ul> <li>Technical Duties</li> <li>Personal Standards</li> </ul>	<ul> <li>Specific personal standards expected of the pharmacy technician</li> <li>Overall scope of practice and HIPAA regulations</li> <li>Certification requirements</li> </ul>
		<ul><li>Training and Competency</li><li>Certifications</li></ul>	<ul> <li>Demonstrate knowledge of federal regulations, code of ethics and standards</li> <li>Identify proper dress code for the pharmacy environment</li> </ul>
Week 2	Chapter 3-Drug Regulation and Control	Law and the Technician  Drug Regulation New Drug Approval  Marketed Drugs  Behind -the-Counter Drugs OTCMedications Sample Labels  Controlled Substances  DEA Forms  Public Safety  Laws and Liability	<ul> <li>Describe the duties of the pharmacy technician with state regulations</li> <li>Demonstrate knowledge of pharmaceutical, medical, and legal developments that impact practice</li> <li>Demonstrate knowledge of governing boards (FDA,DEA,and State Board of Pharmacy)</li> <li>Explain the benefit of state and National certifications</li> <li>Explain difference between controlled and non-controlled drugs</li> <li>Explain the difference between brand and generic medications</li> <li>Demonstrate knowledge of OTC formulations</li> <li>Demonstrate knowledge of how to verify validity of DEA number</li> <li>Show knowledge of National Drug Code (NDC) number components</li> <li>Know the FDA's classification of recalls</li> </ul>

	Chapter 4- Terminology	<ul> <li>Organ System         Terminology</li> <li>Drug Classifications</li> <li>Medical         Abbreviations</li> </ul>	<ul> <li>Identify the most common symbols and abbreviations used on prescriptions, such as elemental symbols and molecular formulas and sig codes</li> <li>List most common roots, prefixes and suffixes</li> <li>Understand the elements which make up pharmaceutical terms</li> </ul>
Week 3	Chapter 5- Prescriptions	<ul> <li>Prescriptions</li> <li>Pharmacy Abbreviations</li> <li>The Fill Process</li> <li>Labels</li> <li>HIPAA</li> </ul>	<ul> <li>Understand the prescription process</li> <li>Preventing and identifying medication errors</li> <li>Importance of protecting patient privacy</li> <li>Compare and contrast the responsibilities of the pharmacist and the pharmacy technician in the prescription process</li> <li>Show knowledge of purpose of lot numbers and expiration dates</li> </ul>
Week 4	Chapter 1-5	Work Based Learning at local retail Pharmacy setting	The student will begin:  Shadow Pharmacy employee at the pick up center  Operate the cash register Place completed prescriptions in the waiting bins

Week 5	Chapter 6- Calculations	<ul> <li>Numbers</li> <li>Fractions</li> <li>Decimal numbers</li> <li>Significant Figures</li> <li>Measurement</li> <li>Equations and Variables</li> <li>Ratio and Proportion</li> <li>Percent's and Solutions</li> <li>Children's Doses</li> <li>Business Calculations</li> </ul>	<ul> <li>Demonstrate basic math skills in addition, subtraction, multiplication and division</li> <li>Understand different number forms, measurement units, and mathematic operation.</li> <li>Understand different units of measure (metric, English, apothecary and avoirdupois)</li> <li>Accurately solve conversions and dosage calculations used in retail pharmacy preparations</li> <li>Demonstrate understanding of ratio and proportion</li> <li>IV flow rates</li> <li>Allegations</li> <li>Temperature conversions</li> <li>Children's dosage (Clark's rule, Young's rule)</li> <li>Dilutions and concentrations</li> </ul>
Week 6	Chapter 8-Body Structure and Function (Mosby's)	<ul> <li>Review of all Body         Systems</li> <li>Diseases and         conditions</li> </ul>	Explain the body systems and usage, side effects and interactions of common prescriptions and non-prescription drugs used to treat the diseases related to the following systems:  Cardiovascular Respiratory GI Renal(Urological) Nervous Immune Endocrine Reproductive Musculo- Skeletal EENT Dermatologic

			<ul> <li>Hematologic</li> <li>Psychsomatic/Psychosocial</li> <li>Pain Management</li> </ul>
Week 7	Chapter 7-Routes and Formulas Chapter 8- Parenterals:Sterile Formulations	<ul> <li>Parenteral Routes</li> <li>IV/IM</li> <li>SUBQ/ID</li> <li>Ophthalmic</li> <li>Intranasal/Inhalation</li> <li>Dermal/Vaginal</li> <li>LVP/SVP</li> <li>Needles/Syringes</li> <li>Laminar</li></ul>	<ul> <li>Explain different medical routes</li> <li>Identify medication forms</li> <li>Understand established procedures for cleaning laminar flow hood</li> <li>Demonstrate knowledge of techniques, equipment, and supplies for drug administration (i.e. insulin syringes and IV tubing)</li> </ul>
Week 8-9	Chapter 1-8	Work Based Learning at local retail Pharmacy setting	The student will:  Shadow retail pharmacy employee at the production line Prepare prescriptions for pharmacists verification
	Chapter 9-	<ul> <li>Compounding</li> <li>Regulations</li> </ul>	<ul> <li>Understand the concept of drug stability</li> <li>Explain the techniques for preparing the following:</li> <li>Solutions</li> </ul>

Week 10	Compunding	<ul> <li>Compounding Considerations</li> <li>Stability and Beyond Use Dates</li> <li>Equipment</li> <li>Using a Balance</li> <li>Volumetric Equipment</li> <li>Liquid Measurement</li> <li>Mixing</li> <li>Solids/Semisolids</li> </ul>	<ul> <li>Suspensions</li> <li>Elixirs</li> <li>Emulsions</li> <li>Extracts</li> <li>Understand proper procedures used in the preparation of medication</li> <li>Be familiar with basic compounding equipment</li> <li>Understand compounding non-sterile products (topical, oral and ear)</li> <li>Understand process for compounding sterile products (IV, Chemo, TPN)</li> <li>Reconstituted inj and non-inj medications</li> <li>Radio pharmaceuticals</li> <li>Eye drops</li> <li>Understand how to determine the correct amount for compounding products</li> <li>Demonstrate knowledge of physical and chemical in capabilities</li> <li>Use and calibrating a scale</li> <li>Proper documentation techniques</li> <li>Show knowledge of the laws pertaining o compounding and manufacturing</li> </ul>
Week 11	Chapter 10- Basic Biopharmaceutics/ Drug Review	<ul> <li>How Drugs Work</li> <li>Concentration and Effect</li> <li>ADME Processes and Diffusion</li> <li>Bioequivalence</li> </ul>	<ul> <li>Identify the top 100 medications/drugs including brand and generic names</li> </ul>

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Week 12	Chapters 1-9	Mid Term Exam	100 Question Exam
Week 13	Chapter 10- Basic Biopharmaceutics	<ul> <li>How Drugs Work</li> <li>Concentration and Effect</li> <li>ADME Processes and Diffusion</li> <li>Bioequivalence</li> </ul>	<ul> <li>Explain the difference between therapeutic response, side effects, and toxicities</li> </ul>
	Chapter 11-Factors Affecting Drug Activity	<ul> <li>Human Variability</li> <li>Adverse Drug         Reactions</li> <li>Drug-Drug         Interactions</li> <li>Drug-Diet         Interactions</li> <li>Disease States</li> </ul>	Explain the term drug interaction
			*.

Week 14	Chapter 12- Information	<ul> <li>Common References</li> <li>Other References</li> <li>The Internet</li> <li>Technical References</li> </ul>	<ul> <li>Discuss resources for staying current with advances in pharmacy practice</li> <li>Demonstrate knowledge of drug information sources including electronic and printed reference material</li> <li>Identify the health care professionals that can write prescriptions</li> </ul>
	Chapter 13- Inventory Management	<ul> <li>Inventory Systems</li> <li>Computers and Inventory</li> <li>Ordering</li> <li>Stocking and Storing</li> </ul>	<ul> <li>Describe the procedures for ordering pharmaceuticals, durable medical equipment devices, and supplies</li> <li>Describe the various methods of inventory control (e.g. perpetual, point of sale)</li> <li>Demonstrate the ability to properly remove from inventory, expired/discontinued pharmaceuticals, durable medical equipment, devices, supplies or recalled items, using appropriate documentation.</li> </ul>
Week 15	Chapter 14- Financial Issues	<ul> <li>Third Party Programs</li> <li>On-Line Adjudication</li> <li>Rejected Claims</li> <li>Other Billing</li> </ul>	<ul> <li>Describe the role of PBM's and third party programs</li> <li>Define Medicare and Medicaid</li> <li>Explain on-line adjudication system</li> </ul>

	Chapter 15- Community Pharmacy	Procedures  Organization  Customer Service Processing/Preparing Prescriptions Customer Pick Up Other Duties	<ul> <li>Identify and list the information required on a completed prescription forms</li> <li>Gather information missing from the prescription forms</li> <li>Demonstrate the ability to follow established procedure to generate and complete product label</li> <li>Explain the legal requirements for pharmacist counseling patients or a patients representative</li> </ul>
Week 16	Chapters 1-15	Work Based Learning at local retail Pharmacy setting	The student will:  Shadow the pharmacy employee at the drop off center  Enter prescriptions into the pharmacy computer
Week 17	Chapter 16- Hospital Pharmacy	<ul> <li>Hospital Pharmacy Areas</li> <li>Organization of Medications</li> <li>Formulary</li> <li>Unit Dose System</li> <li>Comm/Computer Systems</li> </ul>	<ul> <li>Describe the requirements for dispensing investigational drugs</li> <li>Describe governing boards that oversee hospital pharmacy</li> <li>Demonstrate knowledge of delivery systems used within the hospital setting (pneumatic tube, robots)</li> <li>Demonstrate knowledge of automatic stop orders and restricted medication orders</li> </ul>

	Chapter 17-Other Environments	<ul> <li>Medical Records</li> <li>Medication Orders</li> <li>Order Processing</li> <li>Inventory Control</li> <li>Sterile Products         General Hospital         Issues</li> <li>Hospital Pharmacy         Calculations</li> <li>Mail Order         Pharmacy</li> <li>LTC</li> <li>Home Infusion</li> </ul>	<ul> <li>Demonstrate knowledge of bar coding, nursing stations and crash carts</li> <li>Demonstrate knowledge of requirements of mailing medications</li> </ul>
Week 18	Chapters 1-17	Worked Based Learning and Preparation for Certification Exam	The student will prepare for National Certification Exam

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## Waterbury Career Academy High School

#### Health Services

SY 2016-17

Health Services Curriculum Mapping

CTE Program: Allied Health 1-Physical Therapy Aide

Textbook: Cengage Diversified Health Occupations 7<sup>th</sup> ed-Simmers

Time Frame	CTE Topic Unit/Chapter	CTE Concepts/Applications	2015 CCTE Medical Careers Education: Performance Standards and Competencies	National Healthcare Foundation Standards & Accountability Criteria
Week 1	Chapter 7- Anatomy and Physiology  Chapter 6-Medical Terminology	Body Systems and Medical Terminology Specific to the Physical Therapy Aide  Review Body Systems Review Disease with body systems Body Structure and Directional Terminology  Suggested Activities: Vocabulary log of medical terms for each body system. Anatomy labeling of body organs	C. Body Systems: Compare the anatomical structures and physiological function of each body system  10. Diagram structure of cells, tissue, organs, and systems 11. Identify physiology and pathophysiology of body systems 12. Define and use the following medical terminology related to each body system.	Foundation Standard 1:Academic Foundation  1.1 Human Structure and Function 1.11 Classify the basic structural and functional organization of the human body 1.12 Recognize body planes, directional terms, quadrants, and cavities 1.13 Analyze the basic structure and function of the human body.  Foundation Standard 2:Communications  2.2 Medical Terminology 2.21 Use roots, prefixes, and suffixes to communicate information 2.22 Use medical abbreviations to communicate information
Week 2 & 3	Chapter 22- Physical Therapy Skills	Verbal and Written Communication Specific to the Physical Therapy Aide  Communication Strategies Phone Etiquette Medical Abbreviations Verbal and Non Verbal Respect	L. Patient Communication: Demonstrate patient interaction skills  48. Describe the elements of communication using a basic sender-receiver-feedback model 49. Differentiate communication to meet the needs of the patient 50. Use verbal and non-verbal communication skills  51. Describe communication barriers  52. Gather and report subjective/objective data utilizing active listening/speaking and writing	Foundation Standard 2: Communications  2.1 Concepts of Effective Communication 2.11 Interpret verbal and nonverbal communication 2.12 Identify barriers to communication 2.13 Report subjective and objective information

		<ul> <li>Scheduling Patients</li> <li>Correspondence-Email</li> <li>Processing Mail</li> <li>Suggested Activities:         <ul> <li>Role play listening, giving and following direction activities</li> <li>Complete a patient chart: History and PE</li> <li>Medical terminology log book</li> </ul> </li> </ul>	. M. Team Communication: Understand how to communicate client/patient information within a team.  53. Provide complete client information to the team within a timely manner. 54. Observe and report unsafe environmental conditions. 55. Report changes in patient conditions that might introduce risk to clients or staff.	2.14 Interpret the elements of communication using basic sender-receiver-feedback model 2.15 Apply speaking and active listening skills 2.16 Modify communication to meet the needs of the patient/client and to be appropriate to the situation.
Week 4	Chapter 22- Physical Therapy Skills	Legal and Ethical Responsibilities Specific to the Physical Therapy Aide  Legal/Ethical Standards Medical Professional Liability Types of Consent Good Samaritan Act	F. Legal Awareness: Evaluate legal responsibilities, limitations and implications of actions within the health care delivery system and perform duties according to regulations, policies, laws and rights of clients.  20. Explain confidentiality of health information (HIPAA), consent, and negligence.  21. Explain and apply Patient Bill of Rights 22. Define scope of practice  23. Describe legal requirements in documentation	Foundation Standard 5: Legal Responsibilities 5.1 Legal Implications 5.11 Analyze legal responsibilities and limitations 5.12 Apply procedures for accurate documentation and use of electronic and print health records

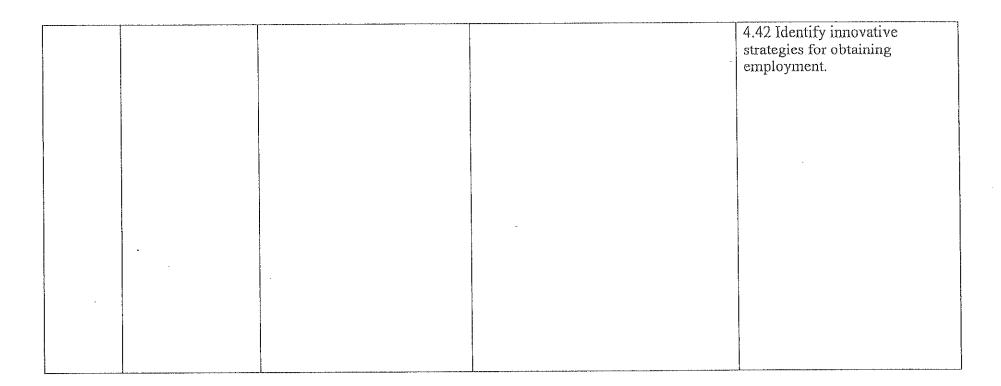
		<ul> <li>Patient Rights</li> <li>Chain of Command</li> <li>HIPAA Patient         Privacy Rule</li> <li>Professionalism</li> <li>Scope of Practice</li> <li>Suggested Activities:         <ul> <li>Research State statutes</li> <li>re: Duties and</li> <li>responsibilities of</li> <li>Physical therapyAide</li> </ul> </li> </ul>	24. Incorporate procedure for accurate doc in health care setting. 25. Describe advance directives, informed consent, living will, negligence and malpractice. 26. Describe legal responsibility with abuse and neglect.  G. Ethical Practices: Evaluate accepted ethical practices with respect to cultural, social, and ethnic differences within the health care environment.  27. Identify needs of residents who have cultural, social, ethical and spiritual differences. 28. Interpret Code of Ethics and PBOR 29.Demonstrate respectful and empathetic treatment of ALL patients/clients 30. Utilize procedures for reporting activities and behaviors that affect the health and safety and welfare of others.	5.2 Legal Practices  5.21 Apply standards for the privacy and confidentiality of health information (HIPAA) 5.22 Summarize the essential characteristics of a patients basic rights within the healthcare setting 5.24 Understand informed consent 5.25 Differentiate laws governing harassment, labor and scope of practice.
Week 5	Chapter 13- Promotion of Safety	Safety Functions Specific to a Physical Therapy Aide  • Fire Safety Guidelines • Bio hazardous Waste Disposal Safety • MSDS Sheets • OSHA standards specific to Physical Therapy Aide • Patient Safety • Body Mechanics • Body Positions • Transfer Techniques	O. Principles of Body Mechanics for positioning, transferring, and transporting clients and perform these activities efficiently and without injury to clients or self.  59. Describe and demonstrate the process for positioning the client to ensure comfort. 60. Recognize center of gravity and base of support in order to use proper lifting techniques. 61. Describe and use various types of transport or transfer equipment appropriate for the patient/situation. 62. Inform patients/clients what to expect during activity.	Foundation Standard 7: Safety Practices  7.2 Personal Safety  7.21 Apply personal safety procedures based on OSHA and CDC regulations 7.22 Apply principles of body mechanics  7.3 Environmental Safety  7.31 Apply safety techniques in the work environment

		Suggested Activities:  Demo Use of fire extinguisher and role play fire drill in Medical office setting  Demo and practice different body positions  Demo and practice proper transfer techniques  Role play an emergency situation specific to the Physical Therapy Aide	H. Safe and Healthy Work Practices: Analyze the existing and potential hazards to clients, co-workers, and self and prevent injury or illness through safe work practices and follow health and safety policies and procedures.  31. Describe standard precautions and OSHA standards. 32. Apply principles of body mechanics 33. Identify methods for cleaning instruments, equipment and environmental surfaces. 34. Identify and implement emergency procedures for fire, electrical and hazardous materials. 35. Recognize and comply with safety signs, symbols, labels and the use of SDS/MSDS sheets.	7.4 Common Safety Hazards  7.41 Recognize Safety Data Sheets (SDS). (www.osha.gov)  7.42 Comply with safety signs, symbols, and labels  7.5 Emergency Procedures and Protocols.  7.51 Practice fire safety in a healthcare setting  7.52 Apply principles of basic emergency response in natural disasters and other emergencies.
Week 6 &7	Chapter 22- Physical Therapy Skills	Verification of Insurance Benefits and Medical Records Management.  Insurance Terminology  Types of Insurance Verification of Benefits  Completing Insurance Forms  Components of the Medical Record  Records	D. Health Care Delivery System: Describe how the health care workers' role fits into their department, organization, and overall health care environment.  13. Differentiate among the range of services offered to clients through various health care facilities.  14. Compare how various state and federal agencies, regulatory boards and ins companies affect the delivery of health care, including reimbursement and payment sources.  15. Describe consumer's responsibility within the health care delivery system.	Foundation Standard 11: Information Technology Applications  11.1 Health Information Literacy Skills 11.11 Identify methods and types of data collected in healthcare 11.12 Use health record data collection tools (input screens, document templates) 11.13 Differentiate between types and content of health records (patient, pharmacy, and lab) 11.14 Create documentation in the health record that reflects timeliness, completeness, and accuracy.

Week 8	Chapter 22- Physical Therapy Skills	Suggested Activities:  Create a Medical Chart Role play new/existing patient scenario visit  Demonstrate and apply understanding of Indexing, Alpha Filing, Numerical and Terminal digit Filing Create files in all systems of filing Create Tickler file for time sensitive matters	M. Team Communication: Understand how to communicate client/patient information within a team.  53. Provide complete client information to the team within a timely manner.	Health Information 11.22 Identify legal and regulatory req. related to use of PHI 11.23 Identify and apply p/p for access and disclosure of PHI 11.24Describe the consequences of inappropriate use of PHI in terms of disciplinary action. 11.25 Describe appropriate methods to correct inaccurate information/errors personally entered into an electronic medical record (EMR)  11.3 Basic Computer Literacy Skills 11.32 Demonstrate basic computer operating procedures 11.33 Demonstrate use of file organization and information storage 11.36 Demonstrate use of appropriate email and social media usage.
Week 9	Chapter 22- Physical Therapy Skills Chapter 6- Medical	**Mid-Semester Exam		
	Terminology  Chapter 7- Anatomy & Physiology			

	Chapter 13- Safety			
Week-10 thru 15	Chapter 22-Physical Therapy Skills	Performing skills Specific to the Role of the Physical Therapy Aide.  Performing Range of Motion (ROM) Exercises Passive and Active ROM Ambulating Patients with Gait Belts Assisting/Ambulating Patients with Crutches, Canes, and Walkers Administering Heat/Cold Applications Cryotherapy Thermotherapy Aquathermia Administration of a Sitz Bath Disinfect and sterilize materials and equipment Respond to acute changes in physiological state of patient	A. Health Science: Understand and apply the academic subject matter required for entrance into health science.  1. Differentiate among and prepare various patient forms, including HER and EMR that are used in documenting client/patient information.  2. Perform math operations as they relate to healthcare.  3. Interpret healthcare results using diagrams, charts, graphs and tables.  4. Define and use medical terminology  5. Describe the basic structural and functional organization of the human body used in assessing health.  6. Describe healthcare in respect to diverse populations.  N. Monitoring Patient Status:  Monitor, plan, implement, and evaluate the care provided based on age, physical, and psychosocial needs.	Foundation Standard 10: Technical Skills 10.1 Technical Skills  10.11 Apply procedures for measuring and recording vital signs including the normal ranges  10.12 Apply skills to obtain training or certification in CPR, automated external defibrillator (AED), foreign body airway obstruction (FBAO) and first aid.  ** Additional technical skills are included specific to Physical Therapy Aide
	•	<ul> <li>Identify architectural</li> </ul>	57. Demonstrate the following skills:	

		barriers  Interact with patients and families in a manner which provides desired psych-social support.  Recognize and respond to Emergency situations  Suggested Activities:  All procedures will be performed in Skill Lab using equipment specific to each skill.	vital signs, basic CPR/AED principles, basic first aid, basic client transfers, height/weight, and appropriate medical language.  58. Recognize and report subjective and objective findings to Physical Therapist and RN.	
Week 16- 18	Chapter 22- Physical Therapy Skills	Certification Exam and Workplace Readiness  Job search Interview techniques Resume Writing Managing conflict Certification Continuing education requirements Stress management  Suggested Activities: Portfolios Resume Mock interview On line applications	E. Employability Skills: Analyze how employability skills enhance employment opportunities and job satisfaction.  16.Demonstrate proficiency in technology skills  17. Compare various career options in therapeutic and diagnostic health care and required education for practice.  18. Describe the personal and professional attributes of a health care provider.  19. Demonstrate employability skills in healthcare.	Foundation Standard 4: Employability Skills  4.2 Employability Skills 4.21 Apply employability skills in healthcare.  4.3 Career Decision-making 4.31 Discuss levels of education, credentialing req, and employment trends in Physical Therapy fields 4.32 Compare careers within the health science career pathways.  4.4 Employability Preparation 4.41 Develop components of a personal portfolio



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# Waterbury Career Academy High School

#### Health Services

SY 2016-17

Health Services Curriculum Mapping

CTE Program: Allied Health 1- Medical Assisting

Textbook: Cengage Diversified Health Occupations 7<sup>th</sup> ed-Simmers

Time	CTE Topic		2015 CCTE Medical Careers	National Healthcare
Frame	Unit/Chapter	CTE Concepts/Applications	Education: Standards and	Foundation Standards &
A 4 44 A 4 4	CARAN CHARDEON		Competencies	Accountability Criteria
		Body Systems and Medical Terminology		Foundation Standard 1:Academic Foundation
	Chapter 7- Anatomy and Physiology	<ul> <li>Review Body Systems</li> <li>Review Disease with body systems</li> <li>Body Structure and</li> </ul>	C. Body Systems: Compare the anatomical structures and physiological function of each body system	1.1 Human Structure and Function 1.11 Classify the basic structural and functional organization of the human body 1.12 Recognize body planes, directional terms, quadrants, and
Week 1	Chapter 6-Medical Terminology	Directional Terminology	10.Diagram structure of cells, tissue, organs, and systems 11.Identify physiology and pathophysiology of body systems	cavities 1.13Analyze the basic structure and function of the human body.
		Suggested Activities:  Vocabulary log of	12. Define and use the following medical terminology related to each body system.	Foundation Standard 2:Communications
		medical terms for each body system.  • Anatomy labeling of body organs		2.2 Medical Terminology 2.21 Use roots, prefixes, and suffixes to communicate information 2.22 Use medical abbreviations to communicate information
Week 2 & 3	Chapter 20- Medical Assistant Skills	Verbal and Written Communication Specific to the Medical Assistant  Communication Strategies	L.Patient Communication: Demonstrate patient interaction skills  48.Describe the elements of communication using a basic sender-receiver-feedback model 49.Differentiate communication to meet the needs of the patient	Foundation Standard 2: Communications  2.1 Concepts of Effective Communication 2.11 Interpret verbal and nonverbal
		<ul> <li>Phone Etiquette</li> <li>Medical Abbreviations</li> <li>Verbal and Non Verbal</li> <li>Respect</li> <li>Scheduling Patients</li> <li>Correspondence-Email</li> </ul>	50.Use verbal and non-verbal communication skills 51. Describe communication barriers 52. Gather and report subjective/objective data utilizing active listening/speaking and writing skills	communication 2.12 Identify barriers to communication 2.13 Report subjective and objective information  2.14 Interpret the elements of

		<ul> <li>Processing Mail</li> <li>Suggested Activities:         <ul> <li>Role play listening, giving and following direction activities</li> <li>Complete a patient chart: History and PE</li> <li>Medical terminology log book</li> </ul> </li> </ul>	. M. Team Communication: Understand how to communicate client/patient information within a team.  53. Provide complete client information to the team within a timely manner. 54. Observe and report unsafe environmental conditions.  55. Report changes in patient conditions that might introduce risk to clients or staff.	communication using basic sender- receiver-feedback model 2.15 Apply speaking and active listening skills 2.16 Modify communication to meet the needs of the patient/client and to be appropriate to the situation.
Week 4	Chapter 20- Medical Assistant Skills	Legal and Ethical Responsibilities Specific to the Medical Assistant  Legal/Ethical Standards Medical Professional Liability Types of Consent Good Samaritan Act Patient Rights Chain of Command HIPAA Patient	F. Legal Awareness: Evaluate legal responsibilities, limitations and implications of actions within the health care delivery system and perform duties according to regulations, policies, laws and rights of clients.  20. Explain confidentiality of health information (HIPAA), consent, and negligence.  21. Explain and apply Patient Bill of Rights 22. Define scope of practice  23. Describe legal requirements in documentation  24. Incorporate procedure for accurate doc in health care setting.  25. Describe advance directives, informed	Foundation Standard 5: Legal Responsibilities 5.1 Legal Implications 5.11 Analyze legal responsibilities and limitations 5.12 Apply procedures for accurate documentation and use of electronic and print health records  5.2 Legal Practices 5.21 Apply standards for the privacy and confidentiality of health information (HIPAA) 5.22 Summarize the essential characteristics of a patients basic

		Privacy Rule Professionalism Scope of Practice  Suggested Activities: Research State statutes re: Duties and responsibilities of Medical Assistants	consent, living will, negligence and malpractice.  26. Describe legal responsibility with abuse and neglect.  G. Ethical Practices: Evaluate accepted ethical practices with respect to cultural, social, and ethnic differences within the health care environment.  27. Identify needs of residents who have cultural, social, ethical and spiritual differences.  28. Interpret Code of Ethics and PBOR 29.Demonstrate respectful and empathetic treatment of ALL patients/clients  30. Utilize procedures for reporting activities and behaviors that affect the health and safety and welfare of others.	rights within the healthcare setting 5.24 Understand informed consent 5.25 Differentiate laws governing harassment, labor and scope of practice.
Week 5	Chapter 13- Promotion of Safety	Safety Functions Specific to Medical Assistant  Fire Safety Guidelines Bio hazardous Waste Disposal Safety MSDS Sheets OSHA standards specific to Medical Assistants Patient Safety Body Mechanics Body Positions Transfer Techniques	O. Principles of Body Mechanics for positioning, transferring, and transporting clients and perform these activities efficiently and without injury to clients or self.  59. Describe and demonstrate the process for positioning the client to ensure comfort. 60. Recognize center of gravity and base of support in order to use proper lifting techniques. 61. Describe and use various types of transport or transfer equipment appropriate for the patient/situation. 62. Inform patients/clients what to expect during activity.  H. Safe and Healthy Work Practices: Analyze the existing and potential hazards to clients, co-workers, and self and prevent	Foundation Standard 7: Safety Practices  7.2 Personal Safety  7.21 Apply personal safety procedures based on OSHA and CDC regulations 7.22 Apply principles of body mechanics  7.3 Environmental Safety  7.31 Apply safety techniques in the work environment  7.4 Common Safety Hazards

		<ul> <li>Demo Use of fire extinguisher and role play fire drill in Medical office setting</li> <li>Demo and practice different body positions</li> <li>Demo and practice proper transfer techniques</li> <li>Role play an emergency situation specific to the medical assistant</li> </ul>	injury or illness through safe work practices and follow health and safety policies and procedures.  31. Describe standard precautions and OSHA standards.  32. Apply principles of body mechanics  33. Identify methods for cleaning instruments, equipment and environmental surfaces.  34. Identify and implement emergency procedures for fire, electrical and hazardous materials.  35. Recognize and comply with safety signs, symbols, labels and the use of SDS/MSDS sheets.	7.41 Recognize Safety Data Sheets (SDS). (www.osha.gov) 7.42 Comply with safety signs, symbols, and labels 7.5 Emergency Procedures and Protocols. 7.51 Practice fire safety in a healthcare setting 7.52 Apply principles of basic emergency response in natural disasters and other emergencies.
Week 6 &7	Chapter 20- Medical Assistant Skills	Verification of Insurance Benefits and Medical Records Management.  Insurance Terminology  Types of Insurance Verification of Benefits  Completing Insurance Forms  Components of the Medical Record  Creating Medical Records  Suggested Activities:  Create a Medical Chart	D. Health Care Delivery System: Describe how the health care workers' role fits into their department, organization, and overall health care environment.  13. Differentiate among the range of services offered to clients through various health care facilities.  14. Compare how various state and federal agencies, regulatory boards and ins companies affect the delivery of health care, including reimbursement and payment sources.  15. Describe consumer's responsibility within the health care delivery system.	Foundation Standard 11: Information Technology Applications  11.1 Health Information Literacy Skills 11.11 Identify methods and types of data collected in healthcare 11.12 Use health record data collection tools (input screens, document templates) 11.13 Differentiate between types and content of health records (patient, pharmacy, and lab) 11.14 Create documentation in the health record that reflects timeliness, completeness, and accuracy.  11.2 Privacy and Confidentiality of Health Information 11.22 Identify legal and regulatory

		Role play     new/existing patient     scenario visit	M. Team Communication: Understand how	req. related to use of PHI 11.23 Identify and apply p/p for access and disclosure of PHI 11.24Describe the consequences of inappropriate use of PHI in terms of disciplinary action.
Week 8	Chapter 20- Medical Assistant Skills	Demonstrate and apply understanding of Indexing, Alpha Filing, Numerical and Terminal digit Filing  Create files in all systems of filing  Create Tickler file for time sensitive matters	to communicate client/patient information within a team.  53. Provide complete client information to the team within a timely manner.	11.25 Describe appropriate methods to correct inaccurate information/errors personally entered into an electronic medical record (EMR)  11.3 Basic Computer Literacy Skills 11.32 Demonstrate basic computer operating procedures 11.33 Demonstrate use of file organization and information storage 11.36 Demonstrate use of appropriate email and social media usage.
Week 9	Chapter 20- Medical Assistant Skills Chapter 6- Medical Terminology Chapter 7- Anatomy & Physiology	**Mid-Semester Exam		

	Chapter 13- Safety			
Week-10 thru 15	Chapter 20- Medical Assistant Skills	Performing skills Specific to the Role of the Medical Assistant.  Measuring/Recording Height and Weight Measuring/Recording Height and Weight of an Infant Positioning a Patient Screening for Vision Problems Assisting with Physical Examinations Eye,Ear,Nose and Throat Examination Assisting with a Gynecological Examination Assisting with a General Examination Assisting with Minor Surgery/Suture Removal Recording and Mounting an EKG Using the PDR Working with Math and Medications	A. Health Science: Understand and apply the academic subject matter required for entrance into health science.  1. Differentiate among and prepare various patient forms, including HER and EMR that are used in documenting client/patient information.  2. Perform math operations as they relate to healthcare.  3. Interpret healthcare results using diagrams, charts, graphs and tables.  4. Define and use medical terminology  5. Describe the basic structural and functional organization of the human body used in assessing health.  6. Describe healthcare in respect to diverse populations.	Foundation Standard 10: Technical Skills  10.11 Apply procedures for measuring and recording vital signs including the normal ranges  10.12 Apply skills to obtain training or certification in CPR, automated external defibrillator (AED), foreign body airway obstruction (FBAO) and first aid.  ** Additional technical skills are included specific to Medical Assistant

		<ul> <li>Using Roman         Numerals</li> <li>Converting Metric         measurements</li> <li>Converting         Household(English)         Measurements</li> <li>Suggested Activities:         <ul> <li>All procedures will be performed in Skill Lab using equipment specific to each skill.</li> </ul> </li> </ul>	N. Monitoring Patient Status: Monitor, plan, implement, and evaluate the care provided based on age, physical, and psychosocial needs.  57. Demonstrate the following skills: vital signs, basic CPR/AED principles, basic first aid, basic client transfers, height/weight, and appropriate medical language.  58. Recognize and report subjective and objective findings to nurse.	Foundation Standard 1:Academic Foundation  1.2 Medical Mathematics 1.31 Apply mathematical computations related to healthcare(metric and household, conversions and measurements) 1.32 Analyze diagrams, charts, graphs and tables to interpret healthcare results 1.33 Record time using the 24-hour clock
Week 16- 18	Chapter 20- Medical Assistant Skills	Certification Exam and Workplace Readiness  Job search Interview techniques Resume Writing Managing conflict Certification Continuing education requirements Stress management Suggested Activities:	E. Employability Skills: Analyze how employability skills enhance employment opportunities and job satisfaction.  16.Demonstrate proficiency in technology skills  17. Compare various career options in therapeutic and diagnostic health care and required education for practice. required education for practice.	Foundation Standard 4: Employability Skills  4.2 Employability Skills 4.21 Apply employability skills in healthcare.  4.3 Career Decision-making 4.31 Discuss levels of education, credentialing req, and employment trends in Medical Assisting field

	<ul> <li>Portfolios</li> <li>Resume</li> <li>Mock interview</li> <li>On line applications</li> </ul>	18. Describe the personal and professional attributes of a health care provider.  19. Demonstrate employability skills in healthcare.	4.32 Compare careers within the health science career pathways.  4.4 Employability Preparation 4.41 Develop components of a personal portfolio 4.42 Identify innovative strategies for obtaining employment.
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### Waterbury Career Academy High School

#### Health Services

SY 2016-17

Health Services Curriculum Mapping

CTE Program: Nursing Assistant

Textbook: Hartman's Nursing Assistant Care:Long-Term Care

\* indicates required mastery of state clinical skills

Time Frame	CTE Topic Unit/Chapter	CTE Concepts/Applications	2015 CCTE Medical Careers Education: Standards and Competencies	National Healthcare Foundation Standards & Accountability Criteria
Week 1&2	Chapter 8- Human Needs & Human Development Chapter 9- The Healthy Human Body Chapter 18- Common Chronic and Acute Conditions	<ul> <li>Review Body Systems</li> <li>Review Disease with body systems</li> <li>Review stage of growth and development</li> <li>Group assignment to write a summary on designated systems. Share with other groups</li> <li>Vocabulary log of medical terms for each body system.</li> <li>Anatomy labeling of body organs</li> </ul>	C. Body Systems: Compare the anatomical structures and physiological function of each body system  10.Diagram structure of cells, tissue, organs, and systems 11.Identify physiology and pathophysiology of body systems 12. Define and use the following medical terminology related to Each body system.	Foundation  1.1 Human Structure and Function 1.11 Classify the basic structural and functional organization of the human body 1.12 Recognize body planes, directional terms, quadrants, and cavities 1.13Analyze the basic structure and function of the human body. 1.2 Diseases and Disorders  1.21 Research common diseases/ disorders of each body system. 1.22 Research emerging diseases and disorders 1.23 Investigate biomedical therapies as they relate to the prevention, pathology and tx of disease
Week 3&4	Chapter 4- Communication and Cultural Diversity	Verbal and Written Communication Specific to the Nurse Assistant  Communication Strategies Medical Abbreviations Terminology Subjective and	L.Patient Communication: Demonstrate patient interaction skills  48.Describe the elements of communication using a basic sender-receiver-feedback model 49.Differentiate communication to meet the needs of the patient 50.Use verbal and non-verbal communication skills 51. Describe communication barriers 52. Gather and report subjective/objective data	Foundation Standard 2: Communications  2.1 Concepts of Effective Communication  2.11 Interpret verbal and nonverbal communication 2.12 Identify barriers to communication 2.13 Report subjective and objective

	Objective information Guidelines for communicating with Special needs residents Proper documentation specific to the Nurse Assistant  Suggested Activities: Role play listening, giving and following direction activities Complete a patient chart Medical terminology log book Identify medical terms in news items	utilizing active listening/speaking and writing skills.	information  2.14 Interpret the elements of communication using basic sender-receiver-feedback model 2.15 Apply speaking and active listening skills 2.16 Modify communication to meet the needs of the patient/client and to be appropriate to the situation.  Foundation Standard 6: Ethics 6.2 Cultural, Social, and Ethnic Diversity 6.21 Research religious and cultural values as they impact healthcare and develop plans/guidelines for addressing cultural diversity. 6.22 Demonstrate respectful and empathetic treatment of ALL patients /clients.  Foundation Standard 2:Communications 2.2 Medical Terminology 2.21 Use roots, prefixes, and suffixes to communicate information 2.22 Use medical abbreviations to communicate information
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Week 5	Chapter 2- The Nursing Assistant and The Care Team Chapter 3- Legal and Ethical Issues	Legal and Ethical Responsibilities Specific to the Nurse Assistant  Legal/Ethical Standards Patient Rights Advance Directives Chain of Command Legal Aspects of Charting HIPAA/PSDA Role of Ombudsman Legal Guidelines for Nurse Assistants Professionalism Scope of Practice  Suggested Activities: OBRA guideline class activity Patient Rights samples from hospitals and Nursing Home Facilities	F. Legal Awareness: Evaluate legal responsibilities, limitations and implications of actions within the health care delivery system and perform duties according to regulations, policies, laws and rights of clients.  20. Explain confidentiality of health information (HIPAA), consent, and negligence.  21. Explain and apply Patient Bill of Rights  22. Define scope of practice  23. Describe legal requirements in documentation  24. Incorporate procedure for accurate doc in health care setting.  25. Describe advance directives, informed consent, living will, negligence and malpractice.  26. Describe legal responsibility with abuse and neglect.  G. Ethical Practices: Evaluate accepted ethical practices with respect to cultural, social, and ethnic differences within the health care environment.  27. Identify needs of residents who have cultural, social, ethical and spiritual differences.  28. Interpret Code of Ethics and PBOR	Foundation Standard 5: Legal Responsibilities  5.1 Legal Implications  5.11 Analyze legal responsibilities and limitations 5.12 Apply procedures for accurate documentation and use of electronic and print health records  5.2 Legal Practices  5.21 Apply standards for the privacy and confidentiality of health information (HIPAA) 5.22 Summarize the essential characteristics of a patients basic rights within the healthcare setting 5.24 Understand informed consent 5.25 Differentiate laws governing harassment, labor and scope of practice.  Foundation Standard 6:Ethics  6.1 Ethical Practice  6.11 Differentiate between ethical and legal issues impacting healthcare
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		Living Wills, Mercy in Medicine  Group research and discussion on Bioethical issue specific to the Nurse Assistant  Research guideline for different states	30. Utilize procedures for reporting activities and behaviors that affect the health and safety and welfare of others.	6.13 Utilize procedures for reporting activities and behaviors that affect the health, safety, and welfare of others.
Week 6	Chapter 6- Safety and Body Mechanics Chapter 10- Positioning,Lifting and Moving	Physical Comfort and Safety Functions Specific to Nurse Assisting  Fire Safety Guidelines Bio hazardous Waste Disposal Safety MSDS Sheets OSHA standards specific to Nurse Assisting Patient Safety Body Mechanics Body Positions	O. Principles of Body Mechanics for positioning, transferring, and transporting clients and perform these activities efficiently and without injury to clients or self.  59. Describe and demonstrate the process for positioning the client to ensure comfort. 60. Recognize center of gravity and base of support in order to use proper lifting techniques. 61. Describe and use various types of transport or transfer equipment appropriate for the patient/situation. 62. Inform patients/clients what to expect during activity.	Foundation Standard 7: Safety Practices  7.2 Personal Safety  7.21 Apply personal safety procedures based on OSHA and CDC regulations 7.22 Apply principles of body mechanics  7.3 Environmental Safety  7.31 Apply safety techniques in the work environment
		<ul> <li>Transfer Techniques</li> <li>Suggested Activities:         <ul> <li>Demo Use of fire extinguisher and role play fire drill in nursing care facility</li> <li>Demo and practice different body positions</li> <li>Demo and practice</li> </ul> </li> </ul>	H. Safe and Healthy Work Practices: Analyze the existing and potential hazards to clients, co-workers, and self and prevent injury or illness through safe work practices and follow health and safety policies and procedures.  31. Describe standard precautions and OSHA standards. 32. Apply principles of body mechanics 33. Identify methods for cleaning instruments, equipment and environmental surfaces. 34. Identify and implement emergency procedures for fire, electrical and hazardous	7.4 Common Safety Hazards  7.41 Recognize Safety Data Sheets (SDS). (www.osha.gov)  7.42 Comply with safety signs, symbols, and labels  7.5 Emergency Procedures and Protocols.  7.51 Practice fire safety in a healthcare setting 7.52 Apply principles of basic

		proper transfer techniques Role play an emergency situation specific to the nurse assistant Begin to use state skill book to practice appropriate test skills	materials.  35. Recognize and comply with safety signs, symbols, labels and the use of SDS/MSDS sheets.	emergency response in natural disasters and other emergencies.
Week 7&8	Chapter 5- Preventing Infection	Apply the Principles of Infection Control Specific to Nurse Assisting  Review Chain of Infection specific to the Nurse Assistant  Medical Asepsis/Surgical Asepsis  OSHA Standards/Bloodborne Pathogens  Isolation Procedures and types  Collection of specimens  Handling of body waste and proper disposal PPE use	B. Disease Processes: Demonstrate the concepts of basic disease processes.  7. Research common and emerging diseases and disorders 8. Recognize signs and symptoms of common and emerging diseases and disorders 9. Identify the body's response to the presence of disease or infection.  J. Health Maintenance Practices: Understand the fundamentals of wellness and the prevention of disease processes.  40. Identify available preventive health screenings and examinations. 41. Describe alternative health practices 42. Describe behaviors that promote health and wellness. 43. Identify methods to reduce health risk factors.	Foundation Standard 7: Safety Practices  7.1 Infection Control  7.11 Explain the principles of infection control  7.12 Assess methods of controlling the spread and growth of microorganisms.
Week 9	Chapter 19-	Care for the Geriatric Patients	K. Pathophysiology: Analyze pathophysiological effects of abnormal factors that impact a healthy body and	Foundation Standard 9: Health Maintenance Practices

Confusion,	<ul> <li>Normal Aging Process</li> </ul>	mind.	9.1 Healthy Behaviors
Confusion, Dementia, and Alzheimer's Disease  Chapter 20- Mental Health and Mental Illness	<ul> <li>Normal Aging Process</li> <li>Change in Social,         Emotional and         Economic Standards</li> <li>Resources available to         the geriatric patient</li> <li>Special needs of the         geriatric patient</li> <li>Community Resources         for Alzheimer's         Disease</li> <li>Common diseases</li> <li>Dementia: Alzheimer's         Disease</li> <li>Characteristics of         Mental Health</li> <li>Causes of Mental         Illness</li> <li>Nurse Assistant role in         caring for mentally ill         residents</li> </ul>	44. Explain the effects of immobility on the body systems. 45. Interpret the potential effects of stress on the development of disease. 46. Describe the effects of potential complications associated with the abuse of ETOH, tobacco and prescription drugs. 47. Compare various diseases caused by environmental hazards, including temperature-related disorders, bites, stings and food poisoning.	9.11 Apply behaviors that promote health and wellness 9.12 Describe strategies for the prevention of diseases including health screenings and examinations. 9.13 Investigate complementary (alternative) health practices as they relate to wellness and disease prevention.
	Suggested Activities:  Video on the Aging Process  Internet research on available services in the community  Assign a disease to each student for research and presentation to the class  Role play the		

		disabilities of the geriatric patient  Guest speaker on Alzheimer's Disease and impact on family and community  Visit a geriatric facility  Interview an elderly person in family or community  Demo and practice skills appropriate for geriatric patient — state guidelines		
Week 10	Chapter 26- Nutrition and Hydration	Apply Principles of Nutrition  Food Pyramid Therapeutic Diets Thickened liquids Use of Assistive Devices Variations to Normal Diets (Tube feedings, etc.) Cultural Influences Importance of Intake and Output on the body Nutritional problems of the elderly	Identify nutrients and food groups  Explain regional, cultural, and religious food preferences.  Describe special diets.  Prepare a basic food plan.  Check patient's diet tray for accuracy.  Identify methods of maintaining fluid balance.	Foundation Standard 9: Health Maintenance Practices  9.1 Healthy Behaviors  9.11 Apply behaviors that promote health and wellness  9.12 Describe strategies for the prevention of diseases including health screenings and examinations.

Week-11	Chapter 21- Rehabilitation and Restorative Care	<ul> <li>Develop a given therapeutic diet and present to class</li> <li>Demo and practice proper feeding technique -* state skill</li> <li>Assist with Restorative (Rehabilitative) Activities</li> <li>Purposes of Restorative (Rehabilitation)</li> <li>Types of Rehabilitation</li> <li>Assistive devices and</li> </ul>	M. Team Communication: Understand how to communicate client/patient information within a team.  53. Provide complete client information to the team within a timely manner.  54. Observe and report unsafe environmental conditions.  55. Report changes in patient conditions that might introduce risk to clients or staff.	Foundation Standard 8: Teamwork  8.1 Healthcare Teams  8.11 Understand roles and responsibilities of team members.
		<ul> <li>Maintaining fluid balance</li> <li>Suggested Activities:         <ul> <li>Keep a week long log of nutrients consumed</li> <li>Compare and contrast gastrostomy and nasogastric tube feedings.</li> <li>Calculate intake and output and document — state skill</li> </ul> </li> </ul>		

		devices	Assist patients/residents to reach the optimum level of independence.	
		Suggested Activities:  Guest speaker — Physical Therapist  Demo and practice ROM — state skill  Research health care team member and qualifications  Visit Rehabilitation facility		
Week 12	Chapter 22– Special Care Skills	Provide Biological, Psychological and Social Support	N. Monitoring Patient Status: Monitor, plan, implement, and evaluate the care provided based on age, physical, and psychosocial needs.	
	Chapter 23- Death and Dying	<ul> <li>Psychological and</li> <li>Social Changes as</li> <li>related to the patient</li> <li>with disease or illness</li> <li>Sub acute care</li> </ul>	57. Demonstrate the following skills: vital signs, basic CPR/AED principles, basic first aid, basic client transfers, height/weight, and appropriate medical language.	
		<ul><li>Telemetry, Ventilator care</li><li>Stages of grief</li></ul>	58. Recognize and report subjective and objective findings to nurse.	
		Rights of the dying patient	Discuss family roles and their significance to health.	
		<ul> <li>Needs of the terminally ill patient and their family</li> </ul>	Respond to patient and family emotional needs.	
		<ul> <li>Care options for the terminally ill patient</li> <li>Hospice Care/Palliative Care</li> </ul>		

		concept Post Mortem Care  Suggested Activities: Guest Speaker — Social Worker Guest Speaker — Hospice Role play disabilities from some terminal illnesses Research and present to class different terminal conditions		
		and how the Nurse Assistant plays a role		
Week 13, 14 & 15	Chapter 16- Urinary	Provide Personal Patient Care  Provide Care for the Adult	Give partial bed bath.*  Assist with shower or tub bath, including the use of specialty tubs.	Foundation Standard 10: Technical Skills
**	Elimination	Patient  • Identify s/s of	Assist patient with sink, tub, shower, or bed shampoo.	10.1 Technical Skills
		abnormal urine Guidelines for catheter care	Groom patient, including skin, foot, and nail care.*	10.11 Apply procedures
	Chapter 17-Bowel Elimination	<ul><li>Specimen collection</li><li>Occult Blood Testing</li></ul>	Assist with and/or administer oral hygiene.*  Assist patient with toileting.*	for measuring and recording vital signs including the normal
		Bowel and Bladder     retraining	Assist patient to dress.*	ranges
	Chapter- 13 Personal Care	Importance of Hygiene and Grooming for the	Assist patient with meals.*	10.12 Apply skills to
	Skills	long-term resident  Nurse Assistant role in grooming of residents	Give perineal care.*  Empty urinary drainage.*	10.12 Apply skills to obtain training or
	<u> </u>	grooming or residents	Divided arranged.	1

Week 16, 17 & 18	check off proficiency in each of the required skills Perform skills in clinical setting  Perform Patient Care Procedures	D. Health Care Delivery System: Describe how the health care workers' role fits into	
	procedures related to resident personal care  Suggested Activities:  Use skill lab to demonstrate and practice each of the required skills  Use state skill list to	of patients with common health problems.	specific to the Nurse Assistant
	of decubitus dicers	Assist with physical examination. Care for patients receiving oxygen therapy. Change an unsterile dressing.  3Take an apical pulse. Take radial pulse.*  Take pedal pulse  Demonstrate understanding and knowledge	certification in CPR, automated external defibrillator (AED), foreign body airway obstruction (FBAO) and first aid.  ** Additional technical skills are included

Chapte	er 1-		their department, organization, and overall	
, , ,	standing	Perform Supervised	health care environment.	Foundation Standard
Health	_	Organization Functions,		10: Technical Skills
Setting	gs	Following the Patient Care	13. Differentiate among the range of services offered to clients through various health care	10.1 Technical Skills
		Plan	facilities.	A COL A CORRESPOND DESIGNATION OF THE PROPERTY
and Di Prepar Chapte Admis Transf Discha	gency Care isaster ration er 11- ssion, Terring and	Plan  Perform Skills related to the Hospital/Long Term Care Setting  • Understanding of importance of each patient procedure • Nurse Assistant role in relationship to patient procedures • State guidelines for Nurse Assistants in providing patient procedures • Understand importance of Patient Care Plan  Suggested Activities: • Use skill lab to demonstrate and practice each of the required skills		10.11 Apply procedures for measuring and recording vital signs including the normal ranges  10.12 Apply skills to obtain training or certification in CPR, automated external defibrillator (AED), foreign body airway obstruction (FBAO) and first aid.  ** Additional technical skills are included specific to the Nurse Assistant

2 <sup>nd</sup> Semester  Weeks 1 thru 10	Chapter 14-Basic Nursing Skills  22 Clinical Skill Procedures (Prometrics)	Clinical Rotations in Long Term Care and Acute Care/Hospital Setting  ***Required 60 clinical hours to be eligible for State of CT CNA Exam  Organize patient care assignments Complete assignments accurately and in a timely manner.  Use state skill list to check off proficiency in each of the required skills  Perform skills in clinical setting	A. Health Science: Understand and apply the academic subject matter required for entrance into health science.  1. Differentiate among and prepare various patient forms, including HER and EMR that are used in documenting client/patient information.  2. Perform math operations as they relate to healthcare.  3. Interpret healthcare results using diagrams, charts, graphs and tables.  4. Define and use medical terminology  5. Describe the basic structural and functional organization of the human body used in assessing health.  6. Describe healthcare in respect to diverse populations.	10.1 Technical Skills  10.11 Apply procedures for measuring and recording vital signs including the normal ranges  10.12 Apply skills to obtain training or certification in CPR, automated external defibrillator (AED), foreign body airway obstruction (FBAO) and first aid.  *** Additional technical skills are included specific to the Nurse Assistant  Foundation Standard 1:Academic Foundation  1.3 Medical Mathematics     1.31 Apply mathematical computations related to healthcare procedures (metric and household,, conversions and measurements)     1.32 Analyze diagrams, charts, graphs and tables to interpret healthcare results.     1.33 Record time using the 24-
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Weeks 11 thru 18	Chapter 24-Caring for your Career and Yourself	Certification Exam and Workplace Readiness  Job search  Interview techniques  Resume Writing  Managing conflict  Certification and State Registry  Continuing education requirements  Stress management  Suggested Activities:  Portfolios  Resume  Mock interview  On line applications	E. Employability Skills: Analyze how employability skills enhance employment opportunities and job satisfaction.  16.Demonstrate proficiency in technology skills  17. Compare various career options in therapeutic and diagnostic health care and required education for practice.  18. Describe the personal and professional attributes of a health care provider.  19. Demonstrate employability skills in healthcare.	Foundation Standard 4: Employability Skills  4.2 Employability Skills  4.21 Apply employability skills in healthcare.  4.3 Career Decision-making 4.31 Discuss levels of education, credentialing req, and employment trends in Nurse Assisting 4.32 Compare careers within the health science career pathways.  4.4 Employability Preparation 4.41 Develop components of a personal portfolio 4.42 Identify innovative strategies for obtaining employment.

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April 2015
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# Pathway to a Child Development Associate (CDA) Credential and NVCC Early Childhood Education (ECE) Certificate/Associate Degree Program

Grade 9	Grade 10	Grade 11	Grade 12
Algebra I	Geometry	Linear Quad	Functions Beyond
English 9	English 10	English 11	English 12
World History	US History I/Civics	US History II	Psychology/Sociology
Physical Science	Biology	NVCC Prin. of Human Body H110 (3)	Chemistry
Spanish I	Spanish II	Spanish III/ Academic Elective	NVCC Creative Experiences for Children-ECE H103 (3)
Physical Education	Elective Microsoft/Art/Music	Child Development 2	UCONN Individual & Family Development (3)
Career Exploration	NVCC Intro. to Early Childhood Education-ECE H101 (3)	Child Development 2 Clinical Hours	Internship/ Capstone Project

NVCC credits towards an ECE Certificate Program at NVCC or NVCC credits towards a CDA Certification Students must complete 480 hours of clinical experience to sit for State CDA exam

Pathway for Associate Degree in Early Childhood Education (ECE)

Grade 9	Grade 10	Grade 11	Grade 12
Algebra I	Geometry	Algebra II	Principles of Statistics
English 9	English 10	English 11	English 12
World History	US History I/Civics	US History II	Psychology/Sociology
Physical Science	Biology	NVCC Prin. of Human Body H110 (3)	Chemistry
Spanish I	Spanish II	Spanish II	NVCC Creative Experiences for Children-ECE H103 (3)
Physical Education	Elective Microsoft/Art/Music	Child Development 2	UCONN Individual & Family Development (3)
Career Exploration	NVCC Intro. to Early Childhood Education-ECE H101 (3)	Contemporary Issues/ Law and Society	Internship/ Capstone Project

NVCC credits towards an Associate Degree Early Childhood Education

Pathway for Associate Degree in Human Service Professions/Pre-Social Work

Grade 9 Grade 10 Grade 11 Grade 12 **NVCC Algebra II Geometry Honors** Pre. Calculus Honors **Principles of Statistics** MAT H137 (3) English 9 Honors English 10 Honors English 11 Honors English 12 Honors World History Honors US History I/Civics Honors **US History II Honors Anatomy Honors** NVCC Prin. of **Physical Science Honors Biology Honors Chemistry Honors** Human Body H110 (3) **UCONN Individual & Family** Spanish I Spanish II Spanish III Development (3) Elective Physical Education Chid Development 2 Clinical Internship Microsoft/Art/Music NVCC Intro. to Human Services-Internship/ Psychology/Sociology Honors Career Exploration HSE\*H101 (3) Capstone Project

NVCC credits towards an Associate Degree in Human Services
UCONN (ECE) articulation level

4/28/2015

#### GRADE 10 2015-2016

Pathway to a Child Development Associate (CDA) Credential and NVCC Early Childhood Education (ECE) Certificate/Associate Degree Program

Grade 9	Grade 10	Grade 11	Grade 12
Algebra I	Geometry	Lînear Quad	Functions Beyond
English 9	English 10	English 11	English 12
World History	US History I/Civics	US History II	Psychology/Sociology
Physical Science	Biology	NVCC Prin. Human Body BIO H110 (3)	Chemistry
Spanish I	Spanish II	Spanish III/ Academic Elective	NVCC Creative Experiences for Children-ECE H103 (3)
Physical Education	Elective Microsoft/Art/Music	Child Development 2	UCONN Individual & Family Development (3)
Career Exploration	Child Development 1	Child Development 2 Clinical Hours	Internship/ Capstone Project

NVCC credits towards an ECE Certificate Program at NVCC or NVCC credits towards a CDA Certification Students must complete 480 hours of clinical experience to sit for State CDA exam

Pathway for Associate Degree in Early Childhood Education (ECE)

Grade 9	Grade 10	Grade 11	Grade 12
Álgebra I	Geometry	Algebra II	Principles of Statistics
English 9	English 10	English 11	English 12
World History	US History I/Civics	US History II	Psychology/Sociology
Physical Science	Biology	NVCC Prin. Human Body BIO H110 (3)	Chemistry
Spanish I	Spanish II	Spanish II	NVCC Creative Experiences for Children-ECE H103 (3)
Physical Education	Elective Microsoft/Art/Music	Child Development 2	UCONN Individual & Family Development
Career Exploration	Child Development 1	Contemporary Issues/ Law and Society	Internship/ Capstone Project

#### Pathway for Associate Degree in Human Service Professions/Pre-Social Work

Grade 9	Grade 10	Grade 11	Grade 12
Geometry Honors	NVCC Algebra II MAT H137 (3)	Pre. Calculus Honors	Principles of Statistics
English 9 Honors	English 10 Honors	English 11 Honors	English 12 Honors
World History Honors	US History I/Civics Honors	US History II Honors	Anatomy Honors
Physical Science Honors	Biology Honors	NVCC Prin. Human Body BIO H110 (3)	Chemistry Honors
Spanish I	Spanish II	Spanish III	UCONN Individual & Family Development
Physical Education	Elective Microsoft/Art/Music	Chide Development 2	Clinical Internship
Career Exploration	Child Development 1	Psychology/Sociology Honors	Internship/ Capstone Project

NVCC credits towards an Associate Degree in Human Services
UCONN (ECE) articulation level

4/28/2015

#### **FOR 2015-2016 GRADE 11 STUDENTS**

#### INFORMATION TECHNOLOGY STRAND

ASSOCIATES AND/OR CAREER AFTER HIGH SCHOOL

**HARDWARE** 

#### Career Track

GRADE 9	GRADE 10	GRADE 11	GRADE 12
Algebra I	Geometry	Linear Quad	Functions Beyond
English 9	English 10	English 11	English 12
World History	Root. of Civ./US History I	US History II	Academic Elective
Physical Science	Biology	NVCC Environmental Science (3)	NVCC Networking CST H325/ NVCC Adv. Networking CTS H236
Physical Education	Spanish II	IT Essentials and Virtualization (A+ Certification)	Advanced Electronics/Robotics
Spanish I	Art/Music Elective	Electronics I	NVCC or UCONN Articulated Course
Career Exploration	NVCC Intro. To Computers	Intro. Engineering Design	Capstone

#### IT ESSENTIALS - A+ CERT. & NOCTI CERT. COMPUTER REPAIR TECHNOLOGY (4015)

GRADE 9	GRADE 10	GRADE 11	GRADE 12

Four Year College Track....Information Technology Professional Careers SOFTWARE

GRADE 9	GRADE 10	GRADE 11	GRADE 12
Algebra I Honors	Geometry Honors	Algebra 2 Honors	Pre. Calculus Honors
English 9 Honors	English 10 Honors	English 11 Honors	English 12 Honors
World History Honors	Root. of Civ./US History I	US History II Honors	Psychology/Sociology
Physical Science Honors	Biology Honors	Chemistry Honors	Physics Honors
Physical Education	Spanish II	Spanish III	Advanced Math/Science Elective
Spanish I	Art/Music Elective	Microcontroller I	NVCC JAVA H220 & Capstone /AP Computer Science
Career Exploration	NVCC Intro. to Computers	IT Essentials and Virtualization	Website Design with WordPress

**NOCTI CERTIFICATION COMPUTER PROGRAMING (4023)** 

#### CSC\*H101 Introduction to Computers 3 cr.

This is an introductory course in information technology concepts and software productivity tools intended for Computer Information Systems majors and other students interested in computers and Information Technology. Areas of instruction include computer concepts, current topics and trends in information technology, the role of computer systems in business problem solving, an introduction to the major career areas of Information Technology and Microsoft Office skills that are important to all college students.

#### CST\*H120 Introduction to Operating Systems 3 cr.

An introduction to the personal computer, hardware, and Operating Systems software. The most popular microcomputer operating systems and graphical interfaces will be discussed in detail. After satisfactorily completing this course, the student will have a thorough understanding of the command structures of the operating systems. Students will receive a brief introduction to local area networks from a user perspective. Laboratory projects will be assigned throughout the course to reinforce course material.

#### CST\*H130 Networking Essentials I 3 cr.

An in-depth study of communications in a networking Environment. Included is the history of networking, OSI model, data types, signaling, multiplexing, signal conversion, data transmission, topologies, channel access method, switching techniques, SDLC, HDLC, IEEE standards, Arcnet, Ethernet, Token Ring, TCP/IP IP, SNA, and the future of networking.

#### CSC\*H183 Information Systems in Organizations 3 cr.

The focus of this course is on how organizations use information systems for decision making. In particular, the course stresses the role of managers in the analysis, design, development, implementation, maintenance and control of information systems as corporate resources. Course includes a hands-on approach to communications using workgroup software.

#### CSC\*H205 Visual Basic I 3 cr.

This course uses Visual Basic .NET, an object-oriented/event-driven language, to teach programming concepts. Through "hands-on" application of the concepts presented in the lectures and tutorials, the student will learn the Visual Basic .NET tools used to create applications that correspond to Windows standards. By the end of the course, the student will be able to design and code simple business applications and will be prepared for more advanced courses in programming using VB, C++, etc.

#### CSC\*H206 VISUAL BASIC II 3 cr.

Prerequisite: CSC\*H205. The course covers a wide range of advanced programming topics using Visual Basic.NET an object oriented, event driven programming language. The goal of the course is to develop computer programming skills beyond the basics covered in the introductory course. This includes arrays and collections, object variables, database programming, web programming, web services, and extensive use of the .NET classes.

#### CSC\*H211 VB & ASP .NET Web Programming 3 cr.

Prerequisite: CSC\*H205. This course covers a wide range of topics in the area of web application development using Microsoft ASP .NET. and the Visual Basic programming language. After an introduction to basic web design techniques, students will progress to more advanced e-commerce applications. Topics include working with server controls, validation techniques, managing state, authenticating users, and the use of themes. Relational databases are a big part of e-commerce applications and are also an important topic area in this course.

#### CSC\*H213 Object-Oriented Programming Using C++ 3 cr.

Prerequisite: CSC\*H205, or any programming language equivalent. This course is designed for a more advanced programming student who wish to learn C++ with object-oriented techniques. The course will contain the basic concepts of an object-oriented programming language. Topics will include classes, constructor and destructor functions, function overloading, operator overloading, class inheritance, polymorphism, stream input/output, manipulator functions, templates and exception handling.

#### CSC\*H214 Advanced C++ Programming 3 cr.

Prerequisite: CSC\*H213. Topics include methods and techniques used in software development cycles. You will learn to move beyond a simple mastery of syntax. You will learn to increase productivity by combining tools, idioms, syntax, and libraries. Numerous hands-on exercises provide real-world experience in developing high quality C++. Throughout the course, you gain extensive hands-on experience with advanced C++ programming techniques. You will be required to develop complete programs from architectural design through to refining the implementation via a series of exercises.

#### CSC\*H217 Object-Oriented Programming Using C#3 cr.

Prerequisite: CSC\*H205. This course offers students the opportunity to extend their experience and programming skills in the area of .NET development. C# (pronounced C Sharp) is an object-oriented programming language with syntax similar to JAVA, C# is becoming increasingly popular with developers in the areas of Windows applications and web sites using relational databases. Using the Visual Studio Integrated Development Environment (IDE) the course will cover topics including arrays, methods, classes, objects, inheritance, and exception handling, File Streams and database applications will also be an important part of the course..

#### CSC\*H220 Object-Oriented Programming Using JAVA 3 cr.

Prerequisite: CSC\*H205, or any programming language equivalent. This course will be an introduction to the JAVA programming language. We will develop JAVA applications as well as introduce World Wide Web browser JAVA applets. We will cover basic control structures and introduce the Object-Oriented (OO) paradigm utilizing classes and objects. We will introduce and develop programs which are event driven. There will be a wide use of the JAVA Abstract Window Toolkit. The OO model will be used in developing object-based and object-oriented programs. Finally, we will explore the toolkit to develop GUI-based, event-driven programs. There will be several programming assignments. Two tests will be given during the semester in addition to a final exam.

#### CSC\*H228 Mobile Device Programming 3 cr.

Prerequisite: CSC\*H205. This course is designed as an introduction to mobile device programming. It is intended for students with an interest in learning to develop applications which will run on Android based smart phones.

Prior programming experience using Visual Basic, Java or C++ is expected.

#### CSC\*H231 Database Design I 3 cr.

An introduction to relational database design. Included will be topics on the evolution of database design, data structures, designing a database, normalizing a database design and implementation of databases utilizing one or more of the popular PC database packages available such as Microsoft SQL Server.

#### CST\*H235 Network Systems 3 cr.

Prerequisite: CST\*H130, or a basic understanding of computer networks. This course teaches the student, through lectures, demonstrations, and classroom labs, the skills and knowledge necessary to configure, manage, and troubleshoot a Windows Server 2008 network infrastructure. The focus of this course will be the installation, configuration, management and support of DHCP and DNS. The course will also address security, the management and installation of services updates, and routing and remote access. Through the use of lab assignments, there is a heavy emphasis on the "hands-on" application of the concepts presented in the lectures and assigned readings.

#### CST\*H236 Advanced Network Systems 3 cr.

Prerequisite: CST\*H235. This advanced course will cover higher level system management features of the Window Server Operating System. The focus will be planning, implementing and maintaining an Active Directory infrastructure. Through lectures and lab assignments, the student will learn about integration of Active Directory with DNS, administration of user accounts and groups, group policies, security, remote access, and performance monitoring.

#### CSC\*H237 Database Programming with VB.NET 3 cr..

Prerequisite: CSC\*H205. This course covers a wide range of relational database programming topics using Visual Basic .NET and ADO .NET objects. Students will learn programming techniques using the Microsoft SQL Server relational database, the .NET System.Data namespace and classes, and disconnected architecture. Topics include SQL queries to create typed and untyped datasets, table relationships, parameterized queries, bound and unbound controls, and data views. Crystal Reports, XML Schema Designer, and Server Explorer tools are used in a hands-on class/lab environment.

#### CST\*H239 Servicing & Support of Local Area Networks 3 cr.

Prerequisite: CST\*H130. A hands-on course allowing students to install, upgrade, maintain and troubleshoot on Microsoft server operating systems. Class discussion and laboratory exercises include Network Interface Cards (NIC's), networking cabling, disk expansions, installations, upgrades, troubleshooting techniques, and common network problems.

#### CSC\*H250 Systems Analysis and Design 3 cr.

Prerequisite: CSC\*H205 or any programming language equivalent. This course is an introduction to systems analysis and design concepts and techniques. Using a case study method, students will conduct system surveys, create feasibility studies, and design typical computer systems used in business and industry.

#### CSC\*H252 Information Systems Project Management 3 cr.

Prerequisite: CSC H205 or any programming language equivalent. This course introduces students to the theory and practice of managing Information Systems and Business projects. Students will learn how to initiate, plan, execute, control, and complete projects in order to meet organizational goals. In addition to traditional project management tools like PERT and GANTT charts, students will learn to use a project management software simulation tool to assist them in managing classroom projects. A comprehensive final project will be assigned and completed either individually or in collaboration with a student project team.

#### CST\*H274 Network Security Technology 3 cr.

Prerequisite: CST\*H130. This course takes an in-depth look at network security concepts and techniques. Students will examine theoretical concepts that make the world of security unique. Also, this course will adopt a practical, hands-on approach when examining networking security techniques. Along with examining different network strategies, this course will explore the advancement of network

### FOR 2015-2016 GRADE 10 STUDENTS

#### INFORMATION TECHNOLOGY STRAND

ASSOCIATES AND/OR CAREER AFTER HIGH SCHOOL

HARDWARE

Career Track

GRADE 9	GRADE 10	GRADE 11	GRADE 12
Algebra I	Geometry	Linear Quad	Functions Beyond
English 9	English 10	English 11	English 12
World History	Roots of Civ./US History I	US History II	Academic Elective
Physical Science	Biology	Environmental Science	NVCC Networking CST H325/ NVCC Adv. Networking CTS H236
Physical Education	Spanish II	IT Essentials and Virtualization (A+ Certification)	Advanced Electronics/Robotics
Spanish I	Art/Music Elective	Electronics II	NVCC or UCONN Articulated Course
Career Exploration	Electronics I	Intro. Engineering Design	Capstone

#### IT ESSENTIALS - A+ CERT. & NOCTI CERT. COMPUTER REPAIR TECHNOLOGY (4015)

Four Year College Track.....Information Technology Professional Careers

SOFTWARE

GRADE 9	GRADE 10	GRADE 11	GRADE 12
Algebra I Honors	Geometry Honors	. Algebra 2 Honors	Pre. Calculus Honors
English 9 Honors	English 10 Honors	English 11 Honors	English 12 Honors
World History Honors	Roots of Civ./US History I	US History II Honors	Psychology/Sociology
Physical Science Honors	Biology Honors	Chemistry Honors	Physics Honors
Physical Education	Spanish II	Spanish III	Advanced Math/Science Elective
Spanish I	Art/Music Elective	Prog. Micro Controller II	NVCC JAVA H220 & Capstone /AP Computer Science
Career Exploration	Prog. Micro Controller I	IT Essentials and Virtualization	Website Design with WordPress

**NOCTI CERTIFICATION COMPUTER PROGRAMING (4023)** 

#### Microsoft Office Specialist Certification

Available in: Word

Excel

PowerPoint

Outlook

Access

SharePoint

OneNote

1 hour test

All available for college credit (ACE) – (depending on college)

Certiport – company that administers the exams

Locations: Patrick's Academy

99 Pratt St.

Hartford, Ct.

860-833-6029

M-F-8-8

Sat-9-5

Accommodates up to 20

\$ 99.00 - \$150.00 per person

Metro Testing Service

30 Hazel Terrace

Woodbridge, Ct.

203-672-5758

M - TH - 9 - 5

F - 2 - 7

Groups of 10

\$ 120.00 per person – Please check the website for price

## CURRICULUM FOR PROGRAMMING WITH MICROCONTROLLERS FOR: THE WATERBURY CAREER ACADEMY

#### COURSE DESCRIPTION:

This course is designed to give students a hands-on working knowledge of microcontrollers based on the ARDUINO microcontroller platform. Students will be able to build simple circuits using breadboards and various electrical components that are attached and controlled by the microcontroller. Students will have a working knowledge of programming in the modified C++ Arduino programming language and be able to compile and debug those programs. Students will develop the ability to modify the program to change the functionality of the electrical circuits/devices that they have constructed.

#### **COURSE OBJECTIVES:**

Students will be able to correctly build a circuit with correct connections based on schematics and diagrams from various texts/sources.

Students will be able to program (write, compile, and debug) the microcontroller based circuit to provide appropriate functionality.

Students will be able to modify circuit/program to alter functionality of circuits.

Students will be able to create functionalities and modify circuits/programs without the aid to specific design, but use basic designs as a basis for modifications.

#### COURSE OUTLINE

#### Unit 1 – Getting Started

- O What is a microcontroller?
- o Software and the IDE
- Introduction to hardware components Breadboard, LEDs, Resistors and Simple Circuits
- Creating a First Circuit
- o Creating a First Program
- o Modifying your Program

#### Unit 2 - Creating Light Patterns using conditional statements

- o The IF statement and operators.
- o The ELSE statement.
- o The WHILE statement.
- o TRUTH statements.
- o Combinators.
- o The FOR statement.
- ARRAYS

#### Unit 3 - Understanding INPUT

- o Digital Input
- Analog Input
- o Combination circuits, Analog and Digital Inputs
- o Using lights as indicators of state

#### Unit 4 – Creating Music with Arduino

- Understanding relationship between 'delay' and 'Frequency'.
- o Understanding relationship between 'Frequency' and 'Pitch'.
- o Creating different *notes* by varying delay.
- o Creating a tune using sequential notes.

#### Unit 5 – Creating a Digital Thermometer

- Using serial input 'RX' and output 'TX' features.
- Reading input from a temperature sensor.
- o Converting input from/to Celcius.
- Using an LCD to display output.
- o Installing and using a LIBRARY.

#### Unit 6 – Creating Graphics on an LCD

- o Binary and Hexadecimal values
- o How to turn 'ON' a pixel.
- o Creating patterns by turning on pixels.
- o Displaying output in graphical form (temperature graph).

#### Unit 7 – <u>Using Sensors</u>

- o Photo (Light) Sensor
- o Tilt Sensor
- o Reed (Magnetic Field) Sensor
- o Piezo Element

#### Unit 8 – <u>Using Joystick to control Servos</u>

- o Controlling Servo
- Understanding Joystick type input
- Controlling two servos using Joystick Pan/Tilt bracket
- o Controlling a 'firing' mechanism using Joystick and servo.

#### Unit 9 – <u>Create Your Own Project!</u>

- o Make a project based on one of several ideas/technologies.
  - Stopwatch
  - Countdown Timer
  - Alarm Clock
  - Temperature Alarm
  - Dial that Shows Temperature
  - Dial that Displays Amount of Light
  - Change in Tone based on Amount of Light

#### PURPOSE OF THE COURSE

Students will:

- Apply knowledge of mathematics and logic previously covered.
- Work independently and in groups to apply that knowledge.
- Use terminology to describe the technology they are creating.
- Understand how technology is used to solve real life problems.
- Incorporate real-life technology into their projects.
- Understanding relationship between computer language and physical processes.
- Problem solving in modifying circuits/programs to solve new problems.
- Expand the use of critical thinking

#### **GOALS**

The goal of the course is to prepare our students for the world of technology by understanding the connection between real world problem and solutions offered by certain technologies and being able to bridge that difference.

Instructional Methods: Demonstrations, laboratory activities, lectures, cooperative group learning, individual instruction and mentoring.

Textbook: Introduction to Arduino "A Piece of Cake\* By Alan G Smith

Course Credit – 1 credit

#### CORE LIST

This list is not all inclusive, it is expected that other ancillary materials can be added to the list to enrich the learning experience but should at least include the following:

Introduction to Arduino by Alan G. Smith (Alan G. Smith)

Getting Started with Arduino, by Massimo Banzi (O'Reilly)

Arduino Workshop A Hands-On Introduction with 65 projects by John Boxall (No Starch Press)

30 Arduino Projects for the Evil Genius by Simon Monk (TAB)

#### **STANDARDS**

#### ISTE (International Society for Technology in Education) Standards

The ISTE Goals for students states that:

Students demonstrate creative thinking, construct knowledge, and develop innovative products and processes using technology.

- o Apply existing knowledge to generate new ideas, products, or processes.
- Use models and simulations to explore complex systems and issues.

Students use critical thinking skills to plan and conduct research, manage projects, solve problems, and make informed decisions using appropriate digital tools and resources.

- Plan and manage activities to develop a solution or complete a project.
- Collect and analyze data to identify solutions and/or make informed decisions.
- o Use multiple processes and diverse perspectives to explore alternative solutions.

This course will use the following Connecticut state standards as guideposts: FROM ESSENTIAL KNOWLEDGE AND SKILLS

- o EKS.03 Demonstrate mathematics knowledge and skills required to pursue the full range of post-secondary education and career opportunities
- EKS.03.03 Analyze Mathematical problem statements for missing and/or irrelevant data.
- o EKS.03.04 Construct charts/graphs from functions and data.
- o EKS.05 Employ critical thinking skills independently and in teams to solve problems and make decisions (e.g., analyze, synthesize and evaluate).
- EKS.05.02 Analyze elements of a problem to develop creative solutions.
- o EKS.05.04 Create ideas, proposals, and solutions to problems.
- EKS.05.07 Generate new and creative ideas to solve problems by brainstorming possible solutions.

#### **GRADE 9.12 STANDARDS ENGINEERING TECHNOLOGY**

- o ENG.02 Use the design process to solve problems by creating and refining prototypes.
- o ENG.02.05 Brainstorming possible solutions.
- o ENG.02.09 Build a prototype from working drawings using appropriate materials.
- o ENG.02.10 Test a prototype to defined criteria.
- o ENG.02.11 Redesign prototypes.
- o ENG.05 Work collaboratively in engineering teams throughout the design process.
- o ENG.05.01 Read and understand design documentation and technical manuals.
- o ENG.05.04 Actively contribute to a team project.
- ENG.08 Demonstrate the application of science and math principles to the electrical engineering process.
- ENG.08.02 Describe and apply the following electricity principles: Ohm's, Watt's, series, parallel, combination circuits, AC/DC systems, and conductors/insulators.
- o ENG.08.04 Draw a circuit diagram and lay out the circuit.
- o ENG.08.07 Describe resistance in electrical systems.

# TECHNOLOGY EDUCATION Grades 9-12 Standards ENGLISH LANGUAGE ARTS Science & Technical Subjects Literacy Grade 9-12

- o RST.11-12.3 Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks; analyze the specific results based on explanations in the text.
- o RST.11-12.4 Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to grades 11–12 texts and topics.

# TECHNOLOGY EDUCATION Grades 9-12 Standards ENGLISH LANGUAGE ARTS Writing Standards for Literacy in History/Social Studies, Science, and Technical Subjects – WHST

 WHST.11-12.6 Use technology, including the Internet, to produce, publish, and update individual or shared writing products in response to ongoing feedback, including new arguments or information.

# **TECHNOLOGY EDUCATION CCSS MATHEMATICS GRADES 9-12 Standards for Mathematical Practice**

 CCSS.Math.Content.HSA-CED.A.3 - Represent constraints by equations or inequalities, and by systems of equations and/or inequalities, and interpret solutions as viable or nonviable options in a modeling context.

MONTHS	UNIT/	CHAPTERS/ TOPICS	Resources/Activities	SUGGESTED READING
August / September	1	Getting Started Understanding:  What is a Microcontroller  IDE and Software Programming  Creating a first circuit with LEDs, Resistors, Breadboards and Arduino.  Creating and Modifying Program to Control Circuit.	Demonstrations/Lab Activities Students will install and configure the Arduino IDE.  Students will construct their first circuits as per specs.  Students will write their first program and compile it.  Students will modify program to vary blinking rates and order.  Exercises 1.9 (Intro. to Arduino)	Introduction to Arduino A piece of Cake* By Alan G Smith Chapter 1

MONTHS	UNIT/	CHAPTERS/ TOPICS	Resources/Activities	SUGGESTED READING
September/ October	UNIT/ DATES 2	CHAPTERS/ TOPICS LEARNING OBJECTIVES Understanding and Using Conditional Statements  IF statement operators ELSE statement WHILE statement TRUTH values Combinators FOR statement ARRAYS	Student will construct circuits with parallel LED/Resistors based on diagrams/schematics.      Students will write and compile programs using the conditional statements with combinators to create patterns of blinking lights.      Students will use arrays and incorporate into circuit control.      Students will write,	SUGGESTED READING  Text – Chapter 2
			compile and debug their own programs to specs. • Exercises 2.10 from text.	

MONTHS	UNIT/	CHAPTERS/ TOPICS	Resources/Activities	SUGGESTED READING
		<u> </u>		
November/ December	DATES 3	Understanding INPUT  Digital Input Analog Input Combination circuits using Analog and Digital inputs. Using light to indicate state/value of inputs.	Demonstrations/Lab Activities  Students will create circuits that have Digital and then Analog inputs.  Students will be able to monitor input values and use lights as indicators of input value.  Students will create combination circuits of Analog and Digital Inputs.  Students will write, compile and debug programs to specifications.	Text – Chapter 3
			● Exercises 3.4	

MONTHS	UNIT/ DATES	CHAPTERS/ TOPICS LEARNING OBJECTIVES	Resources/Activities	SUGGESTED READING
December February	4	CREATING MUSIC	Demonstrations/Lab Activities	Text Chapter 4
		<ul> <li>Understand relationship between "delay" and "frequency".</li> </ul>	CREATING CIRCUITS THAT MAKE SOUND	
		<ul> <li>Understand the relationship between "pitch and "frequency".</li> </ul>	<ul> <li>Students will create a circuit with sound capable elements</li> <li>Program the circuit</li> </ul>	
		<ul> <li>Creating notes/pitches by varying delay.</li> </ul>	using delays to create varying pitches	
		<ul> <li>Creating sequence of pitches to create time</li> </ul>	MID-TERM EXAMINATION	

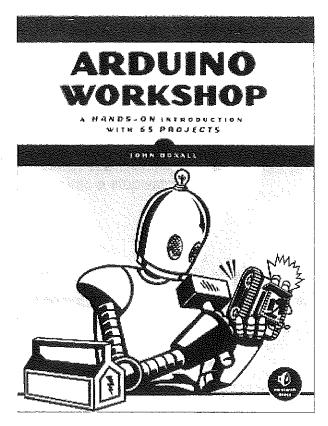
MONTHS	UNIT/ DATES	CHAPTERS/ TOPICS LEARNING OBJECTIVES	Resources/Activities	SUGGESTED READING
January/ February	5	<ul> <li>CREATING A DIGITAL THERMOMETER</li> <li>Understand use of serial input 'RX' and output 'TX' ports.</li> <li>Reading input from a sensor.</li> <li>Using and converting input into usable information.</li> <li>Using an LCD to display information.</li> <li>Installation and Use of Library functions.</li> </ul>	Students will create a circuit that has analog input/output capabilities.     Students will create a program that contains a library header for temperature functionality.     Students will create a circuit capable of display using an LCD monitor.     Students will write, compile and debug that will display temperature sensor results in both °F & C      Exercises 5.6	Text – Chapter 5

MONTHS UNIT	S LEAF	IAPTERS/ TOPICS RNING OBJECTIVES	Resources/Activities	SUGGESTED READING
February/ March	CREAT	Understand and use both BINARY and HEXADECIMAL values. Understand Turning 'ON' and 'OFF' a pixel. Create patterns by turning on select pixels according to functions. Display output from devices in both numeric and graphical formats.	Students will create a circuit that contains an LCD display.     Students will write a program capable of outputting in binary/hex values to the LCD display.     Students will write programs that can turn 'on' and 'off' pixels in order to create patterns.     Students will modify patterns to increase width and height of patterns.      Students will write programs that can graphically display temperature data.     Exercises 6.4	Text – Chapter 6

MONTHS	UNIT/ DATES	CHAPTERS/ TOPICS LEARNING OBJECTIVES	Resources/Activities	SUGGESTED READING
March/April	7	USING SENSORS  Use and understand the output from a 'light, sensor.  Use and understand the output from a 'Tilt' sensor.  Understand and use Reed sensors with RFID tags.  Use of a Piezo element in a circuit.	<ul> <li>Students will create a circuit that contains a photo sensor.</li> <li>Students will write, compile and debug program for photo sensor circuit.</li> <li>Students will create a circuit that contains a tilt sensor.</li> <li>Students will write, compile and debug program for REED sensor circuit.</li> <li>Students will create a circuit that contains a photo sensor.</li> <li>Students will write, compile and debug program for REED sensor circuit.</li> <li>Students will write, compile and debug program for REED sensor circuit.</li> <li>Students will create a circuit that contains a piezo element.</li> <li>Exercises 7.6</li> </ul>	Text Chapter 7

MONTHS	UNIT/ DATES	CHAPTERS/ TOPICS LEARNING OBJECTIVES	Resources/Activities	LEARNING ACTIVITIES /SUGGESTED READING
April/May	8	USING A JOYSTICK TO CONTROL SERVOS   Understand how input can controls servos.  Understand the output from a Joystick.  Controlling servos based on output of a Joystick.  Controlling two servos using Joystick Pan/Tilt functionality.  Controlling third servo with joystick/servos.	Students will create a circuit containing a single servo.  Students will write a program that gives values to the servo to control it.  Students will create circuits using a joystick to give output to control the servo.  Students will write a program for the above circuit.  Students will construct a circuit with multiple servos controlled from a single joystick.  Students will write a program that allows joystick pan/tilt feature to control multiple servo with 'launching' capability.  Exercises 8.5	Text – Chapter 8
	l		FINAL EXAMINATION	1

PM

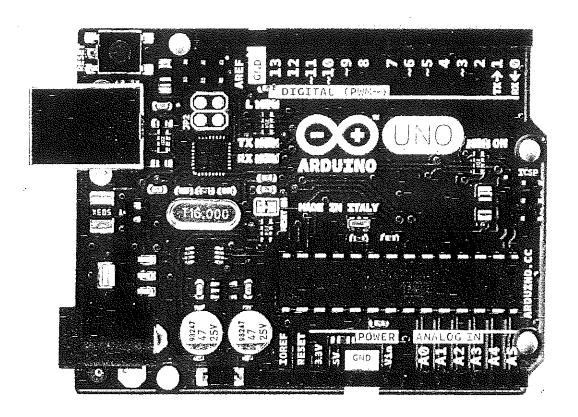




#### **Build a Battery Tester**

An Arduino can be used to test the life of any battery with less than 5 volts, Boxall says. So, for a quick way to see how much juice your AAA, AA, C, or D batteries have left, build this Arduino-based battery tester, which can display battery life via a string of LEDs.

#### **Roll the Dice**



# Arduino in a Nutshell



Jan Borchers

Version 1.10 (Mar 18, 2015)

for Arduino Uno R3 & Arduino IDE 1.6.1

Latest version at: hci.rwth-aachen.de/arduino

#### WCAHS HEALTH STRAND CURRICULUM SEQUENCE

#### **CERTIFIED NURSE ASSISTANT**

Grade 9	Grade 10	Grade 11	Grade 12
Algebra I	Geometry	Linear Quad	Functions Beyond Quad
English 9	English 10	English 11	English 12
World History	US History I/Civics	US History II	Psychology/Sociology
Physical Science	Biology	NVCC Prin. of the Human Body BIO H110 (3)	Chemistry
Spanish I	Spanish II	Elective (lab)	NVCC Anatomy/Physiology BIO-H211
Physical Education	Elective Microsoft/ Art/Music	Allied Health C.N.A.	Allied Health I / Allied Health II
Career Exploration	NVCC Invest, in Health Careers HLT H 103 (3)	Allied Health C.N.A.	Internship/Capstone Project

#### Associate Degree Track for Registered Nurse

Grade 9	Grade 10	Grade 11	Grade 12
Algebra I	Geometry	Algebra II	Pre. Calculus
English 9	English 10	English 11	English 12
World History	US History I/Civics	US History II	SAT Math & English Prep
Physical Science	Biology	Chemistry	NVCC Anatomy/Physiology BIO-H211
Spanish I	Spanish II	Spanish III	Elective (lab)
Physical Education	Elective Microsoft/ Art/Music	NVCC Prin. of the Human Body BIO H110 (3)	ALLIED HEALTH II HEALTH/WELL & PHARMACY TECH.
Career Exploration	NVCC Invest. in Health Careers HLT H 103 (3)	ALLIED HEALTH I MED. ASSISTING/PHY. THERAPY	Internship/Capstone Project

#### Four Year College Track for Professional Health Careers

Grade 9	Grade 10	Grade 11	Grade 12
Geometry Honors	NVCC Algebra II Honors MAT H137	Pre. Calculus Honors	Stats. &Trig. Honors
English 9 Honors	English 10 Honors	English 11 Honors	English 12 Honors
World History Honors	US History I/Civics Honors	US History II /Honors	Psychology Honors
Physical Science Honors	Biology Honors	Chemistry Honors	SAT Math & English Prep
Spanish I	Spanish II	Spanish III	NVCC Intro to Physics PHY H110 (3)
Physical Education	Elective Microsoft/ Art/Music	NVCC Prin. of the Human Body BIO H110 (3)	ALLIED HEALTH II HEALTH/WELL & PHARMACY TECH.
Career Exploration	NVCC Invest. in Health Careers HLT H 103 (3)	ALLIED HEALTH I MED. ASSISTING/PHY. THERAPY	Internship/Capstone Project

Allied Health I - Medical Assistant and Physical Therapy Aide Allied Health II - Health/Wellness and Pharmacy Technician

Revised 2-25-15

#### MANUFACTURING STRAND - Two Year College Track and/or Career after High School

Grade 9	Grade 10	Grade 11	Grade 12
Algebra I	Geometry	Linear Quad	Functions Beyond
English 9	English 10	English 11	English 12
World History	US History I/Civics	US History II	NVCC CNC 1 & CNC 2 MFG 156- MFG256 (5)
Physical Science	Biology	Chemistry	NVCC Lath 2 (3) & Milling 2 (3)
Spanish I	Spanish II	BLUEPRINT READING	NVCC Prin. Quality Control QUA H 114 (3)
Physical Education	Elective Art/Music	NVCC Lathe 1 (2) & Milling 1 (2)	NVCC Manufacturing Processes MFG*H104 (4)
Career Exploration	CAD I NVCC CAD H 110 (3)	NVCC Bench Work 1 (2) & NVCC Grinding 1 (2)	Internship/ Capstone Project

#### MANUFACTURING/ENGINEERING/ADVANCED STEM - Four Year College Track

Grade 9	Grade 10	Grade 11	Grade 12
Geometry Honors	NVCC Algebra II Honors	Trigonometry/Statistics	Pre. Calculus
English 9 Honors	English 10 Honors	English 11 Honors	English 12 Honors
World History Honors	US History I/Civics Honors	US History II Honors	Psychology/Sociology Honors
Physical Science Honors	Pre AP Biology	Chemistry Honors	Physics Honors
Spanish I Honor	Spanish II Honors	Spanish III Honors	NVCC CNC 1 & CNC 2 MFG 156 MGG256 (5)
Physical Education	Elective Art/Music	BLUEPRINT READING	NVCC Prin. Quality Control QUA H 114 (3)
Career Exploration	CAD I NVCC CAD H 110 (3)	NVCC Bench Work 1 (2) & NVCC Grinding 1 (2)	Internship/ Capstone Project

#### NIMS CERTIFICATIONS: (College & Career Tracks)

Grade 9	Grade 10	Grade 11	Grade 12
	Machining L1- Measurement,	Machining L1- Manual Milling	Machining L1- CNC Milling:
	Materials & Safety	Skills 1	Programing Setup & Operations
		Machining L1- Turning Operations:	Machining L1- CNC Turning:
		Turning Chucking Skills	Programming Setup & Operations
		Machining L1- Job Planning, Bench	Machining L1- Turning Operations:
Revised 5-13-15		work & Layout	Turning Between Centers

# Pathway to a Child Development Associate (CDA) Credential and NVCC Early Childhood Education (ECE) Certificate/Associate Degree Program

Grade 9	Grade 10	Grade 11	Grade 12
Algebra I	Geometry	Linear Quad	Functions Beyond
English 9	English 10	English 11	English 12
World History	US History I/Civics	US History II	Psychology/Sociology
Physical Science	Biology	NVCC Prin. of Human Body H110 (3)	Chemistry
Spanish I	Spanish II	Spanish III/ Academic Elective	NVCC Creative Experiences for Children-ECE H103 (3)
Physical Education	Elective Microsoft/Art/Music	Child Development 2	UCONN Individual & Family Development (3)
Career Exploration	NVCC Intro. to Early Childhood Education-ECE H101 (3)	Child Development 2 Clinical Hours	Internship/ Capstone Project

NVCC credits towards an ECE Certificate Program at NVCC or NVCC credits towards a CDA Certification Students must complete 480 hours of clinical experience to sit for State CDA exam

Pathway for Associate Degree in Early Childhood Education (ECE)

Grade 9	Grade 10	Grade 11	Grade 12
Algebra I	Geometry	Algebra II	Principles of Statistics
English 9	English 10	English 11	English 12
World History	US History I/Civics	US History II	Psychology/Sociology
Physical Science	Biology	NVCC Prin. of Human Body H110 (3)	Chemistry
Spanish I	Spanish II	Spanish II	NVCC Creative Experiences for Children-ECE H103 (3)
Physical Education	Elective Microsoft/Art/Music	Child Development 2	UCONN Individual & Family Development (3)
Career Exploration	NVCC Intro. to Early Childhood Education-ECE H101 (3)	Contemporary Issues/ Law and Society	Internship/ Capstone Project

NVCC credits towards an Associate Degree Early Childhood Education

Pathway for Associate Degree in Human Service Professions/Pre-Social Work

Grade 9	Grade 10	Grade 11	Grade 12
Geometry Honors	NVCC Algebra II MAT H137 (3)	Pre. Calculus Honors	Principles of Statistics
English 9 Honors	English 10 Honors	English 11 Honors	English 12 Honors
World History Honors	US History I/Civics Honors	US History II Honors	Anatomy Honors
Physical Science Honors	Biology Honors	NVCC Prin. of Human Body H110 (3)	Chemistry Honors
Spanish I	Spanish II	Spanish III	UCONN Individual & Family Development (3)
Physical Education	Elective Microsoft/Art/Music	Chid Development 2	Clinical Internship
Career Exploration	NVCC Intro. to Human Services- HSE*H101 (3)	Psychology/Sociology Honors	Internship/ Capstone Project

NVCC credits towards an Associate Degree in Human Services

UCONN (ECE) articulation level

4/28/2015

# FOR 2015-2016 GRADE 10 STUDENTS

#### INFORMATION TECHNOLOGY STRAND

ASSOCIATES AND/OR CAREER AFTER HIGH SCHOOL

**HARDWARE** 

#### Career Track

GRADE 9	GRADE 10	GRADE 11	GRADE 12
Algebra I	Geometry	Linear Quad	Functions Beyond
English 9	English 10	English 11	English 12
World History	Roots of Civ./US History I	US History II	Academic Elective
Physical Science	Biology	Environmental Science	NVCC Networking CST H325/ NVCC Adv. Networking CTS H236
Physical Education	Spanish II	IT Essentials and Virtualization (A+ Certification)	Advanced Electronics/Robotics
Spanish I	Art/Music Elective	Electronics II	NVCC or UCONN Articulated Course
Career Exploration	Electronics I	Intro. Engineering Design	Capstone

#### IT ESSENTIALS - A+ CERT. & NOCTI CERT. COMPUTER REPAIR TECHNOLOGY (4015)

Four Year College Track.....Information Technology Professional Careers

SOFTWARE

GRADE 9	GRADE 10	GRADE 11	GRADE 12
Algebra I Honors	Geometry Honors	Algebra 2 Honors	Pre. Calculus Honors
English 9 Honors	English 10 Honors	English 11 Honors	English 12 Honors
World History Honors	Roots of Civ./US History I	US History II Honors	Psychology/Sociology
Physical Science Honors	Biology Honors	Chemistry Honors	Physics Honors
Physical Education	Spanish II	Spanish III	Advanced Math/Science Elective
Spanish I	Art/Music Elective	Prog. Micro Controller II	NVCC JAVA H220 & Capstone /AP Computer Science
Career Exploration	Prog. Micro Controller I	IT Essentials and Virtualization	Website Design with WordPress

**NOCTI CERTIFICATION COMPUTER PROGRAMING (4023)** 

# **FOR 2015-2016 GRADE 11 STUDENTS**

### INFORMATION TECHNOLOGY STRAND

ASSOCIATES AND/OR CAREER AFTER HIGH SCHOOL

#### **HARDWARE**

#### Career Track

GRADE 9	GRADE 10	GRADE 11	GRADE 12
Algebra I	Geometry	Linear Quad	Functions Beyond
English 9	English 10	English 11	English 12
World History	Root. of Civ./US History I	US History II	Academic Elective
Physical Science	Biology	NVCC Environmental Science (3)	NVCC Networking CST H325/ NVCC Adv. Networking CTS H236
Physical Education	Spanish II	IT Essentials and Virtualization (A+ Certification)	Advanced Electronics/Robotics
Spanish I	Art/Music Elective	Electronics I	NVCC or UCONN Articulated Course
Career Exploration	NVCC Intro. To Computers	Intro. Engineering Design	Capstone

# IT ESSENTIALS - A+ CERT. & NOCTI CERT. COMPUTER REPAIR TECHNOLOGY (4015)

Four Year College TrackInformation Technology Professional Careers		essional Careers	SOFTWARE
GRADE 9	GRADE 10	GRADE 11	GRADE 12
Algebra I Honors	Geometry Honors	Algebra 2 Honors	Pre. Calculus Honors
English 9 Honors	English 10 Honors	English 11 Honors	English 12 Honors
World History Honors	Root. of Civ./US History I	US History II Honors	Psychology/Sociology
Physical Science Honors	Biology Honors	Chemistry Honors	Physics Honors
Physical Education	Spanish II	Spanish III	Advanced Math/Science Elective
Spanish I	Art/Music Elective	Microcontroller I	NVCC JAVA H220 & Capstone /AP Computer Science
Career Exploration	NVCC Intro. to Computers	IT Essentials and Virtualization	Website Design with WordPress

NOCTI CERTIFICATION COMPUTER PROGRAMING (4023)

## MANUFACTURING STRAND - Two Year College Track and/or Career after High School

Grade 9	Grade 10	Grade 11	Grade 12
Algebra I	Geometry	Linear Quad	Functions Beyond
English 9	English 10	English 11	English 12
World History	US History I/Civics	US History II	NVCC CNC 1 & CNC 2 MFG 156- MFG256 (5)
Physical Science	Biology	NVCC ENVIRONMENTAL SCIENCE (3)	NVCC Lath 2 (3) & Milling 2 (3)
Spanish I	Spanish II	BLUEPRINT READING	NVCC Prin. Quality Control QUA H 114 (3)
Physical Education	Elective Art/Music	NVCC Lathe 1 (2) & Milling 1 (2)	NVCC Manufacturing Processes MFG*H104 (4)
Career Exploration	CAD I NVCC CAD H 110 (3)	NVCC Bench Work 1 (2) & NVCC Grinding 1 (2)	Internship/ Capstone Project

# MANUFACTURING/ENGINEERING/ADVANCED STEM - Four Year College Track

Grade 9	Grade 10	Grade 11	Grade 12
Geometry Honors	NVCC Algebra II Honors	Trigonometry/Statistics	Pre. Calculus
English 9 Honors	English 10 Honors	English 11 Honors	English 12 Honors
World History Honors	US History I/Civics Honors	US History II Honors	Psychology/Sociology Honors
Physical Science Honors	Pre AP Biology	Chemistry Honors	Physics Honors
Spanish I Honor	Spanish II Honors	Spanish III Honors	NVCC CNC 1 & CNC 2 MFG 156 MGG256 (5)
Physical Education	Elective Art/Music	BLUEPRINT READING	NVCC Prin. Quality Control QUA H 114 (3)
Career Exploration	CAD I NVCC CAD H 110 (3)	NVCC Bench Work 1 (2) & NVCC Grinding 1 (2)	Internship/ Capstone Project

# NIMS CERTIFICATIONS: (College & Career Tracks)

Grade 9	Grade 10	Grade 11	Grade 12
	Machining L1- Measurement,	Machining L1- Manual Milling	Machining L1- CNC Milling:
	Materials & Safety	Skills 1	Programing Setup & Operations
		Machining L1- Turning Operations:	Machining L1- CNC Turning:
	x x	Turning Chucking Skills	Programming Setup & Operations
		Machining L1- Job Planning, Bench	Machining L1- Turning Operations:
Revised 4-24-15		work & Layout	Turning Between Centers

#### CAD\*H110 Introduction to CAD 3 cr.

An introduction to the techniques of generating graphic images with computers, using AutoCAD. Topics include: overview of CAD technology, computer technology, hardware descriptions and requirements, file manipulation and management, two-dimensional geometric construction, symbol library creation, dimensioning, scaling, sectioning, plotting, detail and assembly drawing including tolerance studies.

#### CAD\*H150 CAD 2D (AutoCAD) 3 cr.

Introduction to two-dimensional computer-aided drafting using Autocad. Included are drawing and editing of elementary geometric entities, dimensioning

studied. One class hour and four laboratory hours weekly.

#### MFG\*H124 Blueprint Reading I 2 cr.

First course in blueprint reading. The study of orthographic projection. Topics include lines and their uses, auxiliary views, sectional views, basic and special dimensioning, dimensioning practices for holes, chamfers, angle, tapers, keyways diameters and radii. Also, geometric tolerancing and dimensioning is covered.

#### MFG\*H125 Blueprint Reading II 3 cr.

Prerequisite: Completion of Machine Technology Level I Certificate or with consent of instructor, MFG\*H124: Blueprint Reading I. Second course in blueprint reading. A further study of simple and complex drawings for machining or assembly purposes. Topics include the application and meaning of geometric characteristics and controls, the metric system, weldment, forging and casting drawings and procedures, communication with freehand sketches, blueprint terms and abbreviations.

#### MFG\*H154 Manufacturing Machining: Lathe I 2 cr.

First course in the use of the lathe. Topics include identification of major components of the lathe, tool holders and tool holding, cutting tools, operating the controls, facing and center drilling.

#### MFG\*H155: Manufacturing Machining - Milling I 2 cr.

First course on the vertical and horizontal milling machines. Topics to include cutting tools and holders, setups, spindles and arbors, work holding methods.

#### MFG\*H156: Manufacturing Machinery - CNC I 2 cr.

First course in CNC machinery and programming. Topics include Cartesian coordinates, safe use of CNC equipment, setup and operate a two axis CNC lathe and a three axis CNC machining center, programming and runoff of parts.

#### MFG\*H254 Manufacturing Machinery - Lathe II 3 cr.

Prerequisite: Completion of Machine Technology Level I Certificate or with consent of instructor, MFG\*H154: Manufacturing Machinery - Lathe I. Second course on lathe setup, operation and practices. Topics covered include alignment, turning between centers, and other operations. The student will cut 60 degree external threads, internal threads, tapers, and other thread forms. Use of steady rests and follower rests.

#### MFG\*H255: Manufacturing Machinery - Milling II 3 cr.

Second course on milling setup, operation, and practices. Topics covered include use of Offset Boring Head, side milling cutters, face milling cutters on the horizontal mill, setup and operation of index heads, simple and direct angular indexing, and inspection of gears. Prerequisite: Completion of Machine Technology Level I Certificate or with consent of instructor, MFG\*H155: Manufacturing Machinery - Milling I

#### MFG\*H256 Manufacturing Machinery - CNC II 3 cr.

Second course in Computer Numerical Controlled programming. A further study of CNC programming for the Lathe and Vertical Machining Center. Topics include setup and tooling, programming simple parts, canned drilling cycles, circular interpolation, special milling cycles, cutter compensation, looping and macros, and special features. Prerequisite: Completion of Machine Technology Level I Certificate, or with consent of instructor,

#### QUA\*H114 Principles of Quality Control 3 cr.

Prerequisite: Completion of Machine Technology Level I Certificate or with consent of instructor. This first course in statistical quality control provides an overview of the tools and techniques required in contemporary quality systems. Topics covered include determination of process capabilities, estimation of process standard deviation from sample data, use of control charts, and calculation of probability of simple events. Students will develop SPC and TQM Manufacturing plans.

MFG\*H104 Manufacturing Processes 4 cr.

Students study the theoretical concepts involved in the process of manufacturing parts as well as the development of the knowledge and skills required in the manufacturing process. Laboratory study emphasizes Milling, Drilling, Turning, Grinding & other manufacturing processes. Laboratories will involve setup and procedures for various manufacturing processes. Three class and two laboratory bours weakly. two laboratory hours weekly.

#### **GRADE 10 SCHOOL YEAR 2015-2016**

MANUFACTURING STRAND - Two Year College Track and/or Career after High School

Grade 9	Grade 10	Grade 11	Grade 12
Algebra I	Geometry	Linear Quad	Functions Beyond
English 9	English 10	English 11	English 12
World History	US History I/Civics	US History II	NVCC CNC 1 & CNC 2 MFG 156- MFG256 (5)
Physical Science	Biology	NVCC ENVIRONMENTAL SCIENCE (3)	NVCC Lath 2 (3) & Milling 2 (3)
Spanish I	Spanish II	CAD I NVCC CAD H 110 (3)	NVCC Prin. Quality Control QUA H 114 (3)
Physical Education	Elective Art/Music	NVCC Lathe 1 (2) & Milling 1 (2)	NVCC Manufacturing Processes MFG*H104 (4)
Career Exploration	BLUEPRINT READING	NVCC Bench Work 1 (2) & NVCC Grinding 1 (2)	Internship/ Capstone Project

# MANUFACTURING/ENGINEERING/ADVANCED STEM - Four Year College Track

Grade 9	Grade 10	Grade 11	Grade 12
Coorselms However	AlV/CC Alphabas II Hanasas	T.:	D 01-1
Geometry Honors	NVCC Algebra II Honors	Trigonometry/Statistics	Pre. Calculus
English 9 Honors	English 10 Honors	English 11 Honors	English 12 Honors
World History Honors	US History I/Civics Honors	US History II Honors	Psychology/Sociology Honors
Physical Science Honors	Pre AP Biology	Chemistry Honors	Physics Honors
			NVCC CNC 1 & CNC 2 MFG 156-
Spanish I Honor	Spanish II Honors	Spanish III Honors	MGG256 (5)
		CAD I	NVCC Prin. Quality Control
Physical Education	Elective Art/Music	NVCC CAD H 110 (3)	QUA H 114 (3)
		NVCC Bench Work 1 (2) &	Internship/
Career Exploration	BLUEPRINT READING	NVCC Grinding 1 (2)	Capstone Project

### NIMS CERTIFICATIONS: (College & Career Tracks)

Grade 9	Grade 10	Grade 11	Grade 12
	Machining L1- Measurement,	Machining L1- Manual Milling	Machining L1- CNC Milling:
	Materials & Safety	Skills 1	Programing Setup & Operations
		Machining L1- Turning Operations:	Machining L1- CNC Turning:
		Turning Chucking Skills	Programming Setup & Operations
		Machining L1- Job Planning, Bench	Machining L1- Turning Operations:
Revised 4-24-15		work & Lavout	Turning Between Centers

#### CURRICULUM FOR LATHE I (1/2 Year Course)

DEVLOPED BY: Michael Retano

FOR: THE WATERBURY CAREER ACADEMY

#### COURSE DESCRIPTION:

This course is designed to give students practical experience and theory in turning operations and Lathe work. Students will be able to understand and demonstrate the methods and processes utilized in setup, operation, safety, tool selection and turning of parts. The first course in lathe will include identification of parts, setup and safe lathe operation. Topics that will be covered include basic lathe operations, identification of lathe parts, work-holding devices, feeds, speeds, cutting chips, basic tooling, measurement of inside and outside diameters and radii.

#### COURSE OBJECTIVES:

Students will be able to:

Explain the historical and current role of lathe in the manufacturing process.

Identify, define and understand safe operation, symbols, terms and parts of the lathe.

Identify and describe facing and turning operations.

Identify and execute machine Maintance and preoperational safety inspection.

Apply knowledge of mathematics and logic previously covered.

Work independently and in groups to apply that knowledge.

Use terminology to describe the technology they are utilizing.

Understand the role of safety when operating machinery.

Safely setup and operate lathe for turning operations.

Understanding the relationship between input/output and inspection of turned parts.

Problem solving in turning operation procedures and techniques.

Expand the use of critical thinking and problem solving skills.

#### **GOALS**

The goal of the course is to prepare our students for safe operation of lathe use. Creating a connection between consumer products and the manufacturing processes that are needed to successfully build them.

#### **INSTRUCTIONAL METHODS:**

Demonstrations, Modeling, Synthesized Activities, Laboratory Activities, Lecture, Cooperative Group Learning, Individual Instruction and Mentoring

#### INSTRUCTIONAL RESOURCES:

TEXTBOOK - Machining Fundamentals by: John R. Walker, Bob Dixon, 9<sup>th</sup> Edition, 2014

Precision Machining Technology by: Peter J. Hoffman, Eric S. Hopewell, Brian James, Kent M. Sharp, Jr. 2012

**COURSE CREDIT: .50** 

#### STANDARDS:

### ISTE (International Society for Technology in Education) Standards

The ISTE states the goals for students states that:

Students demonstrate creative thinking, construct knowledge, and develop innovative products and processes using technology.

- o Apply existing knowledge to generate new ideas, products, or processes.
- o Use models and simulations to explore complex systems and issues.

Students use critical thinking skills to plan and conduct research, manage projects, solve problems, and make informed decisions using appropriate digital tools and resources.

- o Plan and manage activities to develop a solution or complete a project.
- Collect and analyze data to identify solutions and/or make informed decisions.
- Use multiple processes and diverse perspectives to explore alternative solutions.

This course will use the following Connecticut state standards as guideposts:

#### ESSENTIAL KNOWLEDGE AND SKILLS

- EKS.03 Demonstrate mathematics knowledge and skills required to pursue the full range of post-secondary education and career opportunities
  - o EKS.03.03 Analyze Mathematical problem statements for missing and/or irrelevant data.
  - o EKS.03.04 Construct charts/graphs from functions and data.
- EKS.05 Employ critical thinking skills independently and in teams to solve problems and make decisions (e.g., analyze, synthesize and evaluate).
  - o EKS.05.02 Analyze elements of a problem to develop creative solutions.
  - o EKS.05.04 Create ideas, proposals, and solutions to problems.
  - o EKS.05.07 Generate new and creative ideas to solve problems by brainstorming possible solutions.
- EKS.06 Implement personal and jobsite safety rules and regulations to maintain safe and healthful working conditions and environments.
  - o EKS.06.01 Assess workplace conditions with regard to safety and health.
  - o EKS.06.02 Align safety issues with appropriate safety standards to ensure a safe workplace/jobsite.
  - o EKS.06.03 Identify safety hazards common to workplaces.
  - o EKS.06.04 Identify safety precautions to maintain a safe worksite.
  - o EKS.06.05 Select appropriate personal protective equipment as needed for a safe workplace/jobsite.

- o EKS.06.07 Use personal protective equipment according to manufacturer rules and regulations.
- o EKS.06.09 Implement safety precautions to maintain a safe worksite.

#### GRADE 9.12 STANDARDS MANUFCATURING TECHNOLOGY

- MAN.01- Employ engineering design process to achieve desired outcomes
  - o MAN.01.01 Describe the process of interpreting and preparing technical drawings and rough drawings and sketches
  - o MAN.01.02 Demonstrate the process for interpreting technical drawings to extrapolate information from a set of plans using appropriate mathematical functions
- MAN.03 Demonstrate the methods involved in turning raw materials into usable products
  - MAN.03.02 Demonstrate the safe and accurate secondary process to create a finished product; forming; separating; combining; assembly; finishing
  - o MAN.03.03 Apply a variety of manufacturing techniques and processes to create a usable product

#### GRADE 9.12 STANDARDS ENGINEERING TECHNOLOGY

- ENG.04 Design using the appropriate materials in engineering by identifying. Comparing, selecting and testing.
  - o ENG.04.01 Identify common materials used in engineering.
  - o ENG.04.03 Test materials for specific characteristics.\*(D11)
  - o ENG.04.04 Explain the process used for selecting the correct materials for specific functions.\*(D10)
- ENG.06 Use engineering equipment, laboratory materials and tools appropriately and safely.
  - o ENG.06.01 Describe the function of a safety device.
  - o ENG.06.02 Demonstrate safe personal behavior in the classroom.
  - o ENG.06.03 Use all tools and equipment safely
  - o ENG.06.04 Describe and demonstrate the proper use of engineering laboratory equipment.\*(B6)
  - o ENG.06.05 Describe and demonstrate the components of personal and group laboratory safety.
  - o ENG.06.06 Describe and use safety laboratory equipment.
  - o ENG.06.07 Explain and demonstrate the proper use of personal protective equipment (PPE).\*(B5)

# TECHNOLOGY EDUCATION Grades 9-12 Standards ENGLISH LANGUAGE ARTS Science & Technical Subjects Literacy Grade 9-12

- RST.11-12.3 Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks; analyze the specific results based on explanations in the text.
- RST.11-12.4 Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to grades 9 –12 texts and topics.

# TECHNOLOGY EDUCATION CCSS MATHEMATICS GRADES 9-12 Standards for Mathematical Practice

 CCSS.Math.Content.HSA-CED.A.3 - Represent constraints by equations or inequalities, and by systems of equations and/or inequalities, and interpret solutions as viable or nonviable options in a modeling context. For example, represent inequalities describing nutritional and cost constraints on combinations of different foods.

#### **COURSE OUTLINE**

#### Unit 1 - Machine and Lab Safety

- o History and Importance of Safety and Personal Protection Equipment (PPE)
- o General lab and Personal Safety
- o General Machine Maintance Procedures, Emergency Power and Emergency Stop
- Slip, Trips and Fall prevention (Most Common Workplace Injury)
- o OSHA standards Pinch, Crush, Operation, Points of Safety

#### Unit 2 – Measurement and Machine Dials

- o External and Internal Calipers
- o Dial Caliper, Vernier Micrometer, Machinist Ruler
- o Depth Gauge, Thread Gauge, Drill Point Gauge
- o Machine Feed Dials (Graduated Micrometer Dials)

#### Unit 3 - Lathe Parts

- Spindle, Chuck, Key, Foot Brake, Emergency Stop
- o Carriage, Cross-slide, Compound rest, Tool Post
- o Motor, Foot, Bed, Ways, Headstock, Tailstock
- o Input Device Parts Identification (Handwheels, Switches, levers and Buttons

### Unit 4 – Lathe Controls and Feeds

- o Course vs. Fine adjustments
- o Spindle Activation and Direction Control Lever
- o Spindle Speed Control
- o Feeds and Speeds (Materials and Tooling correlation)

#### Unit 5 – Tooling and Lathe Accessories

- o Basic Turning Tooling, Tool Post
- o Basic Work holding devices, 3 Jaw Chuck, Clamp,
- o Cutting tools- Roughing, Finish, Facing, Round-nose, Grooving
- o Drills, Centers

#### Unit 6 – Turning Setup

- o Chuck choice and operation, Crash Prevention
- o Finding Center, Tool overhang, Adjusting Tool Post
- o Holding Different Shapes and Materials
- Scribing

#### Unit 7 – <u>Turning Operations</u>

- o Facing, Shouldering, Grooving, Parting
- o Center Drilling, Offset Drilling

#### Unit 8 – Advanced Lathe Operations

- Auto feeds
- o Turning between centers
- o Boring, Knurling, Reaming, Hand filing
- Steady Rest and Follower Rest
- o 4 jaw chuck
- o Polishing, Grinding and Abrasives
- o Tapers, Threading

MONTHS	UNIT/	CHAPTERS/TOPICS	Activities/ Resources	Suggested Reading
August / September	1 Machine and Lab Safety	Chapter 3 Shop Safety	ToolingU supplemental activities and assessments  Eye protection video and research assignment.  Lab Safety review, handout and test  PPE review and identification  Fire Safety handout and test  Hands-on Lab  Demonstration/ PowerPoint  Handouts  Teacher Developed Assessment	Chapter 3 Shop Safety
September/ October	2 Measureme nt and Machine Dials	Chapter 5 Measurement  Measurement to 1/64" (0.5mm) with a steel rule.  Measure to 0.0001" (0.002mm) using vernier micrometer caliper.  Identify various types of gauges found in a machine shop.  Use a dial indicator.  Chapter 6 Layout Work  Explain why layouts are needed.  Identify common layout tools.  Use layout tools safely.  Make basic layouts.  List safety rules for layout work.	Tooling U supplemental activities and assessments  Measurement Exercises  Quality Control/ Quality Assurance Simulation  Measuring tools assessment practical/ written  Hands-on Lab  Demonstration/ PowerPoint  Handouts  Teacher Developed Assessment  Layout tools (Scribe, Square, Straightedge, surface gauge, surface plate, V-block)  Layout dye  Raw machining materials (Composite wood, Plastic, Wax, Aluminum, Steel, Brass)	Chapter 5 Measurement Chapter 6 Layout Work

MONTHS	UNIT/ DATES	CHAPTERS/ TOPICS Learning Objectives	Activities/ Resources	Suggested Reading
October/ November	3 Lathe Parts	Chapter 14 The Lathe  Describe how lathe operates  Identify various parts of the lathe	ToolingU supplemental activities and assessments  Hands-on Lab  Demonstration/ PowerPoint  Handouts  Teacher Developed Assessment  Lathe parts assessment practical/ written  Lathe	Chapter 14 The Lathe
	4 Lathe Controls and Feeds	Chapter 14 The Lathe  Calculate correct cutting speeds and feeds for lathe operations.  Handwheels Gear selection Spindle speed control Power feed lever	ToolingU supplemental activities and assessments  Hands-on Lab  Demonstration/ PowerPoint  Handouts  Teacher Developed Assessment  Lathe controls assessment practical/ written  Lathe	Chapter 14 The Lathe
	5 Tooling and Lathe Accessories	Chapter 14 The Lathe	ToolingU supplemental activities and assessments  Hands-on Lab  Demonstration/ PowerPoint  Handouts  Teacher Developed Assessment  Lathe tools assessment practical/ written  Lathe	Chapter 14 The Lathe
	6 Turning Setup	Chapter 14 The Lathe  Safely setup and operate a lathe using various workholding devices.	ToolingU supplemental activities and assessments  Hands-on Lab	Chapter 14 The Lathe

MONTHS	UNIT/	CHAPTERS/ TOPICS	Activities/ Resources	Suggested Reading
	DATES	Learning Objectives	Demonstration/ PowerPoint	
			Handouts	
			Teacher Developed Assessment	
			Lathe setup and work holding assessment practical/ written	
			Lathe	
			Lathe tooling	
	7 Turning	Chapter 14 The Lathe  Performing basic machining	ToolingU supplemental activities and assessments	Chapter 14 The Lathe
	Turning Operations	operations on a lathe	Hands-on Lab	
			Demonstration/ PowerPoint	
			Handouts	
			Teacher Developed Assessment	
			Turing operations assessment practical/ written	
			Lathe	
			Raw machining materials (Composite wood, Plastic, Wax, Aluminum, Steel, Brass)	
	8	Chapter 15 Other Lathe Operations	ToolingU supplemental activities and assessments	Chapter 15 Other Lathe
	Advanced	<ul> <li>Perform boring and knurling operations on a lathe.</li> </ul>		Operations
	Lathe Operations	<ul> <li>Describe how drilling, reaming, filing, polishing,</li> </ul>	Hands-on Lab Demonstration/ PowerPoint	
		grinding, and milling operations can be	Handouts	
		performed on a lathe.  Properly setup and operate a lathe using steady and	Teacher Developed Assessment	
		follower rests.  Demonstrate familiarity with industrial applications of the lathe.	Measuring tools assessment practical/ written	
		iau ic.	Lathe	
			Advanced lathe tooling	
			Raw machining materials	

MONTHS UNIT/ DATES	CHAPTERS/ TOPICS Learning Objectives	Activities/ Resources	Suggested Reading
		(Composite wood, Plastic, Wax, Aluminum, Steel, Brass)	

#### CURRICULUM FOR Grinding I (1/2 Year Course)

DEVLOPED BY: Michael Retano

FOR: THE WATERBURY CAREER ACADEMY

#### COURSE DESCRIPTION:

This course is designed to give students practical experience and theory in precision grinding operations and abrasives. Students will be able to understand and demonstrate the methods and processes utilized in setup, operation, safety, wheel selection and grinding of parts. The first course in grinding will include identification of parts, setup and safe lathe operation. Topics that will be covered include identifications of the various types of precision grinding machines, basic surface grinder operations, identification of surface grinder parts, work-holding devices, dwell, grinding wheel selection, cutting fluids.

COURSE OBJECTIVES: Students will be able to-

Explain the historical and current role of precision grinding in the manufacturing process.

Identify, define and understand safe operation, symbols, terms and parts of the surface grinder.

Identify and describe cylindrical grinder and wheel grinder operations.

Identify and execute machine maintance and preoperational safety inspection.

Apply knowledge of mathematics and logic previously covered.

Work independently and in groups to apply that knowledge.

Use terminology to describe the technology they are utilizing.

Understand the role of safety when operating machinery.

Safely setup and operate Surface Grinder for grinding operations.

Convey understanding of relationship between input/output and inspection of precision ground parts.

Problem solving in grinding operations procedures and techniques.

Expand the use of critical thinking and problem solving skills.

#### GOALS

The goal of the course is to prepare our students for safe operation of grinding machinery and power tools. Creating a connection between consumer products and the manufacturing processes that are needed to successfully build them.

#### **INSTRUCTIONAL METHODS:**

Demonstrations, Modeling, Synthesized Activities, Laboratory Activities, Lecture, Cooperative Group Learning, Individual Instruction and Mentoring

#### INSTRUCTIONAL RESOURCES:

TEXTBOOK – Machining Fundamentals by: John R. Walker, Bob Dixon, 9<sup>th</sup> Edition, 2014

Precision Machining Technology by: Peter J. Hoffman, Eric S. Hopewell, Brian James, Kent M. Sharp, Jr. 2012

COURSE CREDIT: .50

#### STANDARDS

### ISTE (International Society for Technology in Education) Standards

The ISTE states the goals for students states that:

Students demonstrate creative thinking, construct knowledge, and develop innovative products and processes using technology.

- o Apply existing knowledge to generate new ideas, products, or processes.
- o Use models and simulations to explore complex systems and issues.

Students use critical thinking skills to plan and conduct research, manage projects, solve problems, and make informed decisions using appropriate digital tools and resources.

- o Plan and manage activities to develop a solution or complete a project.
- Collect and analyze data to identify solutions and/or make informed decisions.
- Use multiple processes and diverse perspectives to explore alternative solutions.

This course will use the following Connecticut state standards as guideposts:

#### ESSENTIAL KNOWLEDGE AND SKILLS

- EKS.03 Demonstrate mathematics knowledge and skills required to pursue the full range of post-secondary education and career opportunities
  - o EKS.03.03 Analyze Mathematical problem statements for missing and/or irrelevant data.
  - o EKS.03.04 Construct charts/graphs from functions and data.
- EKS.05 Employ critical thinking skills independently and in teams to solve problems and make decisions (e.g., analyze, synthesize and evaluate).
  - o EKS.05.02 Analyze elements of a problem to develop creative solutions.
  - o EKS.05.04 Create ideas, proposals, and solutions to problems.
  - o EKS.05.07 Generate new and creative ideas to solve problems by brainstorming possible solutions.
- EKS.06 Implement personal and jobsite safety rules and regulations to maintain safe and healthful working conditions and environments.
  - o EKS.06.01 Assess workplace conditions with regard to safety and health.
  - o EKS.06.02 Align safety issues with appropriate safety standards to ensure a safe workplace/jobsite.
  - o EKS.06.03 Identify safety hazards common to workplaces.

- o EKS.06.04 Identify safety precautions to maintain a safe worksite.
- o EKS.06.05 Select appropriate personal protective equipment as needed for a safe workplace/jobsite.
- EKS.06.07 Use personal protective equipment according to manufacturer rules and regulations.
- o EKS.06.09 Implement safety precautions to maintain a safe worksite.

#### GRADE 9.12 STANDARDS MANUFCATURING TECHNOLOGY

- MAN.01 Employ engineering design process to achieve desired outcomes
  - o MAN.01.01 Describe the process of interpreting and preparing technical drawings and rough drawings and sketches
  - o MAN.01.02 Demonstrate the process for interpreting technical drawings to extrapolate information from a set of plans using appropriate mathematical functions
- MAN.03 Demonstrate the methods involved in turning raw materials into usable products
  - MAN.03.02 Demonstrate the safe and accurate secondary process to create a finished product; forming; separating; combining; assembly; finishing
  - o MAN.03.03 Apply a variety of manufacturing techniques and processes to create a usable product

#### **GRADE 9.12 STANDARDS ENGINEERING TECHNOLOGY**

- ENG.04 Design using the appropriate materials in engineering by identifying. Comparing, selecting and testing.
  - o ENG.04.01 Identify common materials used in engineering.
  - o ENG.04.03 Test materials for specific characteristics.\*(D11)
  - ENG.04.04 Explain the process used for selecting the correct materials for specific functions.\*(D10)
- ENG.06 Use engineering equipment, laboratory materials and tools appropriately and safely.
  - o ENG.06.01 Describe the function of a safety device.
  - o ENG.06.02 Demonstrate safe personal behavior in the classroom.
  - o ENG.06.03 Use all tools and equipment safely
  - ENG.06.04 Describe and demonstrate the proper use of engineering laboratory equipment.\*(B6)
  - o ENG.06.05 Describe and demonstrate the components of personal and group laboratory safety.
  - o ENG.06.06 Describe and use safety laboratory equipment.
  - o ENG.06.07 Explain and demonstrate the proper use of personal protective equipment (PPE).\*(B5)

# TECHNOLOGY EDUCATION Grades 9-12 Standards ENGLISH LANGUAGE ARTS Science & Technical Subjects Literacy Grade 9-12

• RST.11-12.3 Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks; analyze the specific results based on explanations in the text.

• RST.11-12.4 Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to grades 9 –12 texts and topics.

# TECHNOLOGY EDUCATION CCSS MATHEMATICS GRADES 9-12 Standards for Mathematical Practice

 CCSS.Math.Content.HSA-CED.A.3 - Represent constraints by equations or inequalities, and by systems of equations and/or inequalities, and interpret solutions as viable or nonviable options in a modeling context. For example, represent inequalities describing nutritional and cost constraints on combinations of different foods.

#### COURSE OUTLINE

#### Unit 1 - Machine and Lab Safety

- O History and Importance of Safety and Personal Protection Equipment (PPE)
- o General lab and Personal Safety
- o General Machine Maintance Procedures, Emergency Power and Emergency Stop
- Slip, Trips and Fall prevention (Most Common Workplace Injury)
- OSHA standards Pinch, Crush, Operation, Points of Safety

### Unit 2 – Measurement and Machine Dials

- o External and Internal Calipers
- o Dial Caliper, Vernier Micrometer, Machinist Ruler
- o Depth Gauge, Thread Gauge, Drill Point Gauge
- o Machine Feed Dials (Graduated Micrometer Dials)

#### Unit 3 - Grinder Parts

- o Spindle, Wheel, Emergency Stop
- o Adjustable table stop
- o Motor, Foot, Bed, Ways, Coolant pump
- o Cross-feed handwheel, Traverse handwheel, Down-feed handwheel

#### Unit 4 – Grinder Controls and Feeds

- o Course vs. Fine adjustments
- o Spindle Activation, Speed and Direction Control
- o Coolant pump line and Control
- o Feeds and Speeds (Materials and Stone correlation)

#### Unit 5 – Stones and Grinder Accessories

- o Basic Turning Tooling
- o Basic Work holding devices, Magtable
- o Dressing diamond
- Wheel shapes

#### Unit 6 – Grinding Setup

- o Wheel choice and operation
- o Adjusting table height and stops
- o Holding Different Shapes and Materials
- o Coolant

#### Unit 7 – Grinding Operations

- o Traverse Grinding
- o Plunge Grinding

#### Unit 8 – Advanced Grinding Operations

- o Internal Grinding, Centerless Grinding
- o Abrasive Belt Grinding
- Electrolytic Grinding
- o Deburring and Media Blasting

MONTHS	UNIT	CHAPTERS/TOPICS	Activities/ Resources	Suggested Reading
August / September	1 Machine and Lab Safety	Chapter 3 Shop Safety	ToolingU supplemental activities and assessments  Eye protection video and research assignment.  Lab Safety review, handout and test  PPE review and identification  Fire Safety handout and test  Hands-on Lab  Demonstration/ PowerPoint  Handouts  Teacher Developed Assessment	Chapter 3 Shop Safety
September/ October	2 Measureme nt and Machine Dials	Chapter 5 Measurement to 1/64" (0.5mm) with a steel rule.  Measure to 0.0001" (0.002mm) using vernier micrometer caliper.  Identify various types of gauges found in a machine shop.  Use a dial indicator.  Chapter 6 Layout Work  Explain why layouts are needed.  Identify common layout tools.  Use layout tools safely.  Make basic layouts.  List safety rules for layout work.	Tooling U supplemental activities and assessments  Measurement Exercises  Quality Control/ Quality Assurance Simulation  Measuring tools assessment practical/ written  Hands-on Lab  Demonstration/ PowerPoint  Handouts  Teacher Developed Assessment  Layout tools (Scribe, Square, Straightedge, surface gauge, surface plate, V-block)  Layout dye  Raw Grinding materials (Aluminum, Steel, Brass)	Chapter 6 Layout Work

MONTHS	UNIT/	CHAPTERS/ TOPICS	Activities/ Resources	Suggested Deading
22 30 30 30 30	DATES	Learning Objectives	A CONTINUES A LACSULITORS	Suggested Reading
	3 Grinder	Chapter 13 Offhand Grinding  Identification of various types of offhand grinders.	Tooling U supplemental activities and assessments	Chapter 13 Offhand Grinding
	Parts	<ul> <li>Identification of grade type of belts and wheels.</li> </ul>	Off-hand grinding setup exercises	Chapter 20 Precision Grinding
		<ul> <li>List safety rules for offhand grinding</li> </ul>	Grinding assessment practical/ written	
		Chapter 20 Precision Grinding  Identify various parts of	Hands-on Lab	
		precision grinder	Demonstration/ PowerPoint	
			Handouts	
			Teacher Developed Assessment	
	4 Grinder	Chapter 13 Offhand Grinding  Use and off-hand grinder safely	Tooling U supplemental activities and assessments	Chapter 13 Offhand Grinding
	Controls and Feeds	Chapter 20 Precision Grinding	Off-hand grinding operation exercises	Chapter 20 Precision Grinding
		<ul> <li>Explain how precision grinders operate</li> </ul>	Surface grinder operation exercises	
			Grinding operation assessment practical/ written	
			Hands-on Lab	
			Demonstration/ PowerPoint	
			Handouts	
			Teacher Developed Assessment	
	5 Stones and Grinder	Chapter 13 Offhand Grinding  Identification of types and shapes of wheels.	Tooling U supplemental activities and assessments  Stone identification and safety	Chapter 13 Offhand Grinding
	Accessories	<ul> <li>Identification of grade type</li> <li>of belts and wheels.</li> <li>Dressing of wheels and</li> </ul>	assessment practical/ written	
		belts  ldentification of properly	Stone selection assessment practical/ written	
		dressed, loaded, and glazed wheels.  Explain operation and safe	Hands-on Lab	
		use of dressing tools (Diamond, Wheel dresser)	Demonstration/ PowerPoint	
		<ul> <li>Explain use of coolant when grinding.</li> </ul>	Handouts	

MONTHS	UNITI	CHAPTERS/ TOPICS	Activities/ Resources	Suggested Reading
	DATES	Learning Objectives	Teacher Developed Assessment	
	6 Grinding Setup	Chapter 20 Precision Grinding  Select, dress and true grinding wheels.  Safely operate a surface grinder using various types of work-holding devices.	Tooling U supplemental activities and assessments  Grinder setup and safety assessment practical/ written  Hands-on Lab  Demonstration/ PowerPoint  Handouts	Chapter 20 Precision Grinding
			Teacher Developed Assessment	
	7 Grinding Operations	Chapter 20 Precision Grinding  Safely operate a surface grinder using various types of work-holding devices.  Solve common surface grinding problems.  List safety rules related to precision grinding.	Tooling U supplemental activities and assessments  Grinder safety and operation assessment practical/ written  Hands-on Lab  Demonstration/ PowerPoint  Handouts  Teacher Developed Assessment  Raw Grinding materials (Aluminum, Steel, Brass)	Chapter 20 Precision Grinding
	8 Advanced Grinding Operations	Chapter 20 Precision Grinding  ldentify other types of precision grinding.	Tooling U supplemental activities and assessments  Grinder safety and operation assessment practical/ written  Hands-on Lab  Demonstration/ PowerPoint  Handouts  Teacher Developed Assessment  Raw Grinding materials (Aluminum, Steel, Brass)	Chapter 20 Precision Grinding

#### CURRICULUM FOR Milling I (1/2 Year Course)

DEVELOPED BY: Michael Retano

FOR: THE WATERBURY CAREER ACADEMY

#### **COURSE DESCRIPTION:**

This course is designed to give students practical and theory in milling operations and mill work. Students will be able to understand and demonstrate methods and processes utilized when setup, operation, safety, tool selection and milling of parts. The first course in milling will include identification of parts, setup and safe mill operation. Topics that will be covered include basic mill operations, identification of mill parts, work-holding devices, cutting chips, basic tooling, measurement of inside and outside diameters and radii.

#### COURSE OBJECTIVES: Students will be able to-

Explain the historical and current role of the mill in the manufacturing process.

Identify, define and understand safe operation, symbols, terms and parts of the lathe.

Identify and describe setup and milling operations.

Identify and execute machine maintance and preoperational safety inspection.

Apply knowledge of mathematics and logic previously covered.

Work independently and in groups to apply that knowledge.

Use terminology to describe the technology they are utilizing.

Understand the role of safety when operating machinery.

Safely setup and operate mill for milling operations.

Convey an understanding of the relationship between input/output and inspection of milled parts.

Apply problem solving strategies in milling operation procedures and techniques.

Expand the use of critical thinking and problem solving skills.

#### GOALS:

The goal of the course is to prepare our students for safe operation of mill use. Creating a connection between consumer products and the manufacturing processes that are needed to successfully build them.

#### INSTRUCTIONAL METHODS:

Demonstrations, Synthesized Activities, Laboratory Activities, Lecture, Cooperative Group Learning, Individual Instruction and Mentoring

#### INSTRUCTIONAL RESOURCES:

TEXTBOOK – Machining Fundamentals by: John R. Walker, Bob Dixon, 9<sup>th</sup> Edition, 2014

Precision Machining Technology by: Peter J. Hoffman, Eric S. Hopewell, Brian James, Kent M. Sharp, Jr. 2012

**COURSE CREDIT: .50** 

#### STANDARDS:

### ISTE (International Society for Technology in Education) Standards

The ISTE states the goals for students states that:

Students demonstrate creative thinking, construct knowledge, and develop innovative products and processes using technology.

- o Apply existing knowledge to generate new ideas, products, or processes.
- o Use models and simulations to explore complex systems and issues.

Students use critical thinking skills to plan and conduct research, manage projects, solve problems, and make informed decisions using appropriate digital tools and resources.

- o Plan and manage activities to develop a solution or complete a project.
- Collect and analyze data to identify solutions and/or make informed decisions.
- o Use multiple processes and diverse perspectives to explore alternative solutions.

This course will use the following Connecticut state standards as guideposts:

### ESSENTIAL KNOWLEDGE AND SKILLS

- EKS.03 Demonstrate mathematics knowledge and skills required to pursue the full range of post-secondary education and career opportunities
  - o EKS.03.03 Analyze Mathematical problem statements for missing and/or irrelevant data.
  - o EKS.03.04 Construct charts/graphs from functions and data.
- EKS.05 Employ critical thinking skills independently and in teams to solve problems and make decisions (e.g., analyze, synthesize and evaluate).
  - o EKS.05.02 Analyze elements of a problem to develop creative solutions.
  - o EKS.05.04 Create ideas, proposals, and solutions to problems.
  - o EKS.05.07 Generate new and creative ideas to solve problems by brainstorming possible solutions.
- EKS.06 Implement personal and jobsite safety rules and regulations to maintain safe and healthful working conditions and environments.
  - o EKS.06.01 Assess workplace conditions with regard to safety and health.
  - o EKS.06.02 Align safety issues with appropriate safety standards to ensure a safe workplace/jobsite.
  - o EKS.06.03 Identify safety hazards common to workplaces.
  - o EKS.06.04 Identify safety precautions to maintain a safe worksite.
  - o EKS.06.05 Select appropriate personal protective equipment as needed for a safe workplace/jobsite.

- o EKS.06.07 Use personal protective equipment according to manufacturer rules and regulations.
- o EKS.06.09 Implement safety precautions to maintain a safe worksite.

# GRADE 9.12 STANDARDS MANUFACTURING TECHNOLOGY

- MAN.01 Employ engineering design process to achieve desired outcomes
  - MAN.01.01 Describe the process of interpreting and preparing technical drawings and rough drawings and sketches
  - MAN.01.02 Demonstrate the process for interpreting technical drawings to extrapolate information from a set of plans using appropriate mathematical functions
- MAN.03 Demonstrate the methods involved in turning raw materials into usable products
  - MAN.03.02 Demonstrate the safe and accurate secondary process to create a finished product; forming; separating; combining; assembly; finishing
  - o MAN.03.03 Apply a variety of manufacturing techniques and processes to create a usable product

#### GRADE 9.12 STANDARDS ENGINEERING TECHNOLOGY

- ENG.04 Design using the appropriate materials in engineering by identifying. Comparing, selecting and testing.
  - o ENG.04.01 Identify common materials used in engineering.
  - o ENG.04.03 Test materials for specific characteristics.\*(D11)
  - o ENG.04.04 Explain the process used for selecting the correct materials for specific functions.\*(D10)
- ENG.06 Use engineering equipment, laboratory materials and tools appropriately and safely.
  - o ENG.06.01 Describe the function of a safety device.
  - o ENG.06.02 Demonstrate safe personal behavior in the classroom.
  - o ENG.06.03 Use all tools and equipment safely
  - ENG.06.04 Describe and demonstrate the proper use of engineering laboratory equipment.\*(B6)
  - ENG.06.05 Describe and demonstrate the components of personal and group laboratory safety.
  - o ENG.06.06 Describe and use safety laboratory equipment.
  - o ENG.06.07 Explain and demonstrate the proper use of personal protective equipment (PPE).\*(B5)

# TECHNOLOGY EDUCATION Grades 9-12 Standards ENGLISH LANGUAGE ARTS Science & Technical Subjects Literacy Grade 9-12

- RST.11-12.3 Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks; analyze the specific results based on explanations in the text.
- RST.11-12.4 Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to grades 9 –12 texts and topics.

# TECHNOLOGY EDUCATION CCSS MATHEMATICS GRADES 9-12 Standards for Mathematical Practice

 CCSS.Math.Content.HSA-CED.A.3 - Represent constraints by equations or inequalities, and by systems of equations and/or inequalities, and interpret solutions as viable or nonviable options in a modeling context. For example, represent inequalities describing nutritional and cost constraints on combinations of different foods.

#### COURSE OUTLINE

#### Unit 1 – Machine and Lab Safety

- o History and Importance of Safety and Personal Protection Equipment (PPE)
- o General lab and Personal Safety
- o General Machine Maintance Procedures, Emergency Power and Emergency Stop
- o Slip, Trips and Fall prevention (Most Common Workplace Injury)
- o OSHA standards Pinch, Crush, Operation, Points of Safety

#### Unit 2 – Measurement and Machine Dials

- o External and Internal Calipers
- o Dial Caliper, Vernier Micrometer, Machinist Ruler
- o Depth Gauge, Thread Gauge, Drill Point Gauge
- o Machine Feed Dials (Graduated Micrometer Dials)

#### Unit 3 - Mill Parts

- o Spindle, Arbor, Collet, Brake, Emergency Stop
- o Table, Saddle, Vise, Quill, Handwheel
- o Motor, Base, Cross traverse, Longitudinal feed, Oiler
- o Input Device Parts Identification

## Unit 4 – Mill Controls and Feeds

- o Course vs. Fine adjustments
- o Spindle Activation/ Direction, Spindle Speed Control
- o Feeds and Speeds (Materials and Tooling correlation)

### Unit 5 – Tooling and Mill Accessories

- o Basic Mill Tooling End mill, Flute, shank, Face, Arbor, Fly cutter
- Basic Work holding devices Vise, Swivel Vise, Flanged Vise, Universal Vise, Rotary table, Magnetic Chuck, Hold down Clamps, Parallels
- o Cutting tools- Roughing, Indexing, Bull, Ball, Engraving, Drills
- o Rules for determining speed Rotations Per Minute (RPM) and feed
- o Calculating cutting Spindle load and cut depth (50% of cutter width or less)

#### Unit 6 – Milling Setup

- o Clamping and Work holding
- o Collet or Chuck Choice and Operation of Drawbar
- o Adjusting for square, Finding Center, Dial Indicator, Scribing, Marking
- Holding Different Shapes and Materials (V-block and specialty hold downs)
- o Edge finder and Z axis Safety Clearance, Finding Z zero, Paper Clearance

#### Unit 7 – Milling Operations

- o Facing, Drilling, Boring, Slitting, Slotting, Pocket
- Broaching, Side Milling
- o Gear Cutting, Threading, Reaming

#### Unit 8 – Advanced Milling Operations

- o Machining Angular Surfaces
- o Rigid tapping, Threading, Reaming, Tapers
- o Rotary table, Rotisserie table

MONTHS	UNIT/ DATES	CHAPTERS/TOPICS Learning Objectives	-Activities/ Resources	Suggested Reading.
August / September	1 Machine and Lab Safety	<ul> <li>Explain why it is important to develop safe work habits.</li> <li>Dress in the proper safety equipment and clothing</li> <li>Recognize and correct unsafe work practices.</li> <li>Apply safe work practices when in a machine shop or worksite.</li> <li>Select the appropriate fire extinguisher for a particular type of fire.</li> </ul>	ToolingU supplemental activities and assessments  Eye protection video and research assignment.  Lab Safety review, handout and test  PPE review and identification  Fire Safety handout and test  Hands-on Lab  Demonstration/ PowerPoint  Handouts  Teacher Developed Assessment	Chapter 3 Shop Safety
September/ October	2 Measureme nt and Machine Dials	Chapter 5 Measurement to 1/64" (0.5mm) with a steel rule.  Measure to 0.0001" (0.002mm) using vernier micrometer caliper.  Identify various types of gauges found in a machine shop.  Use a dial indicator.  Chapter 6 Layout Work  Explain why layouts are needed.  Identify common layout tools.  Use layout tools safely.  Make basic layouts.  List safety rules for layout work.	Tooling U supplemental activities and assessments  Measurement Exercises  Quality Control/ Quality Assurance Simulation  Measuring tools assessment practical/ written  Hands-on Lab  Demonstration/ PowerPoint  Handouts  Teacher Developed Assessment  Layout tools (Scribe, Square, Straightedge, surface gauge, surface plate, V-block)  Layout dye  Raw machining materials (Composite wood, Plastic, Wax, Aluminum, Steel, Brass)	Chapter 5 Measurement Chapter 6 Layout Work

MONTHS	UNIT/ DATES	CHAPTERS//TOPICS	Activities/ Resources	Suggested Reading
November/ December	3 Mill Parts	Chapter 18 The Milling Machine  Describe how milling machine operates  Identify various parts of the milling machine	Tooling U supplemental activities and assessments  Hands-on Lab  Demonstration/ PowerPoint	Chapter 18 The Milling Machine
	·		Handouts Teacher Developed Assessment Mill parts assessment practical/ written Milling Machine	
	4 Mill Controls and Feeds	Chapter 18 The Milling Machine  Describe how milling machine operates  Identify various parts of the	Tooling U supplemental activities and assessments  Hands-on Lab	Chapter 18 The Milling Machine Chapter 19 Milling
		milling machine  Chapter 19 Milling Machine Operations  Describe how milling machine operates Perform various cutting operations	Demonstration/ PowerPoint  Handouts  Teacher Developed Assessment  Mill controls assessment practical/ written	Machine Operations
	5 Tooling and Mill Accessories	Chapter 18 The Milling Machine  Describe milling machine tooling selection variables  Identify various tooling  Describe feeds and speed tooling vs. material selection variables  Tooling diameter, flute number and size, shank, HSS vs. Carbide	Milling Machine Tooling U supplemental activities and assessments Hands-on Lab Demonstration/ PowerPoint Handouts Teacher Developed Assessment Mill tooling identification assessment practical/ written	Chapter 18 The Milling Machine
	6 Milling Setup	Chapter 18 The Milling Machine  Describe milling machine work-holding attachments and devices  Identify various work- holding attachments and devices	Milling Machine Tooling U supplemental activities and assessments Hands-on Lab Demonstration/ PowerPoint	Chapter 18 The Milling Machine  Chapter 19 Milling Machine Operations

MONTHS	UNIT/	CHAPTERS/TOPICS	Activities/ Resources	Suggested Reading
10 Aug 20 10 Aug 20	DATES	Learning Objectives		
		<ul> <li>Describe importance of squaring and finding zero/</li> </ul>	Handouts	
		datums	Teacher Developed Assessment	·
		Chapter 19 Milling Machine Operations  Describe how milling	Mill pre-work setup and hold-down identification assessment practical/written	
		machine operates <ul><li>Setup and safely operate milling machine</li></ul>	Raw machining materials (Composite wood, Plastic, Wax, Aluminum, Steel, Brass)	
		•	Milling Machine	
	7 Milling	Chapter 19 Milling Machine Operations  Describe how milling	Tooling U supplemental activities and assessments	Chapter 19 Milling Machine Operations
	Operations	machine operates	Hands-on Lab	
		<ul> <li>Setup and safely operate milling machine</li> </ul>	Demonstration/ PowerPoint	
			Handouts	,
			Teacher Developed Assessment	
			Mill operations assessment practical/ written	
		•	Raw machining materials (Composite wood, Plastic, Wax, Aluminum, Steel, Brass)	
			Milling Machine	
	8 Advanced	Chapter 19 Milling Machine Operations	Tooling U supplemental activities and assessments	Chapter 19 Milling Machine Operations
,	Milling Operations	<ul> <li>Perform cutting, drilling, and boring operations on milling machine</li> </ul>	Hands-on Lab	
	oporadono /	<ul> <li>Make calculations for</li> </ul>	Demonstration/ PowerPoint	
		cutting bevels, chamfers and complex operations.	Handouts	
			Teacher Developed Assessment	
			Raw machining materials (Composite wood, Plastic, Wax, Aluminum, Steel, Brass)	
			Advanced mill tooling	
			Milling Machine	

#### CURRICULUM FOR Bench Work I (1/2 Year Course)

DEVLOPED BY: Michael Retano

FOR: THE WATERBURY CAREER ACADEMY

#### COURSE DESCRIPTION:

This course is designed to give students practical experience and theory in Manufacturing shop basics. Students will be able to understand and demonstrate methods and processes utilized in the manufacturing lab. The course will include identification of tools, material handling, planning and shop safety. Topics that will be covered include basic hand tools, Personal protective equipment, guards, work flow, layout, material selection and storage, tool selection and Maintance, chemical safety and handling, Accident prevention and hazard identification.

#### COURSE OBJECTIVES:

Students will be able to:

Explain the historical and current role of safety standards in the manufacturing.

Identify, define and understand safe lab behaviors and equipment.

Describe and show understanding of "Right tool for the right job".

Identify and execute lab Maintance and pre-work environment safety inspection.

Apply knowledge of mathematics and logic previously covered.

Work independently and in groups to apply that knowledge.

Use terminology to describe the technology they are utilizing.

Understand the role of safety when working or observing.

Identify hazards and personal work place safety requirements.

Convey understanding of relationship between job planning and output.

Utilize problem solving in manufacturing procedures and techniques.

Expand the use of critical thinking and problem solving skills.

#### GOALS:

The goal of the course is to prepare our students for safe proper use of all basic manufacturing related hand tools, materials and environments.

#### INSTRUCTIONAL METHODS:

Demonstrations, Synthesized Activities, Laboratory Activities, Lecture, Cooperative Group Learning, Individual Instruction and Mentoring

#### **INSTRUCTIONAL RESOURCES:**

TEXTBOOK – Machining Fundamentals by: John R. Walker, Bob Dixon, 9<sup>th</sup> Edition, 2014

Precision Machining Technology by: Peter J. Hoffman, Eric S. Hopewell, Brian James, Kent M. Sharp, Jr. 2012

#### STANDARDS

### ISTE (International Society for Technology in Education) Standards

The ISTE states the goals for students states that:

Students demonstrate creative thinking, construct knowledge, and develop innovative products and processes using technology.

- o Apply existing knowledge to generate new ideas, products, or processes.
- Use models and simulations to explore complex systems and issues.

Students use critical thinking skills to plan and conduct research, manage projects, solve problems, and make informed decisions using appropriate digital tools and resources.

- o Plan and manage activities to develop a solution or complete a project.
- Collect and analyze data to identify solutions and/or make informed decisions.
- Use multiple processes and diverse perspectives to explore alternative solutions.

This course will use the following Connecticut state standards as guideposts:

#### ESSENTIAL KNOWLEDGE AND SKILLS

- EKS.03 Demonstrate mathematics knowledge and skills required to pursue the full range of post-secondary education and career opportunities
  - EKS.03.03 Analyze Mathematical problem statements for missing and/or irrelevant data.
  - o EKS.03.04 Construct charts/graphs from functions and data.
- EKS.05 Employ critical thinking skills independently and in teams to solve problems and make decisions (e.g., analyze, synthesize and evaluate).
  - o EKS.05.02 Analyze elements of a problem to develop creative solutions.
  - o EKS.05.04 Create ideas, proposals, and solutions to problems.
  - o EKS.05.07 Generate new and creative ideas to solve problems by brainstorming possible solutions.
- EKS.06 Implement personal and jobsite safety rules and regulations to maintain safe and healthful working conditions and environments.
  - o EKS.06.01 Assess workplace conditions with regard to safety and health.
  - o EKS.06.02 Align safety issues with appropriate safety standards to ensure a safe workplace/jobsite.
  - o EKS.06.03 Identify safety hazards common to workplaces.
  - o EKS.06.04 Identify safety precautions to maintain a safe worksite.
  - o EKS.06.05 Select appropriate personal protective equipment as needed for a safe workplace/jobsite.
  - o EKS.06.07 Use personal protective equipment according to manufacturer rules and regulations.
  - o EKS.06.09 Implement safety precautions to maintain a safe worksite.

#### GRADE 9.12 STANDARDS MANUFACTURING TECHNOLOGY

- MAN.01- Employ engineering design process to achieve desired outcomes
  - o MAN.01.01 Describe the process of interpreting and preparing technical drawings and rough drawings and sketches
  - MAN.01.02 Demonstrate the process for interpreting technical drawings to extrapolate information from a set of plans using appropriate mathematical functions
- MAN.03 Demonstrate the methods involved in turning raw materials into usable products
  - o MAN.03.02 Demonstrate the safe and accurate secondary process to create a finished product; forming; separating; combining; assembly; finishing
  - o MAN.03.03 Apply a variety of manufacturing techniques and processes to create a usable product

#### **GRADE 9.12 STANDARDS ENGINEERING TECHNOLOGY**

- ENG.04 Design using the appropriate materials in engineering by identifying. Comparing, selecting and testing.
  - o ENG.04.01 Identify common materials used in engineering.
  - o ENG.04.03 Test materials for specific characteristics.\*(D11)
  - o ENG.04.04 Explain the process used for selecting the correct materials for specific functions.\*(D10)
- ENG.06 Use engineering equipment, laboratory materials and tools appropriately and safely.
  - o ENG.06.01 Describe the function of a safety device.
  - o ENG.06.02 Demonstrate safe personal behavior in the classroom.
  - o ENG.06.03 Use all tools and equipment safely
  - o ENG.06.04 Describe and demonstrate the proper use of engineering laboratory equipment.\*(B6)
  - o ENG.06.05 Describe and demonstrate the components of personal and group laboratory safety.
  - o ENG.06.06 Describe and use safety laboratory equipment.
  - o ENG.06.07 Explain and demonstrate the proper use of personal protective equipment (PPE).\*(B5)

# TECHNOLOGY EDUCATION Grades 9-12 Standards ENGLISH LANGUAGE ARTS Science & Technical Subjects Literacy Grade 9-12

- RST.11-12.3 Follow precisely a complex multistep procedure when carrying
  out experiments, taking measurements, or performing technical tasks; analyze
  the specific results based on explanations in the text.
- RST.11-12.4 Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to grades 9 –12 texts and topics.

# TECHNOLOGY EDUCATION CCSS MATHEMATICS GRADES 9-12 Standards for Mathematical Practice

 CCSS.Math.Content.HSA-CED.A.3 - Represent constraints by equations or inequalities, and by systems of equations and/or inequalities, and interpret solutions as viable or nonviable options in a modeling context. For example, represent inequalities describing nutritional and cost constraints on combinations of different foods.

#### **COURSE OUTLINE**

### Unit 1 – Machine and Lab Safety

- The History and Importance of Safety procedures and Personal Protection Equipment (PPE)
- o General lab and Personal Safety
- o General lab Maintance Procedures
- o Fire and chemical safety
- o Slip, Trips and Fall prevention (Most Common Workplace Injury)
- o Pinch, Crush, Operation, Points of Safety

#### Unit 2 – Measurement tools

- o Ruler
- o Dial Caliper
- o Micrometer
- o Dial indicator
- Conversion Chart

#### Unit 3 - Basic Hand Tools

- o Wrenches
- o Hacksaws
- o Files
- Hand taps/dies (threading)
- o Hammers
- o Clamps
- o Pliers
- o Screwdrivers

#### Unit 4 – Shop best practices

- Vise and work holding
- o Material handling and storage
- o Cleaning and Organizing (Work flow and time on task)
- o Planning and Layout

#### Unit 5 –Power tools

- o Electric, Pneumatic, Cordless
- o Saws
- o Drills
- o Hammers
- o Nibblers
- o Grinders

#### Unit 6 –Basic Shop Machinery

- o Pedestal grinder/bench grinder
- o Drill press
- o Horizontal Bandsaw
- o Vertical Bandsaw

#### Unit 7 – Metal types and characteristics

- o Common stock shapes and measurements
- o Alloys, Composites

- o Aluminum, Brass, Copper
- o Steel, stainless steel, tool steel
- o Carbon content, High Carbon, Medium-Carbon, Low-Carbon
- o Ductility, Shear,
- o Rare and precious metals
- o Ferrous vs. Non-Ferrous

### Unit 8 – <u>Advanced Manufacturing processes</u>

- o Laser
- o EDM
- o Waterjet
- o Media Blasting
- o Electro Plating

MONTHS	UNIT/	CHAPTERS/TOPICS	RESOURCES/	SUGGESTED
	DATES	Learning Objectives	ACTIVITIES	READINGS
	1 Machine and Lab Safety	Chapter 3 Shop Safety  Explain why it is important to develop safe work habits.  Dress in the proper safety equipment and clothing  Recognize and correct unsafe work practices.  Apply safe work practices when in a machine shop or worksite.  Select the appropriate fire extinguisher for a particular type of fire.	ToolingU supplemental activities and assessments  Eye protection video and research assignment.  Lab Safety review, handout and test  PPE review and identification  Fire Safety handout and test  Hands-on Lab	Chapter 3 Shop Safety Handouts Teacher Developed Assessment
	2 Measurement	Chapter 5 Measurement  Measurement to 1/64" (0.5mm) with a steel rule.  Measure to 0.0001" (0.002mm) using vernier micrometer caliper.  Identify various types of gauges found in a machine shop.  Use a dial indicator.  Chapter 6 Layout Work  Explain why layouts are needed.  Identify common layout tools.  Use layout tools safely.  Make basic layouts.  List safety rules for layout work.	Tooling U supplemental activities and assessments  Measurement Exercises  Quality Control/ Quality Assurance Simulation  Measuring tools assessment practical/ written  Hands-on Lab  Layout tools (Scribe, Square, Straightedge, surface gauge, surface plate, V-block)  Layout dye  Raw machining materials (Composite wood, Plastic, Wax, Aluminum, Steel, Brass)	Chapter 5 Measurement Chapter 6 Layout Work Handouts Teacher Developed Assessment

MONTHS	UNIT/	CHAPTERS/TOPICS	RESOURCES/	SUGGESTED
	DATES	Learning Objectives	ACTIVITIES	READINGS
	3 Basic Hand Tools	Chapter 7 Hand Tools  Identify most commonly used machine shop hand tools  Select proper hand tool for the job  Maintain Hand tools properly.  Explain how to use hand tools safely.	Tooling U supplemental activities and assessments  Hand tool Exercises  Hand tools identification and common missuses assessment practical/ written  Hands-on Lab	Chapter 7 Hand Tools  Handouts  Teacher Developed Assessment
	4 Shop Best Practices	Chapter 3 Shop Safety  MSDS and Material handling  Maintance and Storage of materials  OSHA Safety (10 Hour Card)	Tooling U supplemental activities and assessments  Shop Maintance Exercises  Material handling assessment practical/ written	Chapter 3 Shop Safety Handouts Teacher Developed Assessment
	5 Power Tools	Chapter 12 Drills and Drilling Machines  Select and safely use correct drills and drilling machine for a given job. Explain safety rules the pertain to drilling operations  General power tool safety, use and hazard identification	Hands-on Lab Tooling U supplemental activities and assessments Power tool Exercises Power tool assessment practical/ written Hands-on Lab	Chapter 12 Drills and Drilling Machines  Handouts  Teacher Developed Assessment
	6 Basic Shop Machinery	Chapter 11 Sawing and Cutoff Machines  Identify the various types of sawing and cutoff machines.  Select the correct machine for the job Safely operate sawing and cutoff machines  Chapter 12 Drills and Drilling Machines  Describe basic drilling operations	Tooling U supplemental activities and assessments  Machine Exercises  Machine Identification and safety assessment practical/ written (multiple)  Hands-on Lab	Chapter 11 Sawing and Cutoff Machines  Chapter 12 Drills and Drilling Machines  Handouts  Teacher Developed Assessment

MONTHS	UNIT/ DATES	CHAPTERS/ TOPICS Learning Objectives	RESOURCES/ ACTIVITIES	SUGGESTED READINGS
	7 Metal types and characteristics	Chapter 28 Metal Characteristics	Tooling U supplemental activities and assessments  Metal identification Exercises  Metal Identification and safety assessment practical/ written  Hands-on Lab	Chapter 28 Metal Characteristics  Handouts  Teacher Developed Assessment
	8 Advanced Manufacturing processes	Chapter 32 Nontraditional Machining Processes  Describe the chemical milling process and its advantages  Explain water jet cutting and water jet abrasive milling.  Summarize the various ultrasonic machining processes.  Explain electronic beam machining.  Describe the laser beam machining process.	Tooling U supplemental activities and assessments  Nontraditional Machining Exercises  Nontraditional Machining identification and safety assessment practical/ written  Hands-on Lab  Raw machining materials (Acrylic, Aluminum, Steel, Brass)	Chapter 32 Nontraditional Machining Processes  Handouts  Teacher Developed Assessment

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CONNECTICUT STATE DEPARTMENT OF EDUCATION

# An Invitation to Consider Next Generation Science



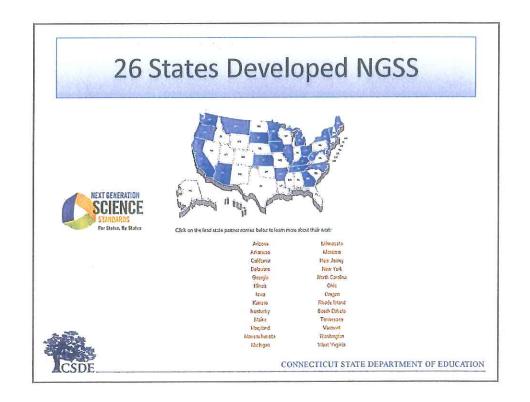
Date: 5-14-15
Presented to: Waterbury Board of Education
Presented by: John Reed, Supervisor of Science and Technology Education

## Foreword

The information regarding curriculum and assessment transition timelines described in this presentation has not yet been detailed or formally accepted, either by the State Board of Education or the Connecticut General Assembly. In an effort to be transparent and inclusive in its NGSS pre-adoption processes, preliminary information about transitioning to new state assessments has been included and is subject to change.



Discussion Feedback  e provide a surramary of your group's responses to the items below.  see rate your agreement with each of the following statements.  Strongly Disagree Disagree Agree Strongly Agree parts in my group before that the est to teaching and learning which as to teaching and learning which as the teaching and learning which parts in my group before that the est which are little with the following the provide as which are cor if we adopt the will be good for Connecticut in the state of the stat	(NGSS) Pre-Adoption S			
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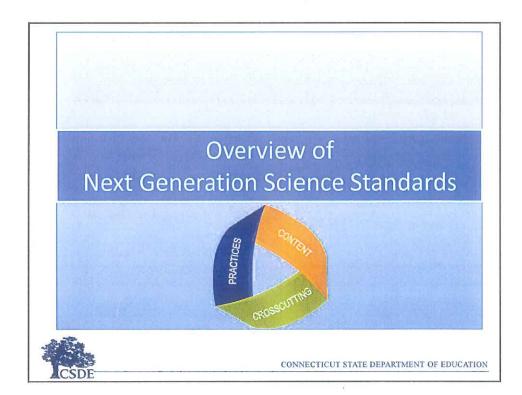


# CT Role in NGSS Development

During the 18-month NGSS development period, CT provided feedback on 4 separate drafts:

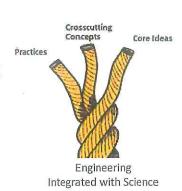
- > SDE science consultants reviewed 2 state drafts and gave feedback to Achieve.
- ➤ 24 Connecticut science educators took part in SDEled reviews of 2 public drafts, generating feedback to Achieve.
- 3,700 Connecticut residents looked at NGSS public drafts in May 2012 and January 2013\*.
- \* Source: Achieve NextGenScience.Org Web Analytics

CSDE



# Students Learn Through 3 Intertwined "Dimensions" of Science

The NGSS are written as "Performance Expectations that blend a Practice with a Core Idea and a Crosscutting Concept.



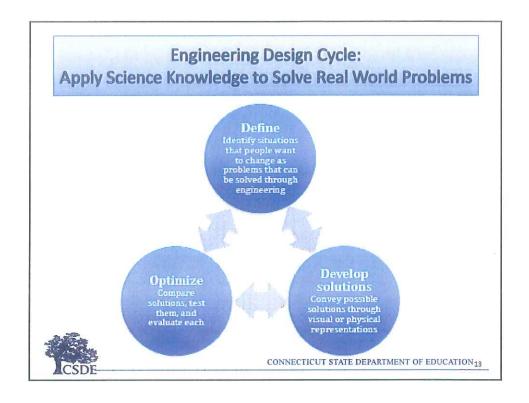


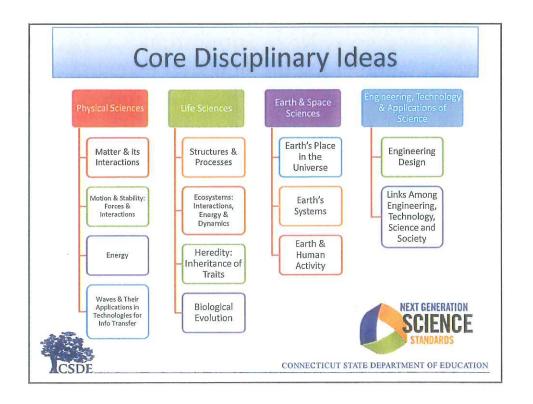
CONNECTICUT STATE DEPARTMENT OF EDUCATION

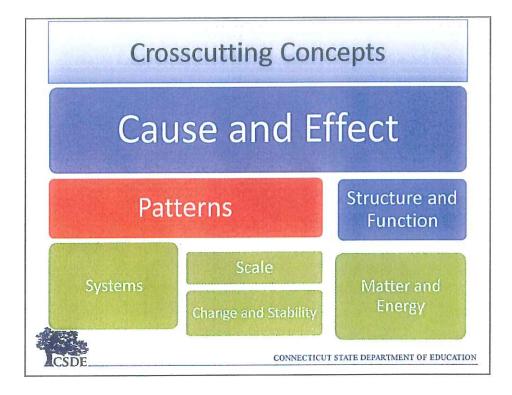
# Science and Engineering Practices: Central to Next Gen Science Learning

- Asking questions and defining problems
- 2. Developing and using models
- 3. Planning and carrying out investigations
- 4. Analyzing and interpreting data
- 5. Using mathematics and computational thinking
- Developing explanations and designing solutions
- 7. Engaging in argument from evidence
- 8. Obtaining, evaluating, and communicating information









# Assessing Next Generation Science Learning

Connecticut: One Dimension (at a time)

**Describe** the effects of the strengths of pushes and pulls on the motion of objects.

**Describe** the basic structures of an animal cell, including the nucleus, cytoplasm, mitochondria and cell membrane, and how they function to support life.

**Provide explanations** to investigated problems or questions.

NGSS: Three Dimensions (simultaneously)

Plan and conduct an investigation to provide evidence of the effects of balanced and unbalanced forces on the motion of an object.

**Develop and use a model** to describe the function of a cell as a whole and ways parts of cells contribute to the function.

Use evidence to support the explanation that traits can be influenced by the environment.



# Equitable Opportunities to Reason with Evidence

A video example of sense-making discourse among diverse students:

"Is it weight or volume that makes the water level rise when you drop an object that sinks into a glass of water?"

https://www.dropbox.com/sh/72az27pbc1m9461/AAAIdorYGWiKZ71XiRHTmhExa#lh:null-TP01 Classroom Discussion Final v2 sub sm H264.mov

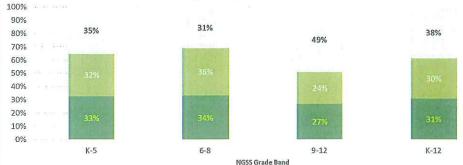




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# Content Match Between CT Science Standards and NGSS

G1. Percentages of NGSS Concepts (K-12) With and Without Matches in CT Standards (K-10)
Organized by NGSS Grade Band



% of NGSS Concepts with Strong Matches% of NGSS Concepts with Moderate Matches

% of NGSS Concepts with No (or Minimal) Matches

# A Model for Transitioning District Curriculum and Instruction\*

CTSS = Connecticut's current state science standards (CSDE, 2004) NGSS = Next Generation Science Standards (Lead States, 2013)

Grade	2015-16	2016-17	2017-18	2018-19
PK-3	CTSS	NGSS	NGSS	NGSS
4	CTSS	CTSS	NGSS	NGSS
5	CTSS	CTSS	CTSS	NGSS
6	CTSS	NGSS	NGSS	NGSS
7	CTSS	CTSS	NGSS	NGSS
8	CTSS	CTSS	CTSS	NGSS
9	CTSS	NGSS	NGSS	NGSS
10	CTSS	CTSS	NGSS	NGSS
11-12	CTSS	CTSS	CTSS	NGSS

Other models are under consideration and will be available soon.

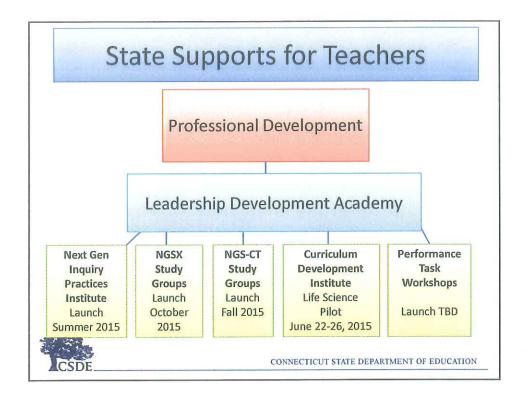
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# Proposed Transition to Next Generation Science State Assessments

	Spring 2016	Spring 2017	Spring 2018	Spring 2019
CMT and CAPT Science (cumulative tests at Grades 5 and 8; high school)	Aligned to CTSS	Aligned to CTSS	Aligned to CTSS	First live administration of state assessment aligned with NGSS
Next Gen Science Assessment Development	NGSS item piloting	NGSS item piloting; Report NGSS "Readiness"	NGSS item piloting; Report NGSS "Readiness"	TBD

CTSS = Current Connecticut Science Standards (adopted in 2004)
NGSS = Next Generation Science Standards (adoption under consideration)





# **Cost Considerations**

- 1. Investment in high quality NGSS professional learning: fees, release time and subs
- 2. Adapting and/or acquiring NGSS "3-dimensional" instructional materials
  - Limited commercially-available instructional materials at present
- 3. Adequate staffing, space & scheduling for 3 years of HS science for ALL students
- 4. Materials and supplies for elementary science teaching and learning.

# District To Do List

2015-2016: Invest in high quality PD offered by State

2015-2017: Enroll district teams to collaborate in curriculum development institutes

beginning June 2015

2016-2018: Adapt and/or acquire NGSS instructional materials

2016-2019: Expect and "look for" transformed teaching practices critical for student success on NGSS assessments



CONNECTICUT STATE DEPARTMENT OF EDUCATION

# To Learn More About NGSS in CT

- CSDE Science Page http://www.sde.ct.gov/sde/cwp/view.asp?a=261 8&q=320890
- ➤ Ellen Cohn, Interim Chief Academic Officer, ellen.cohn@ct.gov
- ➤ Liz Buttner, Curriculum and Instruction, elizabeth.buttner@ct.gov
- ➤ Jeff Greig, Assessments, <a href="mailto:jeff.greig@ct.gov">jeff.greig@ct.gov</a>
- ➤ Ron Michaels, Performance Tasks, ronald.michaels@ct.gov



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Next Generation Science Standards (NGSS) Pre-Adoption Stakeholder Engagement	ds (NGSS) Pre-Adoption Sta	akeholder Engagement		THE REAL PROPERTY.
Your Discussion Feedback				
Please provide a summary of your group's responses to the items below.	p's responses to the items below			
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8. What does your group want to know more about related	w more about related to the NGSS?	388? Please describe.		
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# **Universal Planning Tool**

Pre-K Reading

Title:			
		Topic:	2 8 8 82
Growing and Changing		People, p	lants and animals
Domain Area(s):			
G '' G '-1 1 Eti	al Davidamman		
Cognition, Social and Emotion Physical Development and He		١,	
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Mathematical Discovery, Early	v Scientific Inqu	irv.	
Creative Arts, Social Studies			
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C1-(a):	Time Fran	no:	Date Submitted:
Grade(s): Pre - K	May	ue.	January 5, 2015
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To integrate the domains of the	e CTELDS in au	thentic learning	experiences.
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## Objective(s)—Students will know and be able to

- Develop oral language and vocabulary skills
- Describe how people, animals and plants change as they grow.
- Identify living and non-living things
- Demonstrate increased self-regulation/executive function

#### CTELD Standard Assessed:

Cognition: Strands B, C

Early Language, Communication and Literacy: Strands A, B, D, G

Early Scientific Inquiry: Strands A, C

Social Studies: A, D

Social and Emotional: B,C

Creative Arts: A,B

Early Mathematical Discovery: A,C,D Physical Development and Health: D

Performance Task(s):	Format(s) of Product or Performance:	Other Evidence:
Problem solving	Class book	Teacher observation

Problem solving Inquiry based centers

Using appropriate vocabulary in context

Charts Science Observation Log Teacher observation Anecdotal notes

### Stage 3—Learning Plan

# Learning Activities: Resources

Retelling informational text Oral Language Cards

Sequence Life Cycles of Butterflies, Frogs Big Books (theme related)

Plant seeds Books to support the theme throughout the room

Create a worm garden Manipulatives

Create timelines Magnifying glasses

Compare/measure students (babies, beginning of the year and now)

Safety Goggles

	Seeds
Create class books for growing and changing	Condoning to als
Interactive Read-Alouds  Teacher created SMARTBOARD Activities	Gardening tools  Art Supplies  Web sites: Pbskids.org www.starfall.com abcteach.com zoo.com
·	
Name(s) of Teachers:	Roles & Responsibilities:
Teacher Comments/Reflections/Suggestions:	

#### Instructional Profile

- 1. What are your goals for student learning in this unit? What changes do you hope will occur in the students as a result of this unit?
  - Students will increase their oral language and vocabulary
  - Students will synthesize information gained in all content areas through intentional instructional practices and apply it in authentic learning experiences
  - Students will demonstrate an increase in self-regulation/executive function
- 2. Where appropriate in planning this unit, how have you used or accommodated the diverse experiences and understandings that your students bring to this class?
  - Students have been paired to reflect different ability levels, as well as, bilingual/ESOL and special education
  - Whole group discussions will be held to gather students' prior knowledge
- 3. How does the content of this unit build upon what has been learned previously?

Extension of the Science domain strands and learning progressions identified in the CT Early Learning and Development Standards

4. How does the content of this unit relate to what students will be learning in the future?

Developing foundational skills for scientific inquiry at a higher level, predicting, hypothesizing, observations, drawing a conclusion

- 5. What teaching methods have you selected to help you achieve your learning objectives?
  - Teacher modeling in whole group "I Do, We Do, You Do", strategy
  - Students will work in centers to ensure that every child is engaged
  - Teacher will work with small groups
  - Implement Think, Pair, Share or Turn and Talk
  - Discussion (whole group and small group)

- Iinteractive read alouds
- Developmentally appropriate experiences
- 6. What learning activities have you planned for this unit? Briefly outline the sequence of activities.
  - Growing like me how have you grown and changed since you were a baby until now?
  - Take a nature walk
  - The life cycle of a butterfly (frog)
  - Growing plants (vegetables/flowers) recording information
  - Vocabulary development throughout
  - Field trip to a nursery (farm) to see how plants are grown
- 7. What instructional materials, if any, will you use to help your students reach the specific learning objective?
  - Multiple books reflecting the theme
  - Realia to be sure that all students have a shared understanding
  - Websites/Smartboard
- 8. How will student learning be assessed?

Assessment is on-going throughout the unit using teacher observation, questioning, group discussion, sharing of information, observation logs and student created work.

## Possible Centers for Growing and Changing Unit

#### Dramatic Play:

Birthday party, Greenhouse, Flower Shop, Garden Center, Planting seeds Day Care

#### Kitchen:

Healthy foods, make a menu.

#### Science:

Life cycle of a butterfly, keep journal, sequence the life cycle. My observations: seeds... examine w/magnifying glass compare/contrast.

#### Worms:

Why are worms important? They mix the soil, supply it with air and fertilizer it. This helps the plants grow.

## Writing center:

Tadpoles lifecycle, parts of plants, planting seeds for life cycle and plants.

## Math:

Measure earthworms – pictures of living and non-living things sort. Matching/sorting - same different more/less/equal .

Counting - matching/sorting, flowers/seeds.

## Water table:

Ocean /pond/lake habitats and animals.

## Sand table:

Growing things in soil – planting plastic or real flowers. Plastic insects – worms that live in soil.

#### Blocks:

Build a greenhouse. Build a garden. Block puzzles put together to build plant-flower tree.

#### Art:

Make butterflies (symmetry) fruit/vegetables printing. Still life paintings of flowers. Seed pictures (picture made by gluing seeds)

## Library:

Multiple books to support the theme. Puppets – props to retell story, such as Enormous turnip, Jack and the bean stalk, etc...

### Writing:

Journal writing – how they are growing and changing. Drawing and writing about parts of a plants using picture word cards. Sentence frame – I could not – when I was a baby but now I can. Picture word cards for support.

## Listening:

Books on tape.



Connecticut Early Learning and Development Standards

What children, birth to five, should know and be able to do



Connecticut's Early Learning and Development Standards were developed to help families, communities and schools work together to support children's early learning and growth.



# April 2014

Photos taken at the Connecticut Early Childhood Block Party in Hartford's Bushnell Park on August 24, 2013, courtesy of Leah Grenier (cover photo and pages 4, 5, 6 and 10)
CT ELDS logo design by Andrea Wadowski, Connecticut State Department of Education.

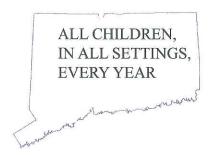
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I am pleased to introduce the Connecticut Early Learning and Development Standards (CT ELDS) which serve as the foundation for supporting ALL young children in Connecticut, no matter where they live, play and learn. The CT ELDS are statements of what children from birth to age five should know and be able to do across the earliest years of development.

The learning progressions within the Connecticut Early Learning and Development Standards promote:

- Equity for <u>all</u> children, through the setting of high, but appropriate, expectations;
- High-quality early learning experiences, by providing clear goals and trajectories of learning;
- · Provision of individual support, based on each child's growth and development;
- Families' understanding of what their children are learning and how they can support them;
- Teachers' understanding of age-appropriate content and approaches to children's learning;
   and,
- Communication across sectors, based upon these common goals for children.

The CT ELDS were developed through the work of the Connecticut Early Childhood Education Cabinet and its Learning Standards Workgroup. In addition, over 100 state and national experts participated in some way during the development process, helping to ensure a strong and comprehensive set of learning standards.

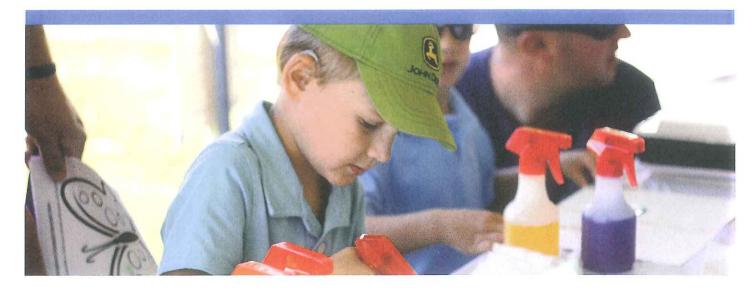


Connecticut's vision is that all young children will have high-quality learning experiences, across all types of settings, and that children's growth and development will be supported across every year of their lives. The CT ELDS serve as a foundation for achieving this vision as they provide the basis for planning learning environments, supporting individual children and communicating around common goals.

Myra Jones-Taylor, Ph.D.

Commissioner, Connecticut Office of Early Childhood

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## **Guiding Principles**

All children benefit from rich learning environments in homes, communities and early care and education settings. Connecticut's Early Learning and Development Standards provide the basis for supporting children's growth and development across settings. The following principles guided the work on the early learning and development standards.

The guiding principles are grouped into four broad categories: Young Children, Families, Early Learning Environments and Communities. The first category, Young Children, addresses what is known about young children's learning and development. The other categories address the roles and responsibilities of families, early childhood environments and communities in supporting children's health, learning and development.

These principles must be considered when this document is used to support children in any early learning environment. Although this document articulates learning standards for children from birth to age 5, these same principles apply throughout the early elementary years.

#### Young Children:

- Are capable and competent. All children are capable of achieving positive early learning and developmental outcomes. There should be high expectations for all young children, regardless of their background, experience, language or developmental status.
- Basic needs of young children include health (physical, mental and oral), safe and nurturing environments, positive social relationships, a sense of belonging and sound nutrition. If these basic needs are not met, a child's growth and development will be affected.
- Are unique in their growth and development. Each child will demonstrate knowledge, skills and abilities within a broad

- range at any point in time. All children within an age range should not be expected to gain a particular skill at the same time. Variation in the growth and development of skills and competencies applies to all young children regardless of age, ability, developmental status or special health care needs. Respect and support for individual differences in achieving learning outcomes should be a cornerstone of early learning.
- Develop and learn within the context of their family and culture. Each child's family and culture lays the foundation of who they are and how they learn and grow.



#### Families:

- Are the primary caregivers and educators of young children. Families lay the foundation for their children's success, through their relationship with their children and by providing experiences that are critical for their children's growth and development.
- environments. It is important for families to be actively engaged with their child's early care and education. Ongoing communication and an active partnership are necessary to ensure positive outcomes; therefore, families must be supported as partners in all early learning environments.



#### **Early Learning Environments:**

- Support young children to learn in the context of relationships. Positive interactions and sustained relationships with family members, caregivers, teachers and other children provide the foundation for learning. Every child, including those with social, emotional or behavioral challenges, should be provided the supports and services necessary to promote ongoing positive relationships with peers and adults.
- Reinforce the importance of the cultural context of young children, families and communities. Cultural context influences behavioral expectations, personal preferences, relationships and sense of self. It is imperative that each child's culture be respected and honored.
- exploration. Young children construct their own understanding of the world around them through exploration and engagement with a variety of materials, experiences and interactions with both peers and adults. Every child should be provided the opportunity to actively explore, engage and interact by providing the supports necessary to ensure a child's full and active participation within an environment.
- Provide meaningful inclusion of children with special needs. Participation in these inclusive settings may require individualized modifications, adaptations and/or support services designed to provide each child with opportunities to benefit from inclusion in an early learning environment.

- Provide experiences that are relevant and integrated across domains of development.

  Developmental domains and content areas are highly interrelated. Children learn best when experiences incorporate multiple domains. Children with special health care needs, delays or disabilities should be provided the individualized supports needed to promote positive developmental outcomes in all areas.
- Intentionally promote the development of skills and knowledge. Planning and decision-making should be based upon research and best practices related to how young children grow and develop.
- Provide opportunities for children to benefit from diversity. Diversity (e.g., culture, ability, socioeconomic status, family constellation) provides opportunities for children to learn about the broader world.
- Support children's language development in their primary language. Children's success in their primary language supports their growth and development across all domains, including acquisition of a second language. Early learning environments may provide opportunities for children to use their primary language and should support families in speaking and reading to their children in the language(s) they prefer.

#### Communities:

- Believe that all children deserve highquality early learning experiences. They value families and invest in systems that support young children, families and early learning environments.
- Offer a variety of resources that support early growth and development. Thriving communities provide supports for children and families, including medical, social and educational opportunities for children, families and caregivers.
- Strategically plan to meet the needs of children and families. They plan together using information relevant to the unique circumstances in their community. This includes facilitating smooth transitions within and between programs and settings.

# **Organization of the Document**

Connecticut's Early Learning and Development Standards are statements of what children should know and be able to do from birth to age 5. These guidelines are intended to inform families, teachers, caregivers and other professionals about common developmental and learning progressions, so that they can work together to better support children's early learning and growth. These standards are intended to serve as a guide for considering the steps in children's development and to plan ways to support children in continued growth.

### Domain Action Pages: What Can I Do to Support Early Learning and Development

For each area of development (domain) there is a general information page that includes a brief description of the domain and strategies to support infants and toddlers as well as preschoolers.

#### The Standards

The CT ELDS are organized by domain. There are eight domains in the document: Social and Emotional Development, Physical Health and Development, Language and Literacy, Creative Arts, Mathematics, Science, Cognition and Social Studies.

Domain: A general area of growth and development

Strand: Sub-categories within each domain

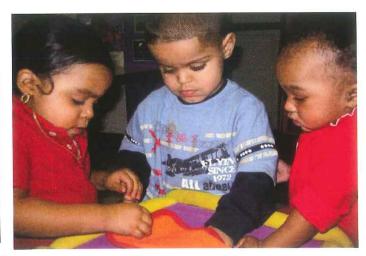
**Learning Progressions**: A series of skills and abilities that build upon each other as children grow and learn

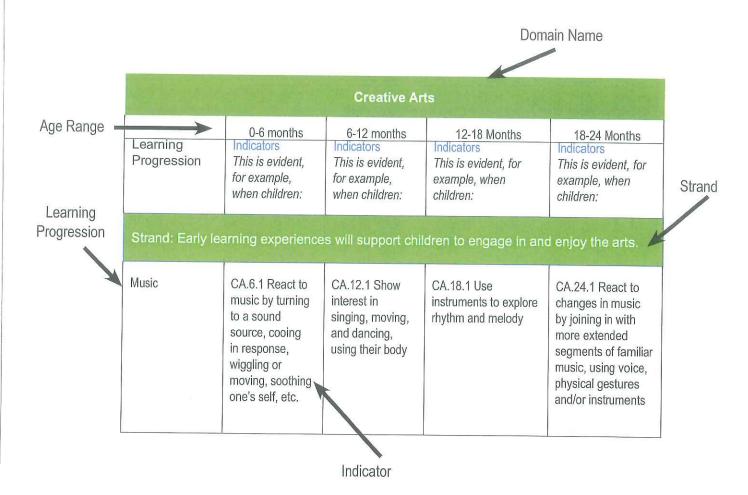
**Indicators**: Examples of what children should know or be able to do at the end of each of the age ranges along the learning progression

**Numbering**: Each strand is assigned a letter designation within a domain. The indicators are numbered, using an abbreviation for the domain name, the number corresponding to the age in months at the end of the age range and the number of the indicators in sequence for that age range. For example, L.24.3 refers to 3<sup>rd</sup> indicator for the 18-24-month range in the Language and Literacy Domain.

#### **Age Ranges**

The CT ELDS are grouped into age ranges, with the examples representing skills, dispositions or knowledge typical for the end of the age range for each domain. However, children develop at varying rates and may not demonstrate every example included in the CT ELDS or may demonstrate them with some variation in timing. While a pattern of skills that is not consistent with a child's age may raise some questions, the CT ELDS is not a screening or assessment tool. Concerns about a child's development may suggest a referral for further assessment or possible support services; however, this document is not designed as a tool for identifying children for referrals, services, or to make decisions about appropriate programs or placements. Instead, this tool is designed to support caregivers and professionals as they consider precursors and next steps, and to determine the environmental supports, activities and adult strategies that will help children to grow and learn.





#### **Integrated Learning**

The domains and strands within the CT ELDS reflect common areas of research and evidence-based practices. Although you may see other documents or resources that break down what children should know and be able to do into categories different from the CT ELDS, the structure and content of these standards are consistent with what is known about child development.

Children do not learn skills in these domains, strands or learning progressions in isolation, but it is helpful to think about growth across these areas to make sure that support is provided for the wide variety of skills children are learning. When planning early learning experiences, families and early care and education professionals should consider what is meaningful and engaging for young children and how skills from a variety of areas can be integrated into children's play.

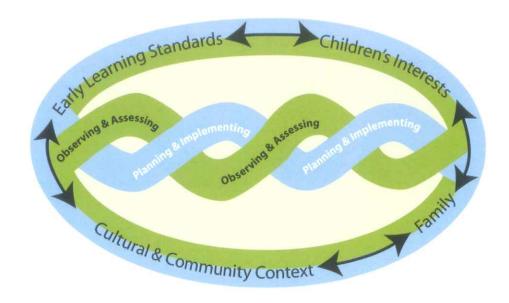
# Supplemental Dual Language Development Framework

In addition to the information for each domain, this document includes a Supplemental Dual Language Development Framework for use in supporting children who are learning multiple languages. This supplement is not applicable to all children, but rather is designed to raise awareness of the typical stages of acquiring a second language.

# Intentionally Supporting Growth and Development

The CT ELDS provide the basis for planning learning environments, supporting individual children and communicating around common goals. They do not exist in isolation and must be used in conjunction with guidance on effective strategies and/or appropriate assessment tools. A cycle of intentional teaching is composed of planning experiences to support children's development, gathering information about how they are progressing and adjusting what is being done to support them based upon this information.

#### The Cycle of Intentional Teaching



All adults who support young children are "teachers," although their planning, observation and assessment may involve differing levels of detail. Teachers in a classroom environment might develop detailed learning experience plans and use formal assessment tools. A family is also engaging in a cycle of intentional teaching when they take their child to the playground to develop gross-motor skills, observe that she cannot yet climb the stairs to the slide and then help her learn this skill. By being intentional, adults can make sure that they are supporting children in meaningful ways.

#### **Assessment**

An assessment tool aligned to the CT ELDS should be used to determine how children are progressing across these domains of development. Two types of tools, with different purposes, are appropriate for use in conjunction with the CT ELDS:

**Developmental Screenings** are tools designed to be brief surveys of children's abilities and are used to determine if further assessment is necessary. (Note: The Ages and Stages Child Monitoring Program offers a developmental screening process that can be accessed by calling the Child Development Infoline at 1-800-505-7000.)

Formative Assessments are tools designed to determine how children are progressing in the development of certain abilities, so that further support can be planned (e.g., curriculum, instruction, family activities and adult support).

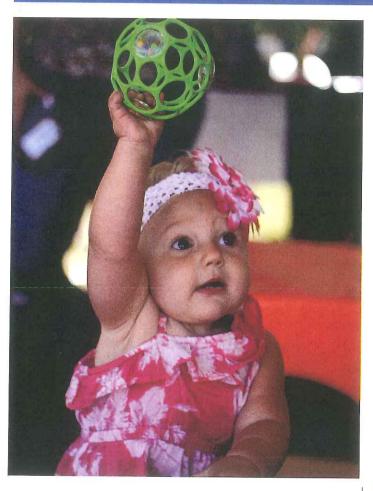
The CT ELDS are <u>not</u> a screening or assessment tool.

#### Communication

Communication between all of the adults supporting children is critical. The CT ELDS provide a common language to communicate about children's skills and progress and to plan supports. The Action Guides include general information about each area of development and evidence-based strategies to support infants and toddlers and preschoolers. The more detailed strands and learning progressions for each domain will support more in-depth discussion and planning.

By using these CT ELDS as part of a thoughtful process, families and early care and education professionals can work together to ensure that children are eager and ready to learn and grow.

# Fostering Competent Learners: Essential Dispositions



Across all ages and domains, early learning experiences will support children to:

#### Be creative

Support young children's growth and development by encouraging creative thinking and novel approaches to solving problems. Children should have opportunities to create, express themselves in a variety of ways and approach problems from new perspectives. The focus of early learning experiences should be on the process instead of the product, promoting learning, exploring and thinking over achieving a specific result or answer.

#### Be inquisitive

Encourage children to explore, seek new information and ask questions. Children should feel comfortable questioning information, testing out new ideas and simply playing with materials in new and unusual ways. Those supporting young children's growth and development should create safe environments in which children can explore and experiment.

#### Be flexible

Foster children's ability to adapt to new situations, to be flexible in their responses and to actively engage in new environments. Exposure to new ideas, environments and situations in meaningful ways can promote resilience.

#### **Be critical thinkers**

Encourage children to use critical thinking skills to help them organize and use the great amount of information available today. Those supporting young children's growth and development should promote an understanding of the concepts behind specific skills (e.g., understanding quantity as well as learning the sequence of counting), provide opportunities to engage in higher-order thinking skills and encourage children to question the accuracy of information they receive.

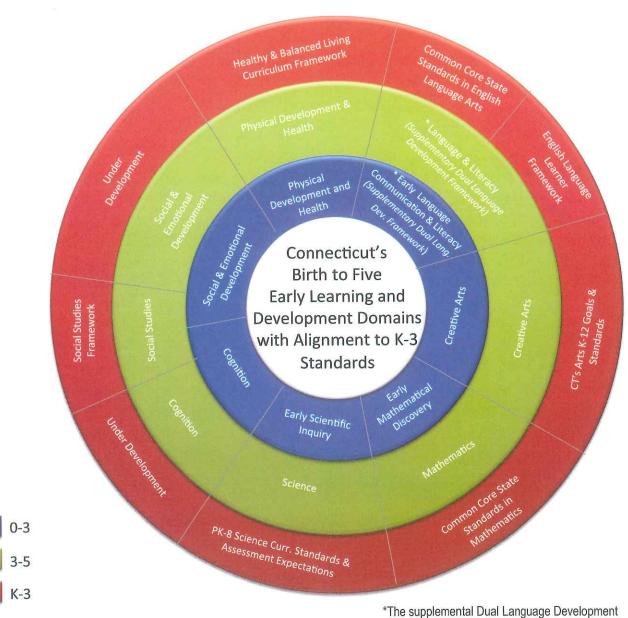
#### Be purposeful and reflective

Promote children's engagement in purposeful action. Very young children should be actively involved in play and will benefit from reminders of the results of their actions. Three- and four-year-olds should play an active role in planning experiences, setting goals and celebrating accomplishments. They should be encouraged to be reflective and to learn from mistakes.

#### Be social learners

Social interactions form the basis for children's learning. Encourage children to interact with adults and peers, ask questions and jointly solve problems. Those supporting young children's growth and development should provide opportunities to learn through cooperative experiences with adults and children.

## **Domain Wheel**



Framework applies to children learning multiple languages. Early learning environments must respect family language preference and honor children's development in their primary language and promote continued bi-lingual development.

Action Guides:
What Can I Do
To Support
Early Learning
and Development?





# Cognition

Making sense of the world, staying with something and working hard to solve problems



# What adults can do...

#### Encourage

- Exploring
- Asking Questions and Making Choices
  - Pretending and Having Fun
    - Remembering
    - Trying New and Difficult Things



#### **Infants and Toddlers**

- **Pretend with your child.** Pretend a banana is a phone or feed a doll.
- Give your child choices. Let your child choose a snack or what to wear.
- Give your child lots of different experiences. Explore your neighborhood parks, libraries and museums. Play with things that are used in different ways (to make sounds, build, etc.)
- Show your baby how things work. "Look at how the car rolls."
- Play games that involve back-andforth. As your child gets older, help them wait for a short time.

#### Preschoolers

- Use everyday routines to notice patterns.

  Point out familiar routines (first we wash hands, then we eat).
- Sort and categorize throughout the day.
  Picking up toys and laundry are great sorting activities.
- Wonder with your child. "I wonder if it's going to rain today." Encourage your child to ask questions.
- **Point out and use symbols.** Encourage your child to recognize and name signs and symbols.
- **Support your child to finish things they start.** Help them plan and stick with things for longer periods of time.



# Social & Emotional Development

Understanding yourself, your feelings and how to play with other people



# What adults can do...

#### Encourage

- Caring
- Affection
- Relationships
- Safety and Security

#### **Infants and Toddlers**

Spend time holding, talking and playing with your baby. Caring contact builds a strong relationship.

Comfort your baby when he cries.

This helps your baby feel secure and learn how to calm down.

Talk about your baby's actions, feelings and body. This will help your baby learn about themselves.

Have family routines. Routines help babies feel safe.

#### Preschoolers

Let your child do some things on their own. Support them to do new things and solve problems.

Talk to your child about feelings.

Help them find ways to calm
themselves.

Help your child understand routines.

Be sure to say goodbye when you leave your child.

Make time to play with other children. Go to the park, have playdates or join a playgroup.





## Physical Health & Development

Learning to take care of yourself and to do things with your body and hands so that you grow strong and healthy



### What adults can do...

#### Encourage

- Healthy Eating
- Physical Activity
- Helping with Self-care

### **Infants and Toddlers**

# Lay your baby on their tummy while they are awake. "Tummy time" helps build strong muscles.

### Talk while you take care of them.

Have them be a part of healthy routines such as waking up, eating and dressing.

## Encourage exploring objects with their hands. Give them small, but safe, items to use with their hands.

Make sure they are healthy. Children who get enough rest and healthy food learn better.

#### **Preschoolers**

### Find a time and place for your child to run and play. Running, jumping and climbing help build strong muscles and bones.

### Have your child take part in self-care.

Talk to them about why being clean is important; show them how to use buttons and zippers, etc.

#### Offer your child healthy food choices.

Talk about healthy food and eating a variety of good things.

#### Make sure they get enough rest.

Preschoolers need 11-13 hours of sleep each day to stay healthy and learn.





## Language & Literacy

Communicating using your body, language, signs and written communication



### What adults can do...

### Encourage

- Interacting with people
- · Gesturing, making noise and talking
- Enjoying books, songs and writing
- Expressing ideas, needs and feelingsWriting

#### **Infants and Toddlers**

**Share books everyday.** Read stories at bedtime or when riding on the bus.

Talk and sing with your baby.

Encourage them to "sing" and "talk" too.

Respond to your baby's noises.

Repeat the noises they make or comment, "You sound happy."

Help them learn new words by naming and describing what you see. "I see a shiny, silver mirror."

Read books to your child EVERY DAY!

#### **Preschoolers**

Show interest in what your child is saying. Look at them when they talk and comment on what they're saying.

Ask questions that make them think.

When reading a story ask, "What do you think will happen next?"

Talk to your child about what happens during the day. Talk about what you do together and ask about what happens when you are apart.

Let them practice "writing." Ask them to draw a picture or make a list, even if they use shapes instead of letters.

Read books to your child EVERY DAY!



### Creative Arts

Enjoying music, dance and art and expressing yourself in these ways



### What adults can do...

### Encourage

- Listening and dancing to music
  - · Describing art and music
    - Looking at pictures
      - Being creative
    - Making music and art

#### Infants and Toddlers

Play music for your child. Describe the music and how it makes you feel.

**Sing to your child.** Move to the music while you're singing.

Show your child pictures. Talk about the picture, what's in it, its colors, the shapes...

Encourage your child to create.

Give children art supplies that are appropriate and safe.

#### Preschoolers

**Display your child's art work.** Talk about what they did to make it.

Give your child space to move to music.

Play music with different beats and styles.

Encourage your child to be creative.

Don't worry about what the project looks like.

**Expose them to the arts.** Watch dancing, look at paintings, listen to music, read books about art, theater and music.





### **Mathematics**

Understanding numbers and how to use them, counting, patterns, measuring and shapes



### What adults can do...

### Encourage

- Counting
- Measuring
- Comparing

### **Infants and Toddlers**

# Use words that describe how much. Talk about wanting more or having one or two of something.

- Talk about shapes. Describe everyday things such as food, toys, or household items, saying things like, "Your plate is a circle."
- **Compare sizes.** Use words such as big, little, long and short.
- Use math words. Talk about adding one, taking away, dividing something.

### Preschoolers

- Count things. Count how many steps it takes to get somewhere, how many pieces of fruit you buy at the store, etc.
- Cook together. Let your child help measure and count what goes into the recipe.
- **Sort and match.** Match clothes, sort silverware, play with shape sorters.
- Compare size, shape and position. Talk to your child about where things are, measure and compare sizes and talk about the shape of everyday items.





### Science

Understanding the world around us, including living things, the earth and space and energy



### What adults can do...

### Encourage

- Exploring
- Experimenting
  - Investigating
- Learning about Living Things

### **Infants and Toddlers**

#### Be excited about their discoveries.

Point out the things they see, hear or feel. "You saw the bird fly down from the nest to get food for its babies! Wasn't that exciting?"

Answer their questions. Encourage them to ask about things they want to know.

Make sure they have many different kinds of experiences. Find opportunities to explore new places, see nature and investigate.

#### Preschoolers

Give them toys that they can use to explore. Boxes, balls, ramps, bubbles, magnets, containers, magnifying glasses, etc.

**Grow things.** Plant seeds and talk about what will happen and what seeds need to grow.

**Go outside.** Look at the sky, trees, plants, animals...collect things and talk about them.

Ask questions. "What do you think will happen next?" "What do you see?"





### Social Studies

Understanding the world and knowing about the people in it.
This starts with knowing about your family, then the community and world.



### What adults can do...

### Encourage

- Understanding family
- Hearing stories about the past
- Recognizing how people are the same and different

### **Infants and Toddlers**

#### Help them learn about themselves.

Children need to learn about their own bodies, their family and their feelings so they can learn about others.

**Talk about family.** Talk about who is a part of your family and about other people's families.

Talk about the places you go. Children will learn about the community when you talk about the store, the library, the park, etc.

### **Preschoolers**

Point out where things are in the community. Draw maps of your home or school.

Talk about how people are the same and different. Help your child to appreciate people who are different from them.

Talk about when you were little. Children love to hear stories and can begin to learn about time and history.

**Play "store."** Children can learn about buying and selling through play.



Early Learning & Development Standards

				Cognitic	on		
	0-6 months	6-12 months	12-18 months	18-24 months	24-36 months	3 to 4 years	4 to 5 years
Learning Progression	Indicators: This is evident, for example, when children:	Indicators: This is evident, for example, when children:	Indicators: This is evident, for example, when children:	Indicators: This is evident, for example, when children:	Indicators: This is evident, for example, when children:	Indicators: This is evident, for example, when children:	Indicators: This is evident, for example, when children:
Strand A: E	arly learning exp	eriences will su	pport children to c	levelop effective	approaches to learnin	g.amerahatan dentahan	
Curiosity and Initiative	C.6.1 Use senses to explore immediate environment	C.12.1 Seek familiar people and/or objects that are not there	C.18.1 Use senses to actively investigate and explore the effects of new actions on objects	C.24.1 Explore objects, activities and environments	C.36.1 Ask questions and seek answers from a variety of sources	C.48.1 Explore and investigate a variety of experiences and topics using different materials	C.60.1 Investigate ways to make something happen
Engagement with Environment, People and Objects	C.6.2 Orient to source of sound or movement and vocalize in response to sights and sounds in the immediate environment	C.12.2 Show interest in a wider variety of sights and sounds with greater purpose, often in shared experiences with adults	C.18.2 Focus attention on interesting sights or sounds, often in shared experiences with adults	C.24.2 Engage in interactions and self-selected activities for increasing lengths of time	C.36.2 Maintain interest in self-selected activities and may seek to engage others or ask questions	C.48.2 Maintain interest in exploring specific topics over time	C.60.2 Express interest in learning about a specific topic over time C.60.3 Engage in preferred and some non-preferred activities for longer periods of time. Remain with some high interest activities 15 minutes or longer
Eagerness to Learn	C.6.3 Laugh, babble, increase movement, and engage in repetition of a learning activity	C.12.3 Seek out new materials and experiences	C.18.3 Explore new ways to use objects and observe results	C.24.3 Demonstrate a desire to accomplish a new skill. May look to others for approval and congratulations	C.36.3 Demonstrate enthusiasm for new learning (may be within familiar contexts)	C.48.3 Seek out new challenges and novel experiences	C.60.4 Show pride in accomplishment when reaching mastery of a skill and share experiences with others
Cooperation with Peers in Learning Experiences						C.48.4 Engage in and complete learning activities with peers  C.48.5 Help and cooperate in group	C.60.5 Plan and complete learning activity with a peer  C.60.6 Model or teach peers how to use materials or complete a task

	0-6 months	6-12 months	12-18 months	18-24 months	24-36 months	3 to 4 years	4 to 5 years
Cause and Effect	C.6.4 Show interest in the results of their actions and "accidental" discoveries	C.12.4 Recognize effect of actions on object - cause and effect (e.g., shake a rattle and it makes a sound)	C.18.4 Learn by observing or listening to others and repeating their actions or verbalizations	C.24.4 Repeat actions over and over and notice results	C.36.4 Vary actions to observe different results (e.g., hit lever harder to see if result changes)	C.48.6 Manipulate materials and communicate about the impact of own actions	C.60.7 Try multiple uses of same materials and observe differing results
Attributes, Sorting and Patterns	C.6.5 Recognize familiar people or objects in the immediate environment (e.g., notice differences between various people and objects)	C.12.5 Respond to new or novel objects with interest, recognizing differences	C.18.5 Match objects that are the same (simple categorizing)	C.24.5 Sort objects by type (e.g., cars and blocks) and put some objects in order (e.g., lines up three objects from smallest to biggest)	C.36.5 Identify differences between objects across multiple characteristics (e.g., texture, color, shape, size)	C.48.7 Identify similarities and differences in objects, people, events, sounds based on one attribute (e.g., same or different colors, loud or soft sound)	C.60.8 Compare relative attributes of objects, people events, sounds (e.g., louder, more, less)
						C.48.8 Recognize patterns in routines, objects and/or sounds and replicate sequence using objects or language	C.60.9 Use familiar patterns to solve problems and reason (e.g., if we go to the library every other day and we went yesterday, today we will)
							C.60.10 Begin to question accuracy of information and sources as evidenced by sharing conflicting information from another source (e.g., when the teacher shares information with class, says, "But my dad says")

Strand B: Ea	rly learning exp	eriences will supp	ort children to u	se logic and reasoning (	continued).		Kristophika (Sako Sako
	0-6 months	6-12 months	12-18 months	18-24 months	24-36 months	3 to 4 years	4 to 5 years
Problem Solving	will show they can solve problems by reaching for desired toys or	C.12.6 Use a variety of actions to obtain desired objects	C.18.6 Purposefully experiment with the effects of new actions upon objects	C.24.6 Try a successful strategy in a new situation (e.g., tugging or prying on something that is stuck)	C.36.6 Use objects in new and unexpected ways to solve problems through trial and error	C.48.9 Think of and try an alternative strategy when a first attempt at solving a problem is unsuccessful	C.60.11 Try multiple strategies to solve a problem and draw on multiple resources (e.g., look at what a peer is doing for ideas)
	blanket	C.12.7 Solve simple manipulative challenges through observation and imitation (e.g., putting something "into a bucket")	C.18.7 Utilize shapes and sorting boxes. May use trial and error to fit objects together	C.24.7 Take things apart and try to put them back together .	C.36.7 Use spatial relationships to solve problems (e.g., fit pieces into puzzle)		
Symbolic Representation			C.18.8 Use dolls and stuffed animals as if they were real (e.g., rocks doll, pets stuffed dog)	C.24.8 Play with dolls or stuffed animals and realistic props together (e.g., use a play spoon to feed a doll)	C.36.8 Use a similar object to represent another object in play (e.g., pretend a pencil is a spoon)	C.48.10 Use or make a prop to represent an object (e.g., build a telephone)	C.60.12 Use dissimilar objects to represent other objects in play or perform an action with an imaginary object (e.g., use stirring action without anything in hand)
	20		C.18.9 Engage in pretend play with realistic objects (e.g., uses a play phone to pretend to make a phone call)	C.24.9 Act out familiar functions in play (e.g., sweeping floor, pouring milk)	C.36.9 Act out relational roles in play (e.g., mom or dad with baby)	C.48.11 Act out actions or scenarios involving familiar roles (e.g., teacher, doctor, firefighter)	C.60.13 Engage in extended pretend play scenarios and display recognition of the difference between pretend or fantasy situations and reality
						C.48.12 Represent people, places or things through simple drawings, movements and three-dimensional construction	C.60.14 Represent people, places or things through drawings, movements and/or three-dimensional constructions that are increasingly abstract (e.g., may draw a map that includes an "X" that marks the location of the treasure)

Strand C: Ea	rly learning exp	periences will sup	port children to s	trengthen executive fund	ction.		
*	0-6 months	6-12 months	12-18 months	18-24 months	24-36 months	3 to 4 years	4 to 5 years
Choosing and Planning		C.12.8 Indicate preferences nonverbally	C.18.10 Indicate preferences by pointing and using one or two words	C.24.10 Indicate preferences using simple language	C.36.10 Make choices based on preferences	C.48.13 With adult assistance, choose activities and plan what to do	C.60.15 Make a plan, follow through and review plan based on what they actually did. Indicate reasons for choice, set goals and follow plan
Task Persistence	C.6.7 Repeat actions to obtain similar results	C.12.9 Practice an activity many times until successful	C.18.11 Complete simple activities	C.24.11 Complete simple activities despite frustration	C.36.11 Complete self- selected short-term activities many times to gain mastery	C.48.14 Continue working through moderately difficult activities, despite some frustration	C.60.16 Complete longer term and more complex tasks with a focus on the goal, despite frustration
Cognitive Flexibility			C.18.12 Use objects in new and unexpected ways	C.24.12 Purposefully try multiple ways of using the same objects	C.36.12 Realize when something is not working and with adult assistance can try another approach	C.48.15 With adult assistance, stop and consider alternatives when encountering a problem	C.60.17 Generate or seek out multiple solutions to a problem
Working Memory				C.24.13 Hold in mind a simple task long enough to complete it (e.g., wiping a table, walking across the room to throw something in the garbage)	C.36.13 Remember where recently used objects were placed	C.48.16 Engage in games that involve remembering (e.g., memory)	LR.60.18 Hold in mind the topic of group discussion and contribute personal experience (e.g., when talking about something that is broken says, "My mom used a screwdriver to fix our shelf.")
Regulation of Attention and Impulses	ž.			C.24.14 Engage in interactions and self-selected activities for increasing length of time	C.36.14 Maintain focus on high-interest activities in the face of routine distractions	C.48.17 Maintain focus on high-interest activities in the face of minor social or sensory distractions	C.60.19 Engage in preferred and some non-preferred activities for longer periods of time. Remain with some high-interest activities 15 minutes or longer
	*				C.36.15 With adult support, resist impulses in structured settings for brief, but increasing periods of time	C.48.18 With adult reminders can briefly inhibit initial response (e.g., stop imitating inappropriate behaviors of peers, wait turn to respond to question or prompt in group setting)	C.60.20 Typically resists impulses and can wait longer to respond in more structured settings (e.g., at a restaurant, in circle time in preschool)

			Social and	l Emotional Develo	pment		
E-	0-6 months	6-12 months	12-18 months	18-24 months	24-36 months	3 to 4 years	4 to 5 years
Learning Progression	Indicators This is evident, for example, when children:	Indicators This is evident, for example, when children:	Indicators This is evident, for example, when children:	Indicators This is evident, for example, when children:	Indicators This is evident, for example, when children:	Indicators This is evident, for example, when children:	Indicators This is evident, for example, when children:
Strand A: Ea	arly learning exper	iences will supp	ort children to deve	lop trusting healthy at	tachments and rel	ationships with prima	ary caregivers.
Trusting Relationships	SE.6.1 Attend and respond to familiar adults and are able to be soothed when distressed	SE.12.1 Prefer primary caregiver(s) to others and usually accept guidance from trusted adults	SE.18.1 Look to trusted caregivers for cues about how to respond to their environment for comfort and support	SE.24.1 Use familiar adults as secure base through behaviors such as glancing back at caregiver while playing	SE.36.1 Approach caregivers for support and comfort, particularly during stressful or frustrating situations	SE.48.1 Engage in interactions with less familiar adults	SE.60.1 Seek help and approval from a wider array of adults in trusted roles
Managing Separation	SE.6.2 Show recognition of familiar faces and awareness if someone is a stranger	SE.12.2 Display preference for trusted adults which may include exhibiting fear and protesting at separation	SE.18.2 Display attachment to trusted adults and feelings of security which may include a fear of strangers and new and unfamiliar places	SE.24.2 Manage routine separations from caregivers with little distress and calm quickly after a separation	SE.36.2 Manage most separations without distress and adjust to new settings with support from a trusted adult	SE.48.2 Manage most separations without distress and adjust to new settings in the presence of trusted adult	SE.60.2 Through expanding relationships with adults (e.g., teacher, play group leader, friends' caregivers), exhibit comfort in exploring more new settings, although they may need to periodically check-in with a familiar adult
		iences will supp	ort children to devel	op self-regulation.			
Regulation of Emotions and Behavior	SE.6.3 In addition to being comforted by familiar adult, can also get comfort from sucking thumb, fist, or pacifier	SE.12.3 Have ways to comfort self, which may involve items such as a stuffed animal or a special blanket that help them feel safe and secure	SE.18.3 Show increasing regulation through daily routines, activities and familiar adults	SE.24.3 With adult assistance, find comfort in rituals and routines. May use special comfort object to self-soothe (especially at nap time)	SE.36.3 With adult support, use self-soothing techniques to calm	SE.48.3 Use strategies to self-soothe with limited adult support	SE.60.3 Use strategies to self-soothe across situations with minimal prompting and share strategies with peers or family  SE 60.4 Demonstrate increased ability to consider the social standards of the environment when responding to their emotional state

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Strand C: Ea	arly learning experie	ences will suppo	ort children to dev	elop self-regulation	(continued)		
	0-6 months	6-12 months	12-18 months	18-24 months	24-36 months	3 to 4 years	4 to 5 years
Regulation of Impulses and Behavior	SE.6.4 Respond to having needs met (e.g., is comforted by being picked up or fed)	SE.12.4 Respond to adult interactions, including tone of voice, expression and gestures (e.g., shaking head and frowning)	SE.18.4 Respond to adult guidance to accept an alternative to initial desire or impulse (e.g., a truck from the shelf vs. one another child has, food choices)	SE. 24.4 Accept some redirection from adults	SE.36.4 Begin to control behavior by responding to choice and limits provided by an adult	SE.48.4 With adult guidance and support, wait for short period of time to get something wanted (e.g., waiting for turn with a toy or waiting for next step in daily routine)	SE.60.5 Tolerate small levels of frustration and disappointment, displaying appropriate behavior with adult prompting and support
		SE.12.5 Show anticipation and respond to familiar routines in their lives	SE.18.5 Within the context of a responsive adult relationship, will begin to tolerate a brief wait for needs to be met	SE.24.5 Is aware of typical routine and shows some understanding of rules, but may need adult support	SE.36.5 Make transitions and follow basic routines and rules with adult supervision	SE.48.5 Make transitions and follow basic schedule, routines and rules with occasional reminders	SE.60.6 Initiate previously taught strategies to help delay gratification (e.g., sets up turn-taking with a peer, finds a book to read while waiting for a special activity)
			SE.18.6 Show anticipation of next step in daily routine (e.g., reaches or signs for bib when placed in high chair)	٤			SE.60.7 Recall and follow daily routines with little support, including adapting to changes in rules and routines
	<del> </del>				nize and respond to		
Emotional Expression	SE.6.5 Display varied responses (e.g., will smile or kick when a caregiver interacts with them. May stiffen when something displeases them, or may turn away from something they dislike)	SE.12.6 Express basic emotions (e.g., sadness, frustration, anger) through facial expressions, movements, crying, smiling, laughing	SE.18.7 Express emotions through physical means such as hugging, throwing. May be cooperative or uncooperative and look to adult for reaction	SE.24.6 Express more complex emotions (e.g., excitement, embarrassment, pride, sadness) and begin to communicate feelings (although this remains an emerging skill which is only partially effective)	SE.36.6 Begin to communicate about feelings, including the cause and reaction to these feelings (e.g., "I miss my mommy. I sad," "He mad you took his toy." "I sad so Papa hug me.")	SE.48.6 Express emotions experienced in typical daily routines (e.g., frustration at waiting, excitement about a favored activity, pride) through language and gesturing rather than physical ways	SE.60.8 Describe emotions and feelings to trusted adults and peers

Strand E: Ea	Strand E: Early learning experiences will support children to develop, express, recognize and respond to emotions (cotinued).										
	0-6 months	6-12 months	12-18 months	18-24 months	24-36 months	3 to 4 years	4 to 5 years				
Recognition and Response to Emotions in Others	SE.6.6 React to different emotions of familiar adults (e.g., smile and coo at smiling faces, turn away from sad faces)	SE.12.7 Notice and react to feelings of others. (e.g., may frown when another baby is crying or be upset if hears yelling)	SE.18.8 Recognize basic feelings in self and others  SE.18.9 Begin to respond to others' feelings and show interest in them. Show awareness of when an adult is pleased or upset with behavior	SE.24.7 Recognize and respond to basic feelings in others (e.g., gives item to peer who is upset)	SE.36.7 Label a variety of emotions in pictures and others' expressions SE 36.8 Show awareness of appropriate responses to the emotional state of others (e.g., may occasionally comfort someone who is upset or may nurture a doll during dramatic play)	SE.48.7 Recognize, label and respond to a wide variety of emotions in others  SE.48.8 Make connections between emotional reaction of others and own emotional experiences	SE.60.9 Recognize and show acknowledgement of the feelings, needs and rights of others through behavior (e.g., say "thank you," share with others, notice issues of fairness)  SE.60.10 Begin to understand that different people may have different emotional reactions				
Strand F: Ea	arly learning experi	ences will supp	oort children to de	velop self-awarene	ss, self-concept and	competence.					
Sense of self	SE.6.7 React when hearing their own name through movement or expressions  SE.6.8 Begin to realize their hands and feet belong to them and explore them as well as face,	SE.12.8 Consistently respond to their name  SE.12.9 Show awareness of body parts of self and others	SE.18.10 Demonstrates self- awareness though response to name and use of "me" and "mine" SE.18.11 Recognize self in mirror	SE.24.8 Identify own family members by relationship and/or name	SE.36.9 Identify self, family members, teacher and some peers by name	SE.48.9 Refer to themselves by first and last name and identify some characteristics (e.g., gender, hair color, etc.) and skills	SE.60.11 Identify themselves as an individual and a part of a group by sharing individual characteristics and roles within the group (e.g., name family members and roles, name team members or classmates)				
Personal Preferences	eyes and mouth  SE 6.9 Express preferences for familiar people and some objects. (e.g., stop crying more quickly with a familiar person; move their legs, arms and smile at a familiar person)	SE.12.10 Develop preferences for food, objects, textures. May reject non- preferred items (e.g., pushing them away)	SE.18.12 Begin to communicate own likes and dislikes	SE.24.9 Use words and/or gestures to express interests (e.g., points and says, "Look, airplane.")	SE.36.10 May want to keep what belongs to them close by and often will not want to share	SE.48.10 Recognize and describe themselves in terms of basic preferences	SE.60.12 Describe self by referring to preferences, thoughts and feelings				

Strand G: Ea	arly learning experi	ences will supp	port children to de	velop self-awaren	ess, self-concept and	l competence (continue	d).
	0-6 months	6-12 months	12-18 months	18-24 months	24-36 months	3 to 4 years	4 to 5 years
Self- Concept and Competency		SE.12.11 Demonstrate anticipation of results from own actions (e.g., drops toy so adult will pick it up, repeats action that makes loud noise) SE.12.12 Respond to own	SE.18.13 Show confidence when supported to complete familiar tasks and will attempt new tasks with adult support  SE.18.14 React positively (e.g.,	SE.24.10 Complete simple familiar tasks with confidence (e.g., puts on article of clothing). Engage in new experiences with support from a familiar adult	SE.36.11 Regularly engage in familiar tasks. Begin to show independence by frequently attempting to do things on their own even when tasks are difficult for them  SE. 36.12 Express feeling of pleasure over	SE.48.11 Demonstrate confidence in a range of activities, routines and tasks and take initiative in attempting unfamiliar tasks	SE.60.13 Demonstrate increased confidence and a willingness to take risks when attempting new tasks and making decisions regarding activities and materials  SE.60.14 Show pride in accomplishments and
		actions with pleasure (e.g., coos, laughs)	smiles, claps) to accomplishments		accomplishment and share this with others (e.g., "Look what I made.")		abilities
Strand H: Ea	arly learning experi	W-1					
Adult Relationships (see note below)	SE.6.10 Respond differently to different people. Respond to familiar people by smiling, cooing and moving their body	SE.12.13 Engage in social interactions not connected to getting physical needs met (e.g., peek-a-boo, performing, copying others and babbling)	SE.18.15 Show affection or shared attention (e.g., pointing out something of interest) to an increasing number of familiar people	SE.24.11 Enjoy games and other social exchanges with familiar adults. May seek out repeated patterns of interaction	SE.36.13 Enjoy sharing new experiences with familiar adults	SE.48.12 Communicate with familiar adults and accept or request guidance	SE.60.15 Typically use socially appropriate behavior with adults, such as helping, responding to limits, etc.
	SE.6.11 Show interest in interacting with others. May gain an adult's attention and wait for a response	SE.12.14 Notice the activity of adults and other children and attend closely					

Note: Caregivers guide children during interactions with them, as well as other adults. Therefore, these markers of social relationships with adults are highly dependent upon child temperament, the adult temperament and the adult's guidance and regulation of the interplay.

	0-6 months	6-12 months	12-18 months	18-24 months	24-36 months	3 to 4 years	4 to 5 years
Play/ Friendship	SE.6.12 Notice other children and may touch, smile or coo to them	SE.12.15 Watch actions of other children but does not join the play. May stay in proximity, make	SE.18.16 Show interest in children who are playing nearby and may interact with them briefly	SE.24.12 Show interest in what other children are doing and play alongside them with similar materials	SE.36.14 Seek out other children and will interact with other children using common materials	SE.48.13 Interact with one or more children (including small groups) beginning to work together to build or complete a project	SE.60.16 Cooperate with peers through sharing and taking turns
		eye contact and babble	Shorty	Similal materials	SE.36.15 Show preference for certain peers over time although these preferences may shift		SE.60.17 Show increasing investment in the responses and friendship of peers and modify behavior to enhance peer relationships
		,				SE.48.14 Interact with a variety of children in the program	SE.60.18 Seek help from peers and offer assistance when it is appropriate
Conflict Resolution						SE.48.15 Seek and accept adult help to solve conflicts with peers	SE.60.19 Engage in developing solutions and work to resolve conflict with peers

			Physical Do	evelopment and h	Health					
	0-6 months	6-12 months	12-18 months	18-24 months	24-36 months	3 to 4 years	4 to 5 years			
Learning Progression	Indicators This is evident, for example, when children:	Indicators This is evident, for example, when children:	Indicators This is evident, for example, when children:	Indicators This is evident, for example, when children:	Indicators This is evident, for example, when children:	Indicators This is evident, for example, when children:	Indicators This is evident, for example, when children:			
Strand A: Early learning experiences will support children to develop gross motor skills.										
*Children may use adaptive equipment or	PH.6.1 Show head control when in any position and during transitional movement	PH.12.1 Get into sitting position on own and play while in this position	PH.18.1 Use walking as main means of mobility and pull toy when walking	PH.24.1 Walk with legs closer together and able to change directions smoothly and carry objects	PH.36.1 Walk and run on various surfaces and level changes with balance and control of speed	PH.48.1 Walk up and down stairs alternating feet while carrying an object	PH.60.1 Alternate direction while running and stop easily without losing balance			
an assistive device to achieve independence on these indicators	PH.6.2 Roll over, usually from both directions PH.6.3 Reach, grasp and bat for objects overhead and eventually reach and play with feet when on back	PH.12.2 Move when on the floor by rolling, creeping, crawling with purpose	PH.18.2 Stand from a squat position using arms to push off floor	PH.24.2 Begin to run	PH.36.2 Walk up and down stairs alternating feet on steps with railing held					
	PH.6.4 Push up and support weight on forearms when on stomach  PH.6.5 Sit with support	PH.12.3 Pull to stand, cruise along furniture and stand alone. May take a few steps independently or with help	PH.18.3 Creep up and down stairs	PH.24.3 Walk up and down steps holding onto rail, often leading with the same foot and negotiating one step at a time						

Strand A: Ea	Strand A: Early learning experiences will support children to develop gross motor skills (continued).										
	0-6 months	6-12 months	12-18 months	18-24 months	24-36 months	3 to 4 years	4 to 5 years				
Large Muscle Movement and Coordination			PH.18.4 Throw ball in forward direction	PH.24.4 Use more complicated series of movements such as climbing onto and down from furniture without help, propelling self on ride-on toys	PH.36.3 Catch and throw a playground ball with an adult short distance away  PH.36.4 Jump with two feet	PH.48.2 Combine several gross motor skills in an organized way, such as moving through an obstacle course or participating in a creative movement activity following directives PH.48.3 Hop on one foot	PH.60.2 Coordinate more complex movements with increasing control, balance, and accuracy (e.g., climbing on playground equipment, pumping a swing, bending, twisting, playing hopscotch, riding tricycle)				
				PH.24.5 Catch a large ball tossed from a short distance against their body using both arms	PH.36.5 Kick a ball in forward direction	PH.48.4 Kick ball at target a short distance away with accuracy and speed PH.48.5 Throw small ball overhand at target a short distance away with accuracy	riding theyele)				
Strand B: Ea	rly learning experience	es will support of	children to devel	op fine motor skills.							
Visual Motor Integration	PH.6.6 Locate an object using vision or sound, reach and grasp the object	PH.12.4 Reach into containers or reach to activate a simple cause and effect toy	PH.18.5 Engage in play that requires using vision and hands such as building a tower or structure, with several blocks balanced on top of each other or placing a large peg in a pegboard base	PH.24.6 Orient pieces to match opening and complete a simple inset form board/puzzle or shape sorter	PH.36.6 Use common tools that require eye-hand coordination with precision and for their intended purpose (e.g., hammer peg, twist handle to open latch, put body parts on Mr. Potato)	PH.48.6 Use smaller objects with precision (e.g., put small pegs in light board, use large needle to sew, use scissors to cut on curved line, etc.)	PH.60.3 Use coordinated movements to manipulate materials, including cutting and drawing with control and using appropriate hand position to manipulate objects (e.g., thumb up position while using scissors)				
	PH.6.7 Follow an object with eyes across body, crossing the middle	PH.12.5 Combine and separate toys (e.g., replace and remove large rings from post in any order)									

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Strand B: Ea	rly learning experienc	es will support o	hildren to devel	op fine motor skills (con	tinued).		
	0-6 months	6-12 months	12-18 months	18-24 months	24-36 months	3 to 4 years	4 to 5 years
Small Muscle Movement and Coordination	PH.6.8 Use voluntary and purposeful movements to bring hands to mouth	PH.12.6 Move objects from one hand to another and combine items at center of body (e.g., banging two blocks together)	PH.18.6 Use both hands at the same time for different purposes (e.g., may stabilize tower with one hand and add an additional block with other hand)	PH.24.7 Use a writing tool to scribble purposefully and imitate vertical and horizontal stroke. May use a fisted grasp	PH.36.7 Use writing tools or paint objects with some control and purpose	PH.48.7 Use writing/ drawing tools with increased precision to draw simple shapes, pictures and/or letter. May have immature pencil grasp with 3-5 fingers on pencil shaft	PH.60.4 Have sufficient control of writing implements to copy simple forms or geometric shapes and write some letters (e.g., may write own name since these are most familiar)
	PH.6.9 Bring hands together while lying on back	PH.12.7 Use index finger to poke and point and grasp small objects between thumb and fingertips					PH.60.5 Use a mature pencil grasp with 3 fingers on writing implement
Strand C: Ea Note: Cor	rly learning experiences	es will support or beliefs and pref	children to acqui erences across t	ire adaptive skills. these developmental pro	ogressions is critic	al.	
Feeding Routines/ Nutrition	PH.6.10 Participate in feeding routines with consistent caregivers by holding onto bottle, and/or leaning forward in anticipation of food offered via bottle, breast or spoon	PH.12.8 Participate in feeding routines by holding cups or bottles, using fingers for self- feeding and/ or using eating utensils	PH.18.7 Demonstrate increased proficiency using eating utensils and cups. May begin to serve self some food, but spills are common	PH.24.8 Begin to serve self food (dishing out helpings and pouring liquids) with adult assistance	PH.36.8 Feed self with minimal spilling	PH.48.8 Pour liquid from a small pitcher	PH.60.6 Use butter knife to spread and cut. Open most containers to remove food
Safety and Responsibility			PH.18.8 Typically respond to adult requests to stop unsafe behavior	PH. 24.9 Show awareness of items that are unsafe and point them out to familiar adults (e.g., point out open gate above stairs, show them a knife that is left on counter)	PH.36.9 Tell several basic safety rules at home and in familiar settings (e.g., school, library and playground). Bring other children's rule-breaking to the attention of adults	PH.48.9 Understand basic safety rules at home and in familiar settings (e.g., school, library and playground). Generally follow rules and bring other children's rule-breaking to the attention of adults	PH.60.7 Understand the reason for most basic safety rules at home, in familiar settings and in the community

Strand C: Ea	arly learning ex	periences will support	children to acqui	re adaptive skills (conti	nued).		
	0-6 months	6-12 months	12-18 months	18-24 months	24-36 months	3 to 4 years	4 to 5 years
Dressing and Hygiene		PH.12.9 Participate in dressing, undressing and bathing by holding arms out, taking off socks, etc.	PH.18.9 Show interest in doing things for self including dressing. Put arm in sleeve, step out of pants, attempt to put on socks or shoes	PH.24.10 Engage in dressing and hygiene routines with increasing intention: pull pants up and down, take off jacket, dry own hands	PH.36.10 Attempt to complete basic self- care routines (e.g., dressing, undressing, toileting and washing) although may still need caregiver assistance	PH.48.10 Manage most aspects of dressing, toileting, hand washing and tooth brushing independently with minimal caregiver reminders to guide and support	PH.60.8 Typically manage own dressing toileting and basic hygiene
Strand D: Ea	arly learning ex	periences will support	children to maint	ain physical health stat	us and well-being.		
	nsideration of d	cultural beliefs and pref	erences across t	hese developmental pro	ogressions is critica	al.	
Physical Health Status	appropriate suppo	orts (such as glasses, hearing	aids, or alternative co	n all areas. Children who posses mmunication systems) have a s eases, age appropriate amount	solid foundation to help th	em grow and learn. Maintai	ning good overall health
Physical Activity	PH.6.11 Interact with caregivers in daily physical activities that involve varying positions and promote development of movement skills	PH.12.10 Interact with caregivers in daily physical activities that involve exploration and movement	PH.18.10 Interact with caregivers in a variety of physical activity experiences	PH.24.11 Engage in physical activity in both indoor and outdoor environments that require use of large muscles	PH.36.11 Demonstrate increasing strength and endurance sufficient to actively engage in a total of 60 minutes of physical activity spread over the course of a day	PH.48.11 Demonstrate increasing strength and endurance sufficient to actively engage in 60 minutes of moderate to vigorous physical activity spread over the course of a day	PH.60.9 Demonstrate increasing strength ar endurance sufficient t actively engage in 60 minutes of moderate to vigorous physical activity spread over the course of a day
Healthy Behaviors	Children participal caregivers. These or Dressing and Hy Feeding Routine		e and nutrition with as lowing strands:	Lesistance and prompting from	PH.36.12 Discuss healthy practices including hygiene, nutrition and sleep	PH.48.12 Name examples of healthy practice including hygiene, nutrition and sleep	PH.60.10 Identify healthy practices including hygiene, nutrition and sleep

The language, communication, and literacy learning progressions included here are intended to represent common development of language skills in a child's primary language or modes of communication. Children who are learning multiple languages or children who are learning to communicate in modes of communication different from that of their primary caregiver may demonstrate individual variation in their progress toward these language and literacy goals. Those supporting children who are learning multiple languages may also want to refer to the supplemental Dual Language Learner Framework to be used in conjunction with considering a child's progress in their primary language or mode of communication through the use of this domain.

	Early Lang	guage, Con	nmunication	ı, and Literacy		Language	and Literacy
	0-6 months	6-12 months	12-18 months	18-24 months	24-36 months	3 to 4 years	4 to 5 years
Learning Progression	Indicators: This is evident, for example, when children:	Indicators: This is evident, for example, when children:	Indicators: This is evident, for example, when children:	Indicators: This is evident, for example, when children:	Indicators: This is evident, for example, when children:	Indicators: This is evident, for example, when children:	Indicators: This is evident, for example, when children:
Strand A: Early le	arning experiences	s will support child	ren to understand la	anguage (receptive lang	juage).		
Word Comprehension	L.6.1 Respond to facial expressions or voices by changing own facial expression, crying or altering movements	L.12.1 Understand that words, gestures and/or signs represent objects, people or experiences	L.18.1 Understand that words, gestures or signs stand for people, objects, or experiences that are not present	L.24.1 Demonstrate in a variety of ways understanding of most of what is communicated through gestures, signs or oral language  L 24.2 Point to familiar objects, people and body parts	L.36.1 Demonstrate an understanding of an increased vocabulary, influenced by experiences and relationships	L.48.1 Understand words or signs for objects, actions and visible attributes found frequently in both real and symbolic contexts	L.60.1 Understand an increasing variety and specificity of words for objects, actions and attributes encountered in both real and symbolic contexts  L60.2 Determine the meanings of unknown words/concepts using the context of conversations, pictures or concrete objects
Language Comprehension	L.6.2 Orient to the direction of sound or visual cues L.6.3 React when hearing own name or to positive facial expression	L.12.2 Can carry out simple requests (e.g., "wave bye-bye")	L.18.2 Remember language heard repeatedly in stories, poems and interactive language experiences	L.24.3 Respond to questions and follow simple directions	L.36.2 Follow two- step directions	L.48.2 Understand increasingly complex sentences that include 2 - 3 concepts (e.g., "Put the blue paper under the box.")	L.60.3 Understand increasingly complex sentences that include 3-4 concepts (e.g., "Plants are living things that will not survive without soil, sunlight and water.")

Strand B: Early I	learning experienc	es will support child	dren to use languag	e (expressive language)		THE STATE OF THE STATE OF	
	0-6 months	6-12 months	12-18 months	18-24 months	24-36 months	3 to 4 years	4 to 5 years
Vocabulary	L.6.4 Use a variety of facial expressions and sounds (e.g., cooing,	acial to use word use words or approximations conventional (e.g., "ma-ma" gestures to communicate		use words or objects and actions; onventional use commands (e.g., gestures to "no"), possessives		L.48.3 Use accepted words for objects, actions and attributes encountered frequently in both real and symbolic contexts	L.60.4 Use an increasing variety and specificity of accepted words for objects, actions and attributes encountered in both real and symbolic contexts
	babbling and varied cries) to communicate	to gestures (e.g.,		reactions (e.g., "ow")	L.36.4 Use some personal pronouns when referring to others (e.g., you, he, she)	L.48.4 Use simple pronouns (e.g., I, me, you, mine, he, she)	
			L.18.4 Has a 20+ word vocabulary	L.24.5 Use new words frequently to talk about familiar things or activities	L.36.5 May occasionally use more sophisticated words than they typically use in conversational speech but that have been learned through books and personal experiences (e.g., large, fast, angry, car, run)	L.48.5 Begin to use some words that are not a part of everyday conversational speech but that are learned through books and personal experiences (e.g., gigantic, rapidly, frustrated, transportation, race or jog)	L.60.5 Use more complex words learned through books and personal experiences (e.g., label favorite shirt as chartreuse, or know that a paleontologist studies dinosaurs)
Expression of Ideas, Feelings and Needs	L.6.5 "Talk" to self and others using various vocalizations	elf and others communicate wants and needs through a combination	L.18.5 Respond to questions with sounds, sometimes including words	L.24.6 Use words to request objects, have needs met or gain attention	L.36.6 Use inflection in phrases or sentences to ask a question	and/or objects	L.60.6 Use more complex words to describe the relationships between objects and ideas (e.g., position words such as "under" or "beside" and comparative words such as
		of crying, babbling and occasional word approximations, and/or gestures	and oftentimes gestures		L.36.7 Comment on a variety of experiences, interactions or observations	L.48.7 Use increasingly longer, complex sentences that combine phrases or concepts to communicate ideas	"bigger" or "longer")

	Strand B: Early lea	arning experience	es will support child	ren to use langua	ge (expressive languaç	ge) (continued).		
		0-6 months	6-12 months	12-18 months	18-24 months	24-36 months	3 to 4 years	4 to 5 years
	Language Structure			L.18.6 Increasingly use gestures and sounds in coordination to communicate	L.24.7 Combine words and speak in short, two-word phrases such as "Me up!"	L.36.8 Use basic grammar rules including pronouns, plurals, possessives and regular past tense  Note: Variations in applying grammar rules may be due to dual language learning and/or alternative grammar usage in home or community	L.48.8 Use basic grammar rules including irregular past tense and questions  Note: Variations in applying grammar rules may be due to dual language learning and/or alternative grammar usage in home or community	L.60.7 Use basic grammar rules including subject-verb agreement, tenses, regular and irregular past tense, irregular plurals  Note: Variations in applying grammar rules may be due to dual language learning and/ or alternative grammar usage in home or community
Available of the control of the cont						L.36.9 Use speech that is mostly intelligible to familiar adults	L.48.9 Use speech that is mostly intelligible to familiar and unfamiliar adults	L.60.8 Use an increasing variety and specificity of accepted words for objects, actions and attributes encountered in both real and symbolic contexts
		- 1-11	AN		ge for social interactio			
	Conventions of Conversation	L.6.6 Show interest in back and forth pretend games	L.12.5 Begin to understand that a conversation is about taking turns	L.18.7 Pay attention to a speaker by pausing physical activity, shifting gaze or looking toward speaker	L.24.8 Take turns in conversations by initiating and sustaining a simple conversation over two turns	L.36.10 Have conversations with adults and peers that include four or more exchanges	L.48.10 Maintain a topic of conversation over the course of several turns	L.60.9 Initiate, maintain and end conversations by repeating what other person says and/or by asking questions
				L.18.8 Repeat or try another mode of communicating desire if initial attempts are unsuccessful				

Strand C: Early le	arning experience	es will support chil	dren to use language	for social interacti	on (continued).	SCHOOL SECTION	
	0-6 months	6-12 months	12-18 months	18-24 months	24-36 months	3 to 4 years	4 to 5 years
Language for Interaction	L.6.7 Coo, gurgle, smile in response to stimulation and to initiate social contact	L.12.6 Enjoy opportunities to "converse" with adults in a more sustained fashion, including playing simple imitation games	L.18.9 Use gestures and/or sounds to interact (e.g., waves, shakes head no, reaches to be lifted up)	L.24.9 Answer a basic question with a word	L.36.11 Converse with adults and peers about common experiences or events	L.48.11 Answer simple who, what, where and why questions	L.60.10 Use language to share ideas and gain information
	L.6.8 Express pleasure as adults imitate the faces and sounds they make	L.12.7 Intentionally use gestures and/ or vocalizations to regulate the behavior of others and engage in social interaction		L.24.10 Use language to express wants, needs, likes and dislikes to others			2
Strand D: Early le	earning experienc	es will support chil	dren to gain book ap	preciation and kno	wledge.		
Interest and Engagement with Books	L.6.9 Respond to music, stories and pictures shared with an adult	L.12.8 Engage with adults, showing shared attention to a book	L.18.10 Point to preferred pictures in books or texts	L.24.11 Point to named pictures; may name or comment on familiar pictures L.24.12 Chime- in on nursery rhymes or repeat words or phrases from familiar stories	L.36.12 Sustain attention for short periods of time while being told a story or reading a favorite picture book L.36.13 Recite familiar phrases of songs, books and rhymes; may chime in with rhyme in familiar text or song	L.48.12 Select fiction and non- fiction books to be read and attend with interest	L.60.11 Independently choose to "read" books and select a variety of texts including fiction and nonfiction

Strand D: Early le	arning experience	es will support ch	ildren to gain book	appreciation and kno	wledge (continued)		
	0-6 months	6-12 months	12-18 months	18-24 months	24-36 months	3 to 4 years	4 to 5 years
Understanding of Stories or Information  (Stories or information may be shared				L.24.13 Answer simple specific questions about familiar stories (e.g., "What does the cat say?"). Ask basic questions	L.36.14 Enjoy telling and retelling stories and information	L.48.13 Demonstrate comprehension through retelling with use of pictures and props, acting out main events or sharing information learned from nonfiction text	L.60.12 With prompting and support, retell familiar stories, including story elements (e.g., setting, characters, events) and/or share key details from informational text
through oral storytelling, sharing of pictures and/or books)				about pictures (e.g., "Who is that?")		L.48.14 Ask and answer simple who, what, where and why questions related to story or text	L.60.13 Identify main components of a story or text (the major plot points of a story or the main topic of an informational text)
,						L.48.15 Make predictions and/or ask questions about the text by examining the title, cover, pictures	L.60.14 Use connections between self and character, experience and emotions to increase comprehension
Strand E: Early le	arning experience	es will support ch	ildren to gain knowl	edge of print and its	uses.		
Book Concepts				L.24.14 Hold book upright	L.36.15 Turn pages of a book	L.48.16 Look at pages of a book from left to right (or according to conventions of home language)	L.60.15 Know how print is read (e.g., left to right, top to bottom, front to back or according to convention of home language)
						L.48.17 Recognize that print represents spoken words (e.g., first name in	L.60.16 Know that books have titles, authors, illustrators or photographers
						print, environmental labels)	L.60.17 Recognize words as a unit of print and that letters are grouped to form words
Print Concepts					L.36.16 Recognize some familiar signs and symbols in the environment (e.g., logos, signs for	L.48.18 Identify some printed words and/or common symbols (e.g., bathroom signs) in the	L.60.18 Identify some familiar printed words out of context
					familiar store)	context of the environment	L.60.19 Begin to use awareness of letter sounds along with pictures to read words in text

Strand E: Early lea	arning experienc	es will support child	ren to gain knowl	edge of print and its	uses (continued).	<b>第一条 英语是</b> 第一个 第二条	Service Charles and Committee of the
	0-6 months	6-12 months	12-18 months	18-24 months	24-36 months	3 to 4 years	4 to 5 years
Letter Recognition						L.48.19 Recognize some letters especially those in one's own name	L.60.20 Recognize and name known letters of the alphabet in familiar and unfamiliar words
							L.60.21 Make some letter-sound connections
Strand F: Early le	arning experienc	es will support child	ren to develop ph	onological awarenes	s.	THE STATE OF THE STATE OF	<b>建心,但是这种是一种的一种。</b>
Phonological Awareness					L.36.17 Recognize envi- ronmental sounds (e.g., animal or vehicle sounds	L.48.20 Recognize rhyming words in songs, chants or poems	L.60.22 Produce rhyming words or words that have same initial sound
	8				such as "Baa-baa" or "Beep-beep")	L.48.21 Identify when initial sounds in words are the same	L.60.23 Recognize which words in a set of words begin with the same sound
						L. 48.212 Distinguish individual words in a sentence	L.60.24 Distinguish syllables in words
Strand G: Early le	earning experien	ces will support child	dren to convey me	eaning through drawi	ng, letters and words.		
Drawing and Writing			L.18.11 Use writing tools to make scribbles	L.24.15 Use writing tools to make scribbles	L.36.18 Draw simple shapes to represent ideas and write message using controlled linear scribble	L.48.23 Draw or "write" to convey an idea, event or story. "Writing" involves scribbles, letters and/or letter-like shapes (e.g., make pretend list or use their words to dictate a message to communicate with others)	L.60.25 Draw original stories with a beginning, middle and end
						L.48.24 Write in a manner that is distinct from drawing. Combine scribbles with letter-like forms	L.60.26 Use early developmental spelling. May use one letter for the initial or final sound to represent whole word

			(	Creative Arts			
	0-6 months	6-12 months	12- 18 Months	18-24 Months	24 to 36 Months	3 to 4 years	4 to 5 years
Learning Progression	Indicators This is evident, for example, when children:	Indicators This is evident, for example, when children:	Indicators This is evident, for example, when children:	Indicators This is evident, for example, when children:	Indicators This is evident, for example, when children:	Indicators This is evident, for example, when children:	Indicators This is evident, for example, when children:
Strand A: Early	learning experie	ences will suppo	rt children to engage	e in and enjoy the	arts.	Lylen Eppl-in	
Music	CA.6.1 React to music by turning to a sound source, cooing in response, wiggling or moving, soothing themselves, etc.	CA.12.1 Show interest in singing, moving and dancing, using their body	CA.18.1 Use instruments to explore rhythm and melody	CA.24.1 React to changes in music by joining in with more extended segments of familiar music using voice, physical gestures and/or instruments	CA.36.1 Show response to qualities of different music with variations in physical movement (e.g., children walk, bounce, slide, rock, sway in response to qualities of rhythm)	CA.48.1 Adapt to changes in the basic qualities of music and move in more organized ways to same/ different qualities of music	CA.60.1 Initiate new musical activities with voices/ instruments (e.g., apply new words, add instruments to familiar song)
		CA.12.2 Move body (e.g., nod head, bounce,	CA.18.2 Respond to music by joining in on one or two words	CA.24.2 Initiate words to songs and song gestures (e.g.,	CA. 36.2 Respond with voice, body and/ or instruments to longer	CA.48.2 Imitate or spontaneously sing an entire verse of song	CA.60.2 Invent own music (through humming, singing, creating rhythms, etc.)
		wiggle, rock) in response to qualities of music whether melody, volume, or rhythm is same or different (fast/ slow; low/high; calm/jazzy)	physically upon hearing a familiar melody or rhythm (e.g., hand gestures)	g or moving naming animals in a segments/or patterns of music nodding) segments/or patterns of music nodding)		CA.48.3 Initiate new musical activities with voices or instruments (e.g., apply words, initiate their own listening and movement experiences with some adult assistance)	CA.60.3 Play with familiar rhythms and patterns in a novel way e.g., explore, and initiate pitch (high/ low), rhythm (patterns), and dynamics (loud/soft)
		CA.12.3 Use musical sounds to aid in communication prior to the advent of language (e.g., babbles in a singsong manner)	CA.18.3 Imitate parts of songs with words and/ or gestures	CA.24.3 Repeat words to songs, song gestures and/or sounds (pitches)	CA.36.3 Repeat parts of simple songs	CA.48.4 Spontaneously sing songs and/or participate in songs with gestures	CA.60.4 Create music using their voices and/or a variety of instruments and materials

Str	and A: Early	learning experie	ences will suppo	rt children to engage	e in and enjoy the	arts (continued)	<b>地名美国西</b> 斯斯斯 (1995)	TO HAMP STORY
		0-6 months	6-12 months	12- 18 Months	18-24 Months	24 to 36 Months	3 to 4 years	4 to 5 years
Visu	ual Arts	CA.6.2 React to stimulation in the environment. This can include drawing, sculptures or painting.	CA.12.4 Respond and explore through sensory experiences such as water play, texture-books or toys and jumbo	CA.18.4 Experiment with a variety of media, including painting with a paint brush, finger painting, scribbling, gluing and taping, age appropriate art software	CA.24.4 Use a wide variety of art materials and media (e.g., clay, dough, wet sand) for purposeful sensory exploration	CA.36.4 Create art in a variety of media with some control and own purpose	CA.48.5 Use different materials and techniques to make art creations that reflect thoughts, feelings, experiences, knowledge	CA.60.5 Use a variety of tools and materials to represent ideas through the visual arts
		Response may be slight such as a glance or stopping an activity	crayons		CA.24.5 Experiment with strokes and lines using brushes, crayons, markers, etc.			
Dra	ima				CA.24.6 Imitate simple aspects of a role using realistic props and sounds	CA.36.5 Engage in simple pretend play activities	CA.48.6 Act out simple scenarios, taking on a familiar role for brief periods during dramatic play	CA.60.6 Assume elaborate roles in dramatic play (e.g., may play multiple roles or may stay in character for extended periods of time)  CA.60.7 Use materials and
								props in unique ways and are creative in finding and using materials as props desired for dramatic play
Da	nce		CA.12.5 Respond to music with full body movements	CA.18.5 Show increasing body awareness through gross motor movement (e.g., walking, bouncing, swaying, rocking, climbing) and bilateral movement (patting), show directional awareness in movements, and use non-locomotor movements (simple finger plays)	CA.24.7 Demonstrate developing ability to balance, awareness of body (e.g., name body parts, move distinct body parts)  CA.24.8 Move creatively while listening to music (e.g., stamp feet, wave arms, sway).	CA.36.6 Demonstrate directional and spatial awareness involving time (fast/slow), space (high, middle, low), or energy (hard/soft) (e.g., moving like a turtle, jumping like a frog, floating like a feather, etc.)	CA.48.7 Demonstrate increasingly complex dance concepts while learning to move their body in place and through space (e.g., jumping from one place to another, combining several movements like hopping, turning, stamping feet)	CA.60.8 Use multiple dance concepts as a way to communicate meaning, ideas and feelings (e.g., use movement to represent leaves falling off trees – sway arms, wiggle fingers, stretch, fall to ground)

Strand B: Early	learning experie	ences will suppo	rt children to explor	e and respond to	creative works.		
	0-6 months	6-12 months	12- 18 Months	18-24 Months	24 to 36 Months	3 to 4 years	4 to 5 years
Appreciation of the Arts					CA.36.7 Describe or ask questions about a work of art	CA.48.8 Respond to the materials, techniques, ideas and emotions of artworks (2- and 3-dimensional (e.g. explain a picture or sculpture including several details)	CA.60.9 Describe the attributes of various arts media (e.g., used a lot of colors and the paint is thick, sculpture is bumpy)
					CA.36.8 Express interest in and show appreciation for the creative work of others (e.g., through body language, facial expression or oral language)	CA.48.9 Demonstrate increased appreciation of the work of others and identify preferences	

		Early Mat	thematical	Discovery		Mathen	natics
Learning Progression	0-6 months Indicators This is evident, for example, when children:	6-12 months Indicators This is evident, for example, when children:	12-18 months Indicators This is evident, for example, when children:	18-24 months Indicators This is evident, for example, when children:	24-36 months Indicators This is evident, for example, when children:	3 to 4 years Indicators This is evident, for example, when children:	4 to 5 years  Indicators  This is evident, for example, when children:
Strand A:	Early learning	experiences v	will support chi	ldren to understan	d counting and cardin	nality.	THE RESIDENCE OF THE PARTY OF T
Number Names			M.18.1 Say or sign a few number names, but may not necessarily recite them in the correct order	M.24.1 Say or sign a few number names, with beginning evidence of correct sequence (e.g., starts with "one")	M.36.1 Say or sign number sequence up to at least five. Use other number names but not necessarily in the correct order	M.48.1 Say or sign the number sequence up to at least 10	M.60.1 Say or sign the number sequence up to at least 20
Cardinality			M.18.2 Demonstrate one-to-one or one-to-many correspondence (e.g., may fill each compartment in	M.24.2 Put objects in one-to-one correspondence (e.g., puts one item in each compartment)	M.36.2 Count two to three objects using one- to-one correspondence	M.48.2 Count up to at least five objects using one-to-one correspondence, using the number name of the last object counted to represent the total number of objects in a set	M.60.2 Count up to 10 objects using one-to-one correspondence, regardless of configuration, using the number name of the last object counted to represent the total number of objects in a set
			a egg carton with one or several objects)			M.48.3 Count out a set of objects up to four	M.60.3 Count out a set of objects up to five
Written Numerals						M.48.4 Recognize written numerals up to at least five	M.60.4 Recognize written numerals up to at least 10

	arly learnin 0-6 months	6-12 months	12-18 months	18-24 months	24-36 months	3 to 4 years	4 to 5 years
Recognition of Quantity	0-0 months	0-12 Horitis	12-10 110111115	M.24.3 Name groups of one to two objects	M.36.3 Name and match a small collection of up to three objects	M.48.5 Recognize and name, without counting, the number of objects in small groups of at least 3 or 4 objects	M.60.5 Quickly recognize and name, without counting, the number of objects in collections of up to at least five items
Comparison				M.24.4 Compare collections that are quite different in size	M.36.4 Compare collections of 1 to 4 similar items verbally or nonverbally	M.48.6 Compare sets of 1 to 5 objects using a visual matching or counting strategy and describing the comparison as more, less than or the same	M.60.6 Compare sets of up to 10 objects using a visual matching or counting strategy and describing the comparison as more, less than or the same
Strand B: E	arly learnin	g experience	s will support	children to und	erstand and describe	relationships to solve problem	s (operations and algebraic
Number Operations					M.36.5 Use some vocabulary related to relative quantity (e.g., "more," "less")	M.48.7 Understand that adding to (or taking away) one or more objects from a group will increase or decrease the objects in the group	M.60.7 Use real-world situations and concrete objects to model and solve addition (e.g., putting together) and subtraction (e.g., taking away) problem up through five  M.60.8 Recognize and describe parts contained in larger numbers by composing number combinations up to at least five (e.g., recognize how many have been secretly taken away from a group of five objects)
Strand C: E	Early learnin	g experience	s will suppor	t children to und	erstand the attributes	and relative properties of obje	cts (measurement and data).
See Attribute,	Sorting and Pa	tterns learning pr	ogression in Cogr	nition			
Measurement				M.24.5 Use some vocabulary related to size and quantity (e.g., say something is "big" or request "more")	M.36.6 Have an increasing vocabulary related to number, size and quantity (e.g., use words such as "tall," "long")	M.48.8 Recognize measurable attribute of an object such as length, weight or capacity	M.60.9 Compare the measurable attributes of two or more objects (e.g., length, weight and capacity) and describe the comparison using appropriate vocabulary (e.g., longer, shorter, same length, heavier, lighter, same weight, holds more, holds less, holds the same amount)  M.60.10 Begin to use strategies to determine measurable attributes (e.g. length or capacity of objects). May use

	0-6 months	6-12 months	12-18 months	18-24 months	24-36 months	3 to 4 years	4 to 5 years
Data						M.48.9 Sort objects into two groups, count, and compare the quantity of the groups formed (e.g., indicate which is more)	M. 60.11 Represent data using a concrete object or picture graph according to one attribute
Sorting and Classifying			M.18.3 Match objects that are the same	M.24.6 Sort objects using inconsistent strategies (e.g., favorite items, colors)	M.36.7 Sort on the basis of one attribute with adult support	M.48.10 Sort and classify objects by one attribute into two or more groups (e.g., color, size, shape)	M.60.12 Sort and classify a set of objects on the basis of one attribute independently and describe the sorting rule. Can re-sort and classify the same set of objects based on a different attribute
Strand D: Ea	ırly learning	experience	s will support	children to und	derstand shapes and s	spatial relationships (geometry	and spatial sense).
Spatial Relationships	ii		M.18.4 Adjust their reach and grasp based upon distance, size and weight of an object	M.24.7 Show beginning understanding of positional vocabulary (e.g., up/down, in/out, on/off, under)	M.36.8 Find objects or locations based upon landmarks and position words (e.g., "Your blanket is on the couch.")	M.48.11 Use positional vocabulary (e.g., up/down, in/out, on/off, under) to identify and describe the location of an object	M.60.13 Use relational vocabulary of proximity (e.g., beside, next to, between above, below, over and under) to identify and describe the location of an object
Identification of Shapes				M.24.8 Match familiar shapes (e.g., circle, square and typical triangle) with same size and orientation	M.36.9 Match familiar shapes with different size and orientation	M.48.12 Identify 2-dimensional shapes (starting with familiar shapes such as circle and triangle) in different orientations and sizes	M.60.14 Identify and describe a variety of 2-dimensional and 3-dimensional shapes with mathematical names (e.g., ball/sphere, box/rectangular prism, can/cylinder) regardless of orientation and size
Composition of Shapes	e					M.48.13 Combine two or more shapes to create a new shape or to represent an object in the environment	M.60.15 Complete a shape puzzle or a new figure by putting multiple shapes together with purpose

		Earl	y Scienti	fic Inquiry		Sc	ience
	0-6 months	6-12 months	12-18 months	18-24 months	24 to 36 months	3 to 4 years	4 to 5 years
Learning Progression	Indicators This is evident, for example, when children:	Indicators This is evident, for example, when children:	Indicators This is evident, for example, when children:	Indicators This is evident, for example, when children:	Indicators This is evident, for example, when children:	Indicators: This is evident, for example, when children:	Indicators: This is evident, for example, when children:
Strand A: E	arly learning	experiences	s will suppor	t children to ap	ply scientific practices.		
Questioning and Defining Problems	See Curiosity a progression in	and Initiative lear Cognition	ning	S.24.1 Observe and make comments on things observed through the senses	S.36.1 Ask simple questions related to things observed through the senses ("what" and "why")	S.48.1 Ask more detailed questions including the relationship between two things or cause and effect relationships	S.60.1 Define a problem to be solved, including details and limitations to be considered (e.g., "We need to figure out how to reach that shelf, but we aren't allowed to stand on the chairs."
Investigating	Investigating See Cause and Affect learning progression in Cognition			S.36.2 Manipulate materials and comment on the impact of own actions	S.48.2 Intentionally vary actions in order to observe the effect of these actions on materials	S.60.2 Engage in collaborative investigations to describe phenomena or to explore cause and affect relationships	
							S.60.3 Gather data by drawing, counting or otherwise documenting observations
Using Evidence				S.36.3 Provide personal reasons or evidence for decisions or opinions (e.g., "I made this picture green	S.48.3 Cite examples to support their ideas (e.g., "I think the plant will die because when I forgot to	S.60.4 Give evidence from observations or investigations	
				because my mom likes green.")	water my plant it died.")	S.60.5 Begin to distinguish evidence from opinion	
Strand B: E	Early learning	g experience	s will suppo	rt children to e	ngage in the process of engine	eering.	
Design Cycle					S.36.4 Gather information to help determine if something has been designed by humans	S.48.4 Identify a problem and, with adult assistance design a solution (e.g., device or process)	S.60.6 Identify a problem and, with adult assistance, design a solution, test and refine design elements

solution (e.g., device or process) to address that problem

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	0-6 months	6-12 months	12-18 months	18-24 months	24 to 36 months	3 to 4 years	4 to 5 years
Unity and Diversity of Life				S.24.2 Explore characteristics of different plants and animals	S.36.5 Observe features of plants and animals and explore function of features	S.48.5 Compare and contrast basic features of living things (e.g., body parts and their uses) between and across groups	S.60.7 Group and classify living things based upon features, providing evidence to support groupings
	3					S.48.6 Recognize changes in living things over their lifespan by observing similarities and differences between babies and adults	S.60.8 Demonstrate an understanding of how living things grow and change through predictable stages (e.g., birth, growth, reproduction, death)
Living Things and Their Interactions with the Environment and Each Other				S.24.3 Observe living things	S.36.6 Observe how a variety of living things obtain food as a source of energy for surviving	S.48.7 Explore how animals depend upon the environment for food, water and shelter	S.60.9 Provide examples of how animals depend on plants and other animals for food
	arly learnin	g experience	s will suppo	rt children to un	derstand physical sciences.		
Energy, Force and Motion				S.24.4 Use trial and error to explore the way different objects move	S.36.7 Observe different ways objects move (e.g., roll, bounce, spin, slide) and what happens when they interact (collide)	S.48.8 Investigate how objects' speed and direction can be varied	S.60.10 Make predictions and conduct simple experiments to change direction, speed and distance objects move
							S.60.11 Determine cause and effect of push/pull/collision that make objects, start, stop and change direction

Strand D: E	arly learning	experiences	will support	t children to un	derstand physical sciences (c	ontinued)	
	0-6 months	6-12 months	12-18 months	18-24 months	24 to 36 months	3 to 4 years	4 to 5 years
Matter and its Properties				S.24.5 Observe simple attributes of materials (e.g., hard, soft)	S.36.8 Observe and describe attributes of materials that are related to their function (e.g., flexibility, transparency, strength)	S.48.9 Compare and contrast attributes of common materials related to their function (e.g., flexibility, transparency, strength)	S.60.12 Evaluate the appropriateness of a material for a given purpose based upon its properties
				,			S.60.13 Observe how heating and cooling cause changes to properties of materials (e.g., Ice melts when we bring it inside. Plastic becomes brittle when it is left outside in the cold.)
Strand E: E	arly learning	experiences	will suppor	t children to un	derstand features of earth.		
Earth's Features and the Effects of Weather and Water				S.24.6 Observe natural features of the earth (e.g., land, rain)	S.36.9 Describe common features of the earth (e.g., sky, land and water) and what is found there (e.g., birds, fish, stars)	S.48.10 Observe, record, and note patterns regarding weather and the effects on the immediate environment (e.g., Rain over a period of days causes flooding. Sunny days cause the flower bed to dry out.)	S.60.14 Give examples of ways in which weather variables (hot/cold temperatures, amount and intensity of precipitation, wind speed) affect us and/or cause changes to earth's features (e.g., The stream has greater water flow after snow melts.)
						S.48.11 Investigate how water interacts with other earth materials (e.g., sand, dirt, pebbles)	
Earth and Human Activity				S.24.7 Talk about different foods humans eat	S.24.10 Give examples of natural resources that humans use to survive (e.g., food, water)	S.48.12 Investigate how humans use design solutions to adapt natural resources to meet basic needs (e.g., cut trees to build houses, make applesauce out of apples)	S.60.15 Explore how humans' use of natural resources impacts the environment (e.g., If we catch all the salmon, this can no longer be a food source. Cutting down trees can cause erosion.)

### Social Studies

Note: Precursors to the skills reflected in social studies can be found in the domain of Social and Emotional and Cognition.

	3 to 4 years	4 to 5 years	
Learning	Indicators	Indicators	
Progression	This is evident, for example, when children:	This is evident, for example, when children:	
Strand A: Early Learning exp	eriences will support children to understand self, family and a diver	se community.	
Individual Development and Identity	SS.48.1 Identify physical characteristics of self (e.g., eyes, hair, skin, etc.)	SS.60.1 Demonstrate an understanding that there are similarities and differences among people and families	
	SS.48.2 Demonstrate an understanding of self as part of a family (e.g., parents, grandparents, siblings, caregivers)		
Culture	SS.48.3 Identify cultural characteristics of self, family and community (e.g., home language, foods, modes of transportation, shelter, etc.)	SS.60.2 Demonstrate understanding that there are similarities and differences among the cultural characteristics of people, families and communities (e.g., languages, foods, art, customs, modes of transportation and shelter)	
Strand B: Early Learning exp	eriences will support children to learn about people and the environ	ment.	
Power, Authority and Governance	SS.48.4 Demonstrate an understanding of some reasons for basic rules in the home, cultural community and/or classroom	SS.60.3 Demonstrate understanding of the reasons for rules and laws in the home, cultural community and/or classroom	
People, Places and Environments	SS.48.5 Demonstrate awareness that people share the environment with other people, animals and plants and have the responsibility to care for them	SS.60.4 Demonstrate awareness that people have a responsibility to take care of the environment through active participation in activities such as recycling	
	SS.48.6 Describe, draw or construct aspects of the geography of the classroom and/or home	SS.60.5 Describe, draw or construct aspects of the classroom, home and/or community (including roads, building, bodies of water, etc.)	
Civic Ideals and Practices	SS.48.7 Participate in jobs and responsibilities at home, classroom or community	SS.60.6 Demonstrate an understanding of why certain responsibilities are important and participate in fulfilling responsibilities at home, classroom or community (e.g., cleaning up, caring for pets)	
Strand C: Early Learning exp	eriences will support children to develop an understanding of econo	omic systems and resources.	
Individuals, Groups and Institutions	SS.48.8 Demonstrate awareness of a variety of jobs in the community and the work associated with them through conversation and/or play	SS.60.7 Demonstrate awareness of the tools and technologies associated with a variety or roles and jobs; expressing interest in different careers	
Production, Distribution and Consumption	SS.48.9 Demonstrate beginning understanding of commerce through exploring the roles of buying and selling in play	SS.60.8 Demonstrate understanding of the basic relationship of money for the purchase of food, shelter, goods and services, moving toward an understanding of the difference between wants and needs	
Science, Technology and Society	SS.48.10 Understand the use of tools, including technology, for a variety of purposes	SS.60.9 Begin to be aware of technology and how it affects life	

Strand D: Early Learning experiences will support children to understand change over time.			
	3 to 4 years	4 to 5 years	
Time, Continuity and Change  SS.48.11 Demonstrate a basic understanding of sequence of and time periods (e.g., using terms such as time of day, yester today and tomorrow)		SS.60.10 Demonstrate a beginning understanding of past, present and future as it relates to one's self, family and community	
	SS.48.12 Demonstrate a beginning understanding of change over time through discussing topics such as their own growth and how they have changed	SS.60.11 Demonstrate a beginning understanding of change over time through discussing, representing or playing, about expanding topics such as their own growth and family history	

### Dual Language Development Framework: Learning Progressions for Second Language Acquisition

This is a basic framework for considering development of second language learning and was developed as a supplement to the Connecticut Early Learning and Development Standards. It is necessary to consider information about children's language development in all languages they are learning when looking at their skills and progress in other developmental domains and content areas. The Language and Literacy domain applies to all students and reflects what children should know and be able to do in their first or primary language(s). Although learning multiple languages may impact the timing of some development in the Language and Literacy domain, the learning progressions in that domain are considered the primary language and literacy acquisition standards. This section is not applicable to all students, but rather is designed to raise awareness of the typical stages of acquiring a second language. It shows a general progression of skills, loosely based on a child with some initial experiences in a first language (L1), who is receiving continued support of language and academic development in L1 at the same time he/she is learning a second language (L2). The general progression in the document is shown below.

Beginning	Middle	Later
Home language and first	Beginning use of	Increasing use of second language
experiences with second language	second language	, , , , , , , , , , , , , , , , , , , ,

There is wide variation in the experiences and skills of children who are learning a second language. The degree to which children's use of their first or second language is supported at home and in other environments has a great impact on their language development, as does the age at which they begin to learn a second language. Children with different experiences and varying exposure to languages may vary from the developmental progression indicated in this document. Some examples are:

- Children who learn two languages at home on a continuing basis from birth may develop similar skills in both languages at the same time.
- Children with strong verbal skills in L1 may move from the beginning stages to later stages more quickly than a child who is very young or who has not had strong language models in L1.
- Children whose school experiences are provided in L2 may begin to demonstrate stronger skills in L2 than
  in L1 if their academic knowledge, vocabulary and expression of higher order thinking are not supported
  in L1.

All of these variables should be considered when looking at children's language and literacy development. This document can serve as a basis for considering a child's skills when they are learning a second language or when their home language is different from that learned at school.

Research widely supports the advantages of learning multiple languages and shows that greater skills in a first language support the development of skills in a second language. Therefore, this document promotes continuing support for children's language development in their first language. While the supports for first and second language development may not occur in the same settings, communication and coordination to ensure common goals across settings will help to ensure the best outcomes for children.

	Dual Langu	uage Development Fra	mework
Learning Progression	Beginning Home Language and first experi- ences with second language	Middle Beginning use of second language	Later Increasing use of second Language
Strand A: Early le	earning experiences will support ch	ildren to develop listening skills.	
Comprehension of Information Presented Orally	DLL.B.1 Demonstrate an under- standing of words related to basic and advanced concepts in L1 that are appropriate for their age. May understand a few words in L2	DLL.M.1 Demonstrate listening comprehension of familiar information and concepts in L2, especially with visual and verbal supports (e.g., repetition of information, clarification)	DLL.L.1 Demonstrate listening comprehension of familiar and unfamiliar content and concepts in L2 with continued and appropriate support (including the use of contextual clues, real experiences, concrete objects, visual/films, etc.)
Comprehension of Oral Instruc- tions, Questions and Prompts	DLL.B.2 Respond to directions, prompts and questions in L1 and acknowledge or respond nonverbally to common words or phrases in L2 when accompanied by gestures and contextual cues	DLL.M.2 Begin to respond to age appropriate routine directions, prompts and familiar questions in L2, especially when there are contextual clues	DLL.L.2 Respond to age appropriate directions, prompts and questions in L2, including multistep directions with continued and appropriate support (including the use of contextual clues, real experiences, concrete objects, visual/films, etc.)
Vocabulary	DLL.B.3 Demonstrate growing vocabulary in L1 while beginning to attend to L2 language, relying on simplified speech and visual or nonverbal cues or the actual objects	DLL.M.3 Demonstrate understanding of familiar words and simple phrases in L2, especially objects, actions and basic common social vocabulary	DLL.L.3 Comprehend and respond to increasingly complex and varied L2 vocabulary with continued and appropriate support (including the use of contextual clues, real experiences, concrete objects, visual/films, etc.)
Pronunciation and Intonation Patterns	DLL.B.4 Demonstrate an age-ap- propriate understanding of intona- tion patterns in L1 and recognize a couple of basic patterns in L2 (e.g., intonation used for question versus statement in English)	DLL.M.4 Respond appropriately to an increasing number of basic intonations patterns in L2 (e.g., can follow and use intonation of songs with or without the correct words)	DLL.L.4 Distinguish intonation patterns and word stress that affect meaning in questions, statements, exclamations and commands in L2; May still demonstrate difficulty hearing some sounds
Conversations and Discussions	DLL.B.5 Demonstrate active listening strategies about personal topics by attending to the speaker nonverbally, making eye contact (if culturally relevant) and attending to gestures	DLL.M.5 Use age-appropriate listening strategies during conversations and discussions, asking on-topic questions with support	DLL.L.5 Attend to speaker during conversation and discussion in L2, responding appropriately with continued and appropriate support (including the use of contextual clues, real experiences, concrete objects, visual/films, etc.)
Strand B: Early I	earning experiences will support ch	nildren to develop speaking skills.	
Communication of Needs	DLL.B.6 May use L1 or L2 to attempt to communicate. In L2 dominant environments may rely on nonverbal communication, such as gestures or behaviors, to seek attention, request objects or initiate a response from others	DLL.M.6 Combine nonverbal and some verbal communication in L2 to be understood by others (may use L1 and L2 in combination or may use imitative, telegraphic and/or formulaic speech); Request items in L2. May use social greetings and common phrases (e.g., "I don't know") in L2	DLL.L.6 Show increasing ability to use verbal communication in L2 to be understood by others. Demonstrate increased participation in conversations with peers and adults
Conversation and Discussion	DLL.B.7 Use L1 during language exchanges and use basic nonverbal communication techniques such as gestures, etc. May occasionally use single words in L2 to communicate	DLL.M.7 Use both L1 and L2 to engage with peers/adults, request or respond. May use L1 and L2 interchangeably (code-switching) and engage in age-appropriate social discussions	DLL.L.7 Demonstrate ability to engage in age-appropriate conversations in L2 on a variety of topics

Pronunciation and Intonation	DLL.B.8 Produce age-appropriate sounds and phonemic structures in L1. May apply L1 patterns when using single words or short phrases in L2	DLL.M.8 Use approximations of sounds and some age-appropriate sounds in L2 but may still carry pronunciation patterns from L1. May add or omit sounds in L2 even when repeating after a model	DLL.L.8 Generally use age-appropriate pronunciation, enunciation, intonation and fluency in L2 but may still carry pronunciation patterns from L2
		DLL.M.9 Use age-appropriate pronunciation, enunciation, intonation and fluency using words, phrases and simple sentences when repeating after a model	
Grammar and Syntax	DLL.B.9 Use age-appropriate grammar in L1 (e.g., plurals, simple past tense, etc.). May apply L1 patterns when using single words or short phrases in L2	DLL.M.10 Begin to use some L2 grammatical structures but may still apply rules from L1 to L2	DLL.L.9 Increasingly use age-appropriate forms of grammar in L2, (e.g., plurals, simple past tense, subject-verb agreement)
Social Conventions	DLL.B.10 Use age-appropriate social communication skills in L1. May apply L1 conventions when using single words or short phrases in L2	DLL.M.11 Show a beginning under- standing of social conventions in L2	DLL.L.10 Use age-appropriate verbal and non- verbal social conventions in L2
Vocabulary Production	DLL.B.11 Use age-appropriate vocabulary in L1 and begin to use and demonstrate understanding of (through nonverbal communication or gestures) basic, concrete labels in L2	DLL.M.12 Begin to use L2 vocabulary, especially concrete objects and routine verbs. Also begin to use social greetings and common phrases/words and appropriate nonverbal actions that indicated understanding of common phrases/words	DLL.L.11 Use age-appropriate and varied vocabulary in a variety of contexts with continued and appropriate support (including the use of contextual clues, real experiences, concrete objects, visual/films, etc.)
Utterance Length and Complexity	DLL.B.12 Use age-appropriate range of utterance length in L1 and may use isolated words in L2	DLL.M.13 Use two and three word utterances in L2 while continuing to expand utterance length and complexity in L1	DLL.L.12 Use age-appropriate utterance length in L2 with increasing use of more complex grammatical structures and a wider variety of elements of speech (e.g., descriptors, pronouns, etc.)
Academic Information (in- quiry, narrative development)	DLL.B.13 Prefer use of L1 to engage in learning and exploration across developmental domains or content areas (e.g., ask and answer age appropriate questions related to science and math, identi- fies emotions, retells stories, etc.)	DLL.M.14 Begin to use L2 to engage in inquiry and learning experiences; may rely on students that share common L2 for understanding and learning. Need concrete experiences to acquire understanding and make connections to L1, prior experiences and known concepts	DLL.L.13 Are able to use L1 or L2 in a range of learning and exploratory contexts with continued ongoing support in L1 and L2
		upport children to develop early liren approximately3-5 years of	
Vocabulary, Symbols and Environmental Print	DLL.B.14 Begin to recognize that symbols (classroom, home or com- munity) in the environment carry a consistent meaning in L1 or L2	DLL.M.15 Recognize in the environment (classroom, home or community) some familiar symbols, words and print labels in L1 or L2	DLL.L.14 Recognize in the environment (classroom, home or community) an increasing number of familiar symbols, words and print labels in L2
Connect written text and spoken language	DLL.B.15 Begin to recognize the first letter in their own name or the character for their own name in L1 or L2	DLL.M.16 Identify some letters or characters in L1 and L2 and the sounds associated with them	DLL.L.15 Begin to demonstrate that the letters or characters of the L2 alphabet or system are symbols that make up or represent words
Phonemic awareness	DLL.B.16 Attend to and experiment with different sounds or tone in words in L1	DLL.M.17 Attend to and experiment with different sounds or tone in words in L1 and L2 with support	DLL.L.16 Experiment with and vary sounds in words in L1 and L2 (e.g., manipulating onsets, rimes and phonemes to create rhymes, alliteration, etc.)
Written language	DLL.B.17 Begin to demonstrate an awareness that written language can be in L1 or L2	DLL.M.18 Begin to use marks or symbols to represent spoken language in L1 or L2	DLL.L.17 Continue to develop beginning writing skills by using letters or symbols from L2 to represent their ideas

### Appendix A: CT ELDS to Common Core State Standards Alignment — English Language Arts

Language a	nd Literacy Early Learnin	g and Development Standards	Common Core State Standards in English Language Arts
	3 to 4 years	4 to 5 years	Kindergarten
Strand A: Unde	erstand Language (F	Receptive Language)	
Word Comprehension	L.48.1 Understand words or signs for objects, actions and visible attributes found frequently in both real & symbolic contexts	L.60.1 Understand an increasing variety and specificity of words for objections, actions and attributes encountered in both real and symbolic contexts  L. 60.2 Determine the meanings of unknown words/concepts using the context of conversations, pictures or concrete objects	CC.K.L.4 Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on kindergarten reading and content  CC.K.L.4.a Identify new meanings for familiar words and apply them accurately (e.g., knowing duck is a bird and learning the verb to duck)  CC.K.L.4.b Use the most frequently occurring inflections and affixes (e.g., -ed, -s, re-, un-, pre-, -ful, -less) as a clue to the meaning of an unknown word  CC.K.L.5 With guidance and support from adults, explore
Language Comprehension	L.48.2 Understand increasingly complex sentences that include 2 to 3 concepts (e.g., "Put the blue paper under the box.")	L.60.3 Understand increasingly complex sentences that include 2 to 3 concepts (e.g., "Plants are living things that will not survive without soil, sunlight and water.")	word relationships and nuances in word meanings CC.K.L.5.a Sort common objects into categories (e.g., shapes, foods) to gain a sense of the concepts the categories represent CC.K.L.5.b Demonstrate understanding of frequently occurring verbs and adjectives by relating them to their
	language (Express	ive language)	opposites (antonyms)
Vocabulary	L.48.3 Use accepted words for objects, actions and attributes encountered frequently in both real and symbolic contexts  L.48.4 Use simple pronouns (I, me, you, mine, he, she)	L.60.4 Use an increasing variety and specificity of accepted words for objects, actions and attributes encountered in both real and symbolic contexts	CC.K.L.5.c Identify real-life connections between words and their use (e.g., note places at school that are colorful) CC.K.L.6 Use words and phrases acquired through conversations, reading and being read to, and responding to texts
	L.48.5 Begin to use some words that are not a part of everyday conversational speech but that are learned through books and personal experiences (e.g., gigantic, rapidly, frustrated, transportation, race or jog)	L.60.5 Use more complex words learned through books and personal experiences (e.g., label favorite shirt as chartreuse, or know that a paleontologist studies dinosaurs)	
Expressing Ideas, Feelings and Needs	L.48.6 Communicate about current or removed events and/ or objects  L.48.7 Use increasingly longer, complex sentences that combine phrases or concepts to communicate ideas	L.60.6 Use more complex words to describe the relationships between objects and ideas (e.g., position words such as under, beside and comparative words such as bigger or longer)	CC.K.SL.4 Describe familiar people, places, things and events and, with prompting and support, provide additional detail CC.K.SL.5 Add drawings or other visual displays to descriptions as desired to provide additional detail CC.K.SL.6 Speak audibly and express thoughts, feelings and ideas clearly

Language Structure	L.48.8 Use basic grammar rules including irregular past tense and questions  Note: Variations in applying grammar rules may be due to dual language learning and/or alternative grammar usage in home or community  L.48.9 Use speech that is mostly intelligible to familiar and unfamiliar adults	L.60.7 Use basic grammar rules including subject-verb agreement, tenses, regular & irregular past tense, irregular plurals  Note: Variations in applying grammar rules may be due to dual language learning and/or alternative grammar usage in home or community  L.60.8 Use an increasing variety and specificity of accepted words for objects, actions and attributes encountered in both real and symbolic contexts	CC.K.L.1 Demonstrate command of the conventions of standard English grammar and usage when speaking CC.K.L.1.a Print many upper- and lowercase letters CC.K.L.1.b Use frequently occurring nouns and verbs CC.K.L.1.c Form regular plural nouns orally by adding /s/ or /es/ (e.g., dog, dogs; wish, wishes) CC.K.L.1.d Understand and use question words (interrogatives) (e.g., who, what, where, when, why, how) CC.K.L.1.e Use the most frequently occurring prepositions (e.g., to, from, in, out, on, off, for, of, by, with) CC.K.L.1.f Produce and expand complete sentences in shared language activities
Strand C: Use	anguage for social	interaction	
Conventions of Conversation	L.48.10 Maintain a topic of conversation over the course of several turns	L.60.9 Initiate, maintain and end conversations by repeating what other person says and/or asking questions	CC.K.SL.1 Participate in collaborative conversations with diverse partners about kindergarten topics and texts with peers and adults in small and larger groups  CC.K.SL.1.a Follow agreed-upon rules for discussions
Language for Interaction	L.48.11 Answer simple who, what, where and why questions	L.60.10 Use language to share ideas and gain information	(e.g., listening to others and taking turns speaking about the topics and texts under discussion) CC.K.SL.1.b Continue a conversation through multiple exchanges CC.K.SL.2 Confirm understanding of a text read aloud or information presented orally or through other media by asking and answering questions about key details and requesting clarification if something is not understood CC.K.SL.3 Ask and answer questions in order to seek help, get information, or clarify something that is not understood
Strand D: Book	Appreciation and l	Knowledge	
Show Interest and Engagement with Books	L.48.12 Select fiction and non-fiction books to be read and attend with interest	L.60.11 Independently choose to 'read' books and select a variety of texts, including fiction and nonfiction	CC.K.R.F.4 Read emergent-reader texts with purpose and understanding CC.K.R.I.10 Actively engage in group reading activities with purpose and understanding CC.K.R.L.10 Actively engage in group activities with purpose and understanding
Understands Stories or Information  (Stories or information may be shared through oral storytelling, sharing of pictures and/or books)	L.48.13 Demonstrate comprehension through retelling with use of pictures and props, acting out main events or share information learned from nonfiction text	L.60.12 With prompting and support, retell familiar stories, including story elements (e.g., setting, characters, events) and/or shares key defails from informational text	CC.K.R.I.1 With prompting and support, ask and answer questions about key details in a text CC.K.R.I.2 With prompting and support, identify the main topic and retell key details of a text CC.K.RL.1 With prompting and support, ask and answer questions about key details in a text CC.K.RL. 2 With prompting and support, retell familiar stories, including key details CC.K.R.L.3 With prompting and support, identify characters, setting and major events in a story

	L.48.13 Ask and answer simple who, what, where and why questions related to story or text L.48.15 Make pre- dictions and/or ask questions about the text by examining the title, cover, pictures	L.60.13 Identify main components of a story or text (the major plot points of a story or the main topic of an informational text)  L.60.14 Use connections between self and character experience and emotions to increase comprehension	CC.K.R.I.3 With prompting and support, describe the connection between two individuals, events, ideas, or pieces of information in a text
Strand E: Know	wledge of Print and	Its Uses	
Book Concepts	L.48.16 Looks at pages of a book from left to right (or according to conventions of home language)  L.48.17 Recognizes that print represents spoken words (i.e., first name in print, environmental labels)	L.60.15 Know how print is read (left to right, top to bottom, front to back or according to convention of home language)  L.60.16 Know that books have titles, authors, illustrators or photographers  L.60.17 Recognize words as a unit of print and that letters are grouped to form words	CC.K.R.F.1 Demonstrate understanding of the organization and basic features of print CC.K.R.F.1.a Follow words from left to right, top to bottom, and page by page CC.K.R.I.4 With prompting and support, ask and answer questions about unknown words in a text CC.K.R.I.5 Identify the front cover, back cover, and title page of a book CC.K.R.I.6 Name the author and illustrator of a text and define the role of each in presenting the ideas or information in a text CC.K.R.L.4 Ask and answer questions about unknown words in a text CC.K.R.L.5 Recognize common types of texts (e.g., storybooks, poems) CC.K.R.L.6 With prompting and support, name the author and illustrator of a story and define the role of each in telling the story CC.K.R.I.7 With prompting and support, describe the relationship between illustrations and the text in which they appear (e.g., what person, place, thing, or idea in the text an illustration depicts) CC.K.R.I.9 With prompting and support, identify the reasons an author gives to support points in a text CC.K.R.I.9 With prompting and support, describe the relationship between illustrations, or procedures) CC.K.R.L.7 With prompting and support, describe the relationship between illustrations and the story in which they appear (e.g., in illustrations, descriptions, or procedures) CC.K.R.L.9 With prompting and support, compare and contrast the adventures and experiences of characters in familiar stories
Print Concepts	L.48.16 Identify some printed words and/ or common symbols (e.g., bathroom signs) in the context of the environment	L.60.18 Identify some familiar printed words out of context  L.60.19 Begin to use awareness of letter sounds along with pictures to read words in text	CC.K.R.F.3 Know and apply grade-level phonics and word analysis skills in decoding words CC.K.R.F.3.a Demonstrate basic knowledge of letter-sound correspondences by producing the primary or most frequent sound for each consonant CC.K.R.F.3.b Associate the long and short sounds with the common spellings (graphemes) for the five major vowels CC.K.R.F.3.c Read common high-frequency words by sight (e.g., the, of, to, you, she, my, is, are, do, does) CC.K.R.F.3.d Distinguish between similarly spelled words by identifying the sounds of the letters that differ

Letter Recognition	L.48.19 Recognize some letters especially those in one's own name	L.60.2 Recognize and names known letters of the alphabet in familiar and unfamiliar words  L.60.21 Make some letter-sound connections	CC.K.R.F.1.b Recognize that spoken words are represented in written language by specific sequences of letters CC.K.R.F.1.c Understand that words are separated by spaces in print CC.K.R.F.1.d Recognize and name all upper- and lowercase letters of the alphabet
Strand F: Pho	nological Awareness		
Phonological Awareness	L.48.20 Recognize rhyming words in songs, chants or poems L.48.21 Identify when initial sounds in words are the same L. 48.22 Distinguish individual words in a sentence	L.60.22 Produce rhyming words or words that have same initial sound  L.60.23 Recognize which words in a set of words begin with the same sound  L.60.24 Distinguish syllables in words	CC.K.R.F.2 Demonstrate understanding of spoken words, syllables, and sounds (phonemes)  CC.K.R.F.2.a Recognize and produce rhyming words CC.K.R.F.2.b Count, pronounce, blend, and segment syllables in spoken words CC.K.R.F.2.c Blend and segment onsets and rhymes of single-syllable spoken words CC.K.R.F.2.d Isolate and pronounce the initial, medial vowel, and final sounds (phonemes) in three-phoneme (consonant-vowel-consonant, or CVC) words* (This does not include CVCs ending with /l/, /r/,or /x/.) CC.K.R.F.2.e Add or substitute individual sounds (phonemes) in simple, one-syllable words to make new words
Strand G: Cor	veying meaning thr	ough drawing, letters and wor	ds
Conveying meaning through drawing, letters and words	L.48.23 Draw or "writes" to convey an idea, event or story. "Writing" involves scribbles, letters and/ or letter-like shapes (e.g., make pretend list or use their words to dictate a message to communicate with others)	L.60.25 Draw original stories with a beginning, middle and end	CC.K.W.1 Use a combination of drawing, dictating, and writing to compose opinion pieces in which they tell a reader the topic or the name of the book they are writing about and state an opinion or preference about the topic or book (e.g., My favorite book is)  CC.K.W.2 Use a combination of drawing, dictating, and writing to compose informative/explanatory texts in which they name what they are writing about and supply some information about the topic  CC.K.W.3 Use a combination of drawing, dictating, and writing to narrate a single event or several loosely linked events, tell about the events in the order in which they occurred, and provide a reaction to what happened  CC.K.W.5 Production and Distribution of Writing: With guidance and support from adults, respond to questions and suggestions from peers and add details to strengthen writing as needed  CC.K.W.6 Production and Distribution of Writing: With guidance and support from adults, explore a variety of digital tools to produce and publish writing, including in collaboration with peers  CC.K.W.7 Participate in shared research and writing projects (e.g., explore a number of books by a favorite author and express opinions about them)  CC.K.W.8 Research to Build and Present Knowledge: With guidance and support from adults, recall information from experiences or gather information from provided sources to answer a question
	L.48.24 Write in a manner that is distinct from drawing. Combine scribbles with letter-like forms	L.60.26 Use early developmental spelling. May use one letter for the initial or final sound	CC.K.L.2 Demonstrate command of the convention of standard English capitalization, punctuation, and spelling when writing  CC.K.L.2.a Capitalize the first word in a sentence and the pronoun I  CC.K.L.2.b Recognize and name end punctuation  CC.K.L.2.c Write a letter or letters for most consonant and short-vowel sounds (phonemes)

# Appendix B: CT ELDS to Common Core State Standards Alignment — Mathematics

Mathematics Early Learning and Development Standards			Common Core State Standards in Mathematics
	3 to 4 years	4 to 5 years	Kindergarten
Strand A: U	nderstand Counting and Ca	ardinality	
Number Names	M.48.1 Say or sign the number sequence up to at least 10	M.60.1 Say or sign the number sequence up to at least 20	K.CC.1. Count to 100 by ones and by tens. K.CC.2. Count forward beginning from a given number within the known sequence (instead of having to begin at 1).
Cardinality	M.48.2 Count up to at least five objects using one-to-one correspondence, using the number name of the last object counted to represent the total number of objects in a set	M.60.2 Count up to 10 objects using one-to-one correspondence, regardless of configuration, using the number name of the last object counted to represent the total number of objects in a set	K.CC.4. Understand the relationship between numbers and quantities; connect counting to cardinality  a. When counting objects, say the number names in the standard order, pairing each object with one and only one number name and each number name with one and only one object  b. Understand that the last number name said tells the number of objects counted. The number of objects is the same regardless of their arrangement or the order in which they were counted  c. Understand that each successive number name refers to a quantity that is one larger
	M.48.3 Count out a set of objects up to 4	M.60.3 Count out a set of objects up to 5	K.CC.5. Count to answer "how many?" questions about as many as 20 things arranged in a line, a rectangular array, or a circle, or as many as 10 things in a scattered configuration; given a number from 1–20, count out that many objects
Written Numerals	M.48.4 Recognize written numerals up to at least five	M.60.4 Recognize written numerals up to at least 10	K.CC.3. Write numbers from 0 to 20. Represent a number of objects with a written numeral 0-20 (with 0 representing a count of no objects)
Recognizing Quantities	M.48.5 Recognize and name, without counting, the number of objects in small groups of at least 3 or 4 objects	M.60.5 Quickly recognize and name, without counting, the number of objects in collections of up to at least five items	-
Comparison	M.48.6 Compare sets of 1-5 objects using a visual matching or counting strategy and describing the comparison as more, less than or the same	M.60.6 Compare sets of up to 10 objects using a visual matching or counting strategy and describing the comparison as more, less than or the same	K.CC.6. Identify whether the number of objects in one group is greater than, less than, or equal to the number of objects in another group, e.g., by using matching and counting strategies*  (* Include groups with up to ten objects)  K.CC.7. Compare two numbers between 1 and 10 presented as written numerals

Strand B: U	nderstand and describe re	lationships to solve proble	ns (operations and algebraic thinking)
Number Operations	M.48.7 Understand that adding to (or taking away) one or more objects from a group will increase or decrease the objects in the group	M.60.7 Use real-world situations and concrete objects to model and solve addition (e.g., putting together) and subtraction (e.g., taking away) problems up through 5	K.NBT.1. Compose and decompose numbers from 11 to 19 into ten ones and some further ones, e.g., by using objects or drawings, and record each composition or decomposition by a drawing or equation (e.g., 18 = 10 + 8); understand that these numbers are composed by ten ones and one, two, three, four, five, six, seven, eight, or nine ones  K.OA.1. Represent addition and subtraction with objects, fingers, mental images, drawings*, sounds (e.g., claps), acting out situations, verbal explanations, expressions, or equations  *Drawings need not show details, but should show the mathematics in the problem (This applies wherever
		M.60.8 Recognize and describe parts contained in larger numbers by composing number combinations up to at least five (e.g., recognize how many have been secretly taken away from a group of five objects)	drawings are mentioned in the Standards.)  K.OA.2. Solve addition and subtraction word problems, and add and subtract within 10, e.g., by using objects or drawings to represent the problem  K.OA.3. Decompose numbers less than or equal to 10 into pairs in more than one way, e.g., by using objects or drawings, and record each decomposition by a drawing or equation (e.g., 5 = 2 + 3 and 5 = 4 + 1)  K.OA.4. For any number from 1 to 9, find the number that makes 10 when added to the given number, e.g., by using objects or drawings, and record the answer with a drawing or equation  K.OA.5. Fluently add and subtract within 5
Strand C: U	nderstand the attributes ar	nd relative properties of obj	ects (measurement and data)
Measurement	M.48.8 Recognize measurable attribute of an object such as length, weight or capacity	M.60.9 Compare the measurable attributes of two or more objects (e.g., length, weight and capacity) and describe the comparison using appropriate vocabulary (e.g., longer, shorter, same length, heavier, lighter, same weight, holds more, holds less, holds the same amount)  M.60.10 Begin to use strategies to determine measurable attributes (length or capacity of objects). May use comparison, standard or non-standard measurement tools	K.MD.1. Describe measurable attributes of objects, such as length or weight. Describe several measurable attributes of a single object K.MD.2 Directly compare two objects with a measurable attribute in common, to see which object has "more of"/"less of" the attribute, and describe the difference. For example, directly compare the heights of two children and describe one child as taller/shorter
Data	M.48.9 Sort objects into two groups, counts and compares the quantity of the groups formed (e.g., indicates which is more)	M. 60.11 Represent data using a concrete object or picture graph according to one attribute	
Sorting and Classifying	M.48.10 Sort and classify objects by one attribute into two or more groups (e.g., color, size, shape)	M.60.12 Sort and classify a set of objects on the basis of one attribute independently and describe the sorting rule. Can re-sort and classify the same set of objects based on a different attribute	K.MD.3. Classify objects into given categories; count the numbers of objects in each category and sort the categories by\ count **  ** Limit category counts to be less than or equal to 10

Strand D: U	Strand D: Understand shapes and spatial relationships (geometry and spatial sense)			
Spatial Relationships	M.48.11 Use positional vocabulary (e.g., up/down, in/out, on/off, under) to identify and describe the location of an object	M.60.13 Use relational vocabulary of proximity (e.g., beside, next to, between, above, below, over and under) to identify and describe the location of an object	K.G.1. Describe objects in the environment using names of shapes, and describe the relative positions of these objects using terms such as above, below, beside, in front of, behind, and next to K.G.2. Correctly name shapes regardless of their orientations or overall size K.G.3. Identify shapes as two-dimensional (lying in a	
Identifying Shapes	M.48.12 Identify 2- dimensional shapes (starting with familiar shapes such as circle and triangle) in different orientations and sizes	M.60.14 Identify and describe a variety of 2- dimensional and 3- dimensional shapes with mathematical names (e.g., ball/sphere, box/rectangular prism, can/cylinder) regardless of orientation and size	plane, "flat") or three-dimensional ("solid")  K.G.4. Analyze and compare two- and three-dimensional shapes, in different sizes and orientations, using informal language to describe their similarities, differences, parts (e.g., number of sides and vertices/"corners") and other attributes (e.g., having sides of equal length)	
Composing Shapes	M.48.13 Combine two or more shapes to create a new shape or to represent an object in the environment	M.60.15 Complete a shape puzzle or a new figure by putting multiple shapes together with purpose	K.G.5. Model shapes in the world by building shapes from components (e.g., sticks and clay balls) and drawing shapes K.G.6. Compose simple shapes to form larger shapes. For example, "Can you join these two triangles with full sides touching to make a rectangle?"	



## Appendix C: Connecticut Early Learning and Development Standards (CT ELDS)

#### **Development Process**

Early learning and development standards are statements of what children from birth to age five should know and be able to do at various ages across their earliest years of development. These learning progressions serve as guides for the adults who support children's growth and development over time, providing a basis for planning experiences and providing support through the early childhood years. The Connecticut Early Learning and Development Standards (CT ELDS) will serve as the foundation for supporting ALL young children, no matter where they live, play and learn.

The Governor's Early Childhood Education Cabinet, along with the Connecticut State Department of Education (CSDE) and the newly formed Office of Early Childhood, has devoted significant fiscal and human resources to creating rigorous and developmentally appropriate early learning and development standards. This process has taken place over the course of 2 ½ years, with development completed in October 2013.

#### **Background Work**

As a part of Connecticut's 2009 application for American Recovery and Reinvestment Act funds for Head Start State Advisory Councils, early learning standards were identified as a priority area. The goal for this priority area was: By September 2013, Connecticut will adopt comprehensive and multi-domain early learning standards that reflect a progression of skills, birth through age five, aligned with kindergarten through grade 12 standards. A workgroup to address this goal was selected with the intention of ensuring wide, cross-sector input. The first meeting of the Learning Standards Workgroup was convened on June 22, 2011, and included representatives from the Connecticut Early Childhood Education Cabinet, the Connecticut

Department of Education, Head Start, higher education, early intervention, the Regional Education Service Centers, home care provider networks, public schools and the state chapter of the National Association for the Education of Young Children. A full list of workgroup members and their affiliations can be found in Appendix D.

The Learning Standards Workgroup relied heavily upon two guiding documents to inform the process of standards development:

- The Joint Position Statement of the National Association for the Education of Young Children (NAEYC) and the National Association of Early Childhood Specialists in State Departments of Education (NAECS/ SDE): Early Learning Standards: Creating the Conditions for Success (NAEYC, 2012)
- Early Learning Guidelines Resource: Recommendations and Issues for Consideration When Writing or Revising Early Learning Guidelines (Scott-Little, Kagan, & Frelow, 2010)

In order to provide a strong background for members, the workgroup reviewed both current Connecticut documents and other state and national sets of early learning standards. After members had an opportunity to explore specific characteristics of these valuable documents, the group began addressing the various issues set forth by Scott-Little, Kagan & Frelow (2010) including: guiding principles, age ranges and groupings, domains and subject areas and the structure of the standards.

In the fall of 2011, shortly after the workgroup began this process, the United States Department of Education released its Race to the Top Early Learning Challenge application. Connecticut opted to address early learning and development standards as a key strategy under Focused Investment Area C of the Early Learning Challenge. The efforts of the



Standards Workgroup were coordinated with the Connecticut Leadership Team for the Race to the Top application and a detailed plan was developed for the learning standards work. Although funding was not granted to Connecticut, the plan outlined in the application served as a guide for the continued work of the Standards Workgroup.

The specific steps in the development process are outlined below. These efforts involved many local and national experts, in addition to the contribution of the Standards Workgroup members. A full listing of those who contributed to the various stages of this work is included in Appendix E.

#### **Alignment and Gap Analysis**

The first critical step in creating new learning standards was a detailed and thorough alignment and gap analysis of Connecticut's current learning standards. The workgroup chose to draw upon existing documents as much as possible, both in an effort to ease the transition to new learning standards and to effectively capitalize on previous investments and resources used in creating standards documents. Determining the existing alignments of standards and identifying gaps involves intensive consideration of documents, which often have very different structure and language. Below is a list of the various alignment

projects conducted. The information gathered through this work was integral to the development of the first draft of the CT ELDS.

- Comparison of Common Core State Standards and Connecticut's preschool standards (the Connecticut Preschool Curriculum Framework): this process involved CSDE consultants as well as outside local experts in the area of Mathematics and English Language Arts. The alignment between documents was examined and a crosswalk document, including guidance for practice, was issued.
- Comparison of Connecticut's preschool standards (the Connecticut Preschool Curriculum Framework) and the Head Start Child Development and Early Learning Framework: the CSDE and the Connecticut Head Start Association engaged in an intensive and collaborative process to determine the alignments and gaps between these two documents. This process involved rating the degree of matches found, a cross check for agreement on the matches and the reconciliation of any discrepancies. The completion of this work resulted in the report: Crosswalk between the Head Start Child Development and Early Learning Framework

- and the Connecticut Preschool Curriculum and Assessment Frameworks (Connecticut Head Start Association, 2012).
- SRI International's Standards Alignment Study. This study included the following documents: Connecticut's Preschool Curriculum Framework, Connecticut's Kindergarten Science Curriculum Standards, Connecticut's Kindergarten Social Studies Framework and the Connecticut Guidelines for the Development of Infant and Toddler Early Learning. A full report dated May 30, 2012, detailed the process and outcomes of this study (Hebbeler and Taylor, 2012).

#### **Drafting New Standards**

On June 25 and 26, 2013, groups of experts in each of the identified domains were gathered to create a first draft based upon the structure outlined by the Learning Standards Workgroup. Each group utilized the information from the alignment and gap analysis studies, additional resources and research (including other state standards documents, K-12 standards and research) and crafted an initial draft of new birth-to-five standards across seven age bands.

This initial draft was reviewed by multiple experts throughout the state for further refinement in July and August of 2012. These reviewers considered the initial draft of the CT ELDS from one of several perspectives:

- · Domain-specific feedback, including:
  - Breadth, depth and relative difficulty of skills addressed
  - The age appropriateness of the indicators
  - The placement of the indicators within the domain
  - The wording of the indicators
- The cultural relevancy of the indicators for diverse populations

- The appropriateness of the indicators for children who are dual-language learners
- The appropriateness of the indicators for children with special needs

Finally, EASTCONN, the acting fiduciary of the Connecticut Early Childhood Education Cabinet, worked with CSDE to synthesize the input and make revisions based upon the expert input. This resulted in the draft CT ELDS.

#### **Content Validation**

The Standards Workgroup decided to adhere to the recommended practices for standards development set forth by Scott-Little, Kagan & Frelow (2010). Requests for Proposal were issued for both a Content Validation Study and an Age Validation Study. The review of the proposals submitted resulted in the recognition that additional funding would be necessary to support a methodologically sound age validation study. However, as a result of the RFP process, the Connecticut Early Childhood Education Cabinet entered into a contract with the National Association for the Education of Young Children to conduct a Content Validation Study. This study involved gathering feedback from national experts as to whether the skills, knowledge and dispositions in the Connecticut Early Learning and Development Standards reflect critical, comprehensive goals and a continuum of growth and development. This study was completed in September 2013 and revisions to the draft standards were made as a result of this report (Snow, 2013).

The Content Validation Study contributed greatly to the robust and thorough process Connecticut engaged in to create the Connecticut Early Learning and Development Standards, thereby ensuring that our efforts to support *All Children*, *In All Settings*, *Every Year*, are based on the strongest of foundations: sound early learning and development standards.

## Appendix D: Connecticut Early Childhood Education Cabinet: Early Learning Standards Workgroup

Co-Chair: Harriet Feldlaufer	Chief, Bureau of Teaching & Learning, Connecticut State Department of Education
Co-Chair: Dina Anselmi	Co-director, Trinity College Center for Teaching & Learning and Associate Professor of Psychology
Elizabeth Ann Aschenbrenner	Director of Early Childhood Initiatives, EASTCONN
Andrea Brinnel	Consultant, Connecticut State Department of Education
Marcia Elliott	Principal, West Stafford School
Amparo Garcia	Lead Planning Analyst, Department of Education
Kristi Leutjen	Teacher, Whiting Lane School, West Hartford
Michelle Levy	Consultant, Connecticut State Department of Education
Sherry Linton-Massiah	Project Director, Early Childhood Education Cabinet
David Morgan	Chair, CT Head Start Association & Director, TEAM, Inc.
Kathryn O'Connor	Director, Connecticut College Children's Program
Karen Rainville	Executive Director, CAEYC & Co-Chair, EC Alliance
Jane Rothschild	SLC, HARC Stepping Stones
Carmelita Valencia-Daye	Professor, Gateway Community College
Janna Wagner	Chief Knowledge & Learning Officer, All Our Kin

## Appendix E: Standards Alignment, Drafting and Revision Process Participants

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Kari Baransky	Meriden BOE
Amanda Bartone	Ansonia Public Schools
Katherine Benard	Branford Public Schools
Ellen Benham	Bristol Public Schools
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Nancy Blackwell-Todd	New Haven Public Schools
Lori Blake	
Rebecca Breen	East Hartford Public Schools Birth-To-Three Program
Colleen Brower	Connecticut Charts-a-Course
Mary Budrawich	Early Childhood Consultant
	Connecticut State Department of Education
Marilyn Calderon	Connecticut Parent Power
	Hartford Area Childcare Collaborative/Middlesex County Early Head Start
	Partnerships
Suzanne Clement	Cooperative Educational Services,
Julie Coakley	Cooperative Educational Services
Kristen Cool	Windsor Locks Public Schools
Jane Crowell	City of Hartford
Angela Crowley	Yale University School of Nursing
Joanne Cunard	
	The A.J. Pappanikou Center for Excellence in Developmental Disabilities
	Accreditation Facilitation Project
Anita Deschenes-Desmond	Capital Region Education Council (CREC)
Shawn Marie-Dummond	Education Connection
Jen Fagan	Bloomfield Public Schools
Karen Feder	
Sandy Fowler	Accreditation Facilitation Project
Irene Garneau	Wintonbury Early Childhood Magnet School
Kathy Gavin	Goodwin College
Anne Giordiano	Education Connection
Erica Gittleman	Easter Seals
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Margaret Holmberg	Connecticut Association for Infant Mental Health
Cindy Jackson	
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### Standards Alignment, Drafting and Revision Process Participants (continued)

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### Notes







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#9

## CONNECTICUT STATE DEPARTMENT OF EDUCATION Career and Technical Education (CTE)

#### Carl D. Perkins Continuous Improvement Plan Completion Forms Secondary and Postsecondary Education 2015-16

Carl D. Perkins Career and Technical Education Improvement Act of 2006 Public Law 109-270

Due: May 15, 2015

Academic Office Connecticut State Department of Education Hartford, Connecticut



#### Carl D. Perkins Grant Secondary Continuous Improvement Plan

Per Section 123 of the Carl D. Perkins Career and Technical Improvement Act of 2006, the state is responsible to monitor and hold accountable all grant recipients for performance on all of the core indicators. Section 123 requires implementation of program improvement plans which address failure of eligible agencies to meet the state adjusted performance levels of any of the core indicators of performance. The section also references consequence when there is failure to make substantial progress to meet the purpose of the Act or to implement responsibilities under the Act.

Listed below are the academic performance targets utilized for Perkins and the No Child Left Behind (NCLB) Act. Below are the levels negotiated with the U.S. Department of Education through 2014.

#### Academic Core Indicator Performance Targets for Secondary Schools

	State Res	ponse and State Activiti	es for Meeting Sta	ndards
	]	Reading	Mathematics	
		Suggested Annual	Suggested Annua	
	AYP Level	Targets	AYP Level	Targets
2002-03	62%	62%	59%	59%
2003-04	02.70	65%	39%	62%
2004-05		72%		69%
2005-06	72%	75%	69%	73%
2006-07		78%		76%
2007-08		81%		80%
2008-09	81%	84%	80%	83%
2009-10		88%		87%
2010-11		91%		90%
2011-12	91%	96%	90%	95%
2012-13		99%		98%
2013-14	100%	100%	100%	100%
2014-15				

To continue funding for FY 2015-16, each district/community college is required to complete a Continuous Improvement Plan (CIP) for the incremental improvement of all CTE career clusters/areas of concentration and the core indicators where performance levels for 2014-15 were **not** met. In addition, each district/community college must modify or complete a plan to show enhancement to the existing Perkins Five-Year Plan under the expansion section located on page 3. Continuous Improvement Plan Templates on Pages 4-8 relate to secondary programs only.

Instructions to complete the CIP are located on the Connecticut State Department of Education (CSDE) Web site at <a href="http://www.sde.ct.gov/sde/cwp/view.asp?a=2678&q=320802&sdePNavCtr=#45488">http://www.sde.ct.gov/sde/cwp/view.asp?a=2678&q=320802&sdePNavCtr=#45488</a>, titled Continuous Improvement Plan Guide. Each district/community college must submit the CIP and proposals, irrespective of means of transmittal or postmark date, by 4:30 p.m. on Friday, May 15, 2015. Proposals submitted become the property of the CSDE and a part of the public domain. One original and one copy of all sections of the grant with original signatures, including the ED 114 and budget narrative, must be mailed or delivered to Lori Matyjas to the address below.

Mailing Address	Delivery Address
Lori Matyjas, Program Manager	Lori Matyjas, Program Manager
Connecticut State Department of Education	Connecticut State Department of Education
Academic Office	Academic Office
P.O. Box 2219, Hartford, CT 06145	165 Capitol Avenue, Room #215, Hartford, CT 06106

#### Cover Sheet

Grantee: Waterbury Public Schools

(District or Community College)

Contact: Louise A. Brown

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Phone: 203-346-3506

Continuous Improvement Team (identify district/community college team leader):

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Crosby: Jade L. Gopie Kennedy: Robert Johnston

Waterbury Career Academy: Dr. Louis A. Padua

Wilby: Michele Buerkle

Teachers:

Crosby: Wanda Faucher (Allied Health), Wanda Casey (Business Dept. Chair/CTE Test Admin.).

Kirk Palladino (FCS), Paul Gwiazdoski (Tech Ed Dept. Chair)

Kennedy: Pamela O'Connor (Allied Health), Jeff Lucian (Business Dept. Chair/CTE Test Admin.),

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Waterbury Career Academy: Linda Richard (Allied Health/CTE Test Admin.). Amanda Strigwolt (FCS), Jose Ferreira (Infor. Tech.), Michael Retano (Manufacturing) Wilby: Lynn Palleria (Business Dept. Chair), Jeremy Rubock (Tech Ed Dept. Chair),

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CIPs attached for the following career cluster/areas of concentration-assessment/clusters:

AI	eas of Concentration (Secondary)	Car	eer Clusters (Secondary and Postsecondary)
X	Accounting		Agriculture and Natural Resources
	Agriculture Mechanics	X	Arts, Audio Video Tech, and Communication
	Animal Science		Services
	Aquaculture and Marine-Related Technologies	X	Business and Administrative Services
X	Automotive Technology	X	Construction
X	Business Management	X	Education and Training services
X	Certified Nursing Assistant (CNA)	X	Financial Services
X	Computer Aided Drafting and Design	X	Health Services
X	Computer Information Systems	X	Human Services
X	Cooperative Work Education (CWE)	X	Hospitality and Tourism
X	Culinary and Food Production	X	Information Technology Telecom Services
X	Digital Video Production Systems		Legal and Protective Services
X	Early Childhood Education and Services	X	Manufacturing
X	Marketing Education		Public Administration/Government Services
X	Medical Careers Education	X	Scientific Research Engineering and Technical
	Natural Resources and Environmental Science		Services
	Nutrition, Food Production	X	Transportation, Distribution and Logistics Services
	Personal Finance	X	Wholesale/Retail Sales and Services
X	Plant Science		
X	Engineering Technology		
X	Textiles & Design		
X	Wood Technology		
	Non-assessed career pathway:		

#### Carl D. Perkins Grant Secondary/Postsecondary Continuous Improvement Plan

#### PERKINS GRANT SUMMARY

Please provide a brief summary of your school district's/college's plan for career & technical education improvement 2015-16, including the use Perkins grant funds. You may provide a bulleted or a narrative summary of the plan for improvement. Be sure to include information on specific areas of focus, improvement or innovation.

Local plans will be evaluated based upon core indicator performance levels. Plans must target funds to:

- address specific strategies for improvement
- assure that the program is such size, scope and quality to improve the quality of career and technical education. If the local recipient fails to meet at least 90 percent of an agreed upon performance level for any of the indicators of performance, it will have to develop and implement an improvement plan.

The State may, after an opportunity for a hearing, withhold all or part of a local recipient's funding if the local meets any one of the three criteria below:

- Fails to implement the required improvement plan.
- Makes no improvement within one year of implementing the improvement plan.
- Fails to meet at least 90 percent of a performance for the same performance indicator three years in a row.

#### Waterbury Public Schools proposes to improve career and technical education in all areas of concentration by:

- Creating and filling the position of district CTE Coordinator to lead, organize, and support CTE instruction at the district level.
- <u>Increasing building-based CTE oversight by principals, and their designees. Increasing collaboration among building-based CTE leaders and district level CTE Coordinator.</u>
- Analyzing CTE Core Indicator Performance Levels for recent years to identify areas of need for curricular and/or instructional improvements. (CTE Coordinator and building-based CTE leaders)
- Following Curricula Revision Calendar established by the district in Spring 2015 to review and revise specific CTE courses on a prescribed timeline.
- Aligning curriculum and instruction in CTE courses to the CTE Standards and Competencies (2015 Edition & Common Core State Standards).
- Promoting teacher identification of CTE skill competencies in lesson plans.
- Increasing standardization of CTE courses among the four high schools.
- Providing/supporting professional development (PD) opportunities for CTE teachers related to both academics and technical skill attainment based upon CTE Standards and Competencies (2015 Edition & Common Core State Standards).

0	Continuing to increase CTE courses available at the Waterbury Career Academy, with the addition of
	grade 11 students in 2015-16.

- Enhancing marketing of CTE offerings to attract additional concentrators.
- Reviewing CTE course content for the purpose of identifying routes to concentration that may not have been previously identified.
- Upgrading technology and instructional supplies in all CTE areas.
- Providing equipment and supplies that enhance experiential learning in the CTE areas.
- Continuing to develop/support articulations in CTE areas with Naugatuck Valley Community College, and/or other post-secondary institutions.

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## CAREER & TECHNICAL EDUCATION COURSE INFORMATION CHART

Please list <u>all</u> Career & Technical Education courses offered in your district by secondary school.

Name of Secondary School: Crosby High School

Career Cluster/Area of Concentration Alignment For all CTE courses, if applicable, specify the area of concentration that the course is aligned that includes the instruction of the competencies of the 2015 Connecticut Performance Standards and Competencies (PS&C).	Title of CTE Course	2014-15 Enrollment What was the approximate total enrollment for this course, including all sections?
Arts, Audio Video Tech, and Comm. Services/Video	Video Production I	54
Production Systems	Video Production II	11
Business & Admin. Services/Accounting	Accounting 1	9
Business & Admin. Services/Business Management	Business Law	9
Architecture and Construction/Computer Aided	Mechanical CAD I	27
Drafting and Design	Mechanical CAD II	9
	Architectural CAD I	10
	Architectural CAD II	8
Architecture and Construction/Wood Technology	Construction I	56
	Construction II	12
	Advanced Construction	2
Education and Training Services/Early Childhood	Early Childhood I	62
Education and Services	Early Childhood II	20
Financial Services/Personal Finance	Personal Finance	25
Health Services/Medical Careers Education &	Allied Health I	13
Certified Nurse Assisting (CNA)	Allied Health II	12
Human Services/Early Childhood Education and		
Services		
Hospitality & Tourism/Nutrition and Food	Foods I	146
Production	Advanced Foods	66
	Advanced Foods II	16
Hospitality & Tourism/Culinary and Food	Culinary I	36
Production	Culinary II	43

Hospitality & Tourism/Marketing Education	Marketing I	34
	Marketing II	6
	Entrepreneurship	15
Info. Tech. Telecom Services/Computer Information	Microsoft Word/Multimedia	202
Systems	Databases	57
	Computers II	11
Manufacturing/Computer Aided Drafting and Design		
Scientific Research, Engr. and Tech Services/Pre-	Intro to Engineering Design	proj
Engineering Technology	Principles of Engineering	6
	Manufacturing	15
Transportation, Dist. and Logistics	Auto Tech I	44
Services/Automotive Technology	Auto Tech II	17
	Advanced Auto Tech	16
Wholesale/Retail Sales and Services/Marketing	Marketing I	34
Education	Marketing II	6
Wholesale/Retail Sales and Services/Textiles and	Clothing I	30
Design	Advanced Clothing	7
	Fashion Design	3

## CAREER & TECHNICAL EDUCATION COURSE INFORMATION CHART

Please list <u>all</u> Career & Technical Education courses offered in your district by secondary school.

Name of Secondary School: Kennedy High School

Career Cluster/Area of Concentration Alignment For all CTE courses, if applicable, specify the area of concentration that the course is aligned that includes the instruction of the competencies of the 2015	Title of CTE Course	2014-15 Enrollment What was the approximate total enrollment for this course, including all sections?
Connecticut Performance Standards and Competencies (PS&C).		course, metading an sections.
Arts, Audio Video Tech, and Comm. Services/Video	Video Production I	55
<b>Production Systems</b>	Video Production II	16
	Graphic Communication I	108
	Graphic Communication II	8
Business & Admin. Services/Accounting	Accounting I	14
	Accounting II	0
Business & Admin. Services/Business Management	Introduction to Business	8
	Business Law	22
Architecture and Construction/Computer Aided	Arch CAD I	39
Drafting and Design	Arch CAD II	5
	Technical Drafting	33
Architecture and Construction/Wood Technology	Construction I	73
	Construction II	16
Education and Training Services/Early Childhood	Early Childhood Education	52
<b>Education and Services</b>	Early Childhood Education II	7
Financial Services/Personal Finance	Personal Finance	30
	Personal Finance II	10
Health Services/Medical Careers Education &	Allied Health I	12
Certified Nurse Assisting (CNA)	Allied Health II	13
Human Services/Early Childhood Education and	Child Development I	111
Services	Child Development II	16
Hospitality & Tourism/Nutrition and Food Production		

Hospitality & Tourism/Culinary and Food		
Production		
Hospitality & Tourism/Marketing Education	Marketing I	18
_	Marketing II	1
Info. Tech. Telecom Services/Computer Information	Multi Media	230
Systems	Office Word	222
	Spreadsheets	71
	Databases	76
	Communications	34
Manufacturing/Computer Aided Drafting and		
Design		
Scientific Research, Engr. and Tech Services/Pre-	Engineering Mechanical CAD I	12
Engineering Technology	Engineering Mechanical CAD II	0
	Electronics	34
	Principles of Technology	15
Transportation, Dist. and Logistics	Automotive I	0
Services/Automotive Technology	Automotive II	0
Wholesale/Retail Sales and Services/Marketing		
Education		
Wholesale/Retail Sales and Services/Textiles and	Clothing	44
Design	Advanced Clothing	15
	Fashion Design	2

## CAREER & TECHNICAL EDUCATION COURSE INFORMATION CHART

Please list all Career & Technical Education courses offered in your district by secondary school.

Name of Secondary School: Waterbury Career Academy (2014-15, grades 9 & 10 only, 2015-16 grades 9, 10 & 11)

Career Cluster/Area of Concentration Alignment For all CTE courses, if applicable, specify the area of concentration that the course is aligned that includes the instruction of the competencies of the 2015 Connecticut Performance Standards and Competencies (PS&C).	Title of CTE Course	2014-15 Enrollment What was the approximate total enrollment for this course, including all sections?
Arts, Audio Video Tech, and Comm. Services/Video Production Systems		
Business & Admin. Services/Accounting		
Business & Admin. Services/Business Management		
Architecture and Construction/Computer Aided Drafting and Design	Mechanical CAD 1	76
Architecture and Construction/Wood Technology		
Education and Training Services/Early Childhood Education and Services	Early Childhood Education I	60
Financial Services/Personal Finance		
Health Services/Medical Careers Education & Certified Nurse Assisting (CNA)	Foundations in Health Science and Technology	58
Human Services/Early Childhood Education and Services		
Hospitality & Tourism/Nutrition and Food Production		
Hospitality & Tourism/Culinary and Food Production		
Hospitality & Tourism/Marketing Education		
Info. Tech. Telecom Services/Computer Information	Introduction to Computers 1	41
Systems	Graphic Design	29
Manufacturing/Computer Aided Drafting and Design		

Scientific Research, Engr. and Tech Services/Pre-	
Engineering Technology	
Transportation, Dist. and Logistics	
Services/Automotive Technology	
Wholesale/Retail Sales and Services/Marketing	
Education	
Wholesale/Retail Sales and Services/Textiles and	
Design	

## CAREER & TECHNICAL EDUCATION COURSE INFORMATION CHART

Please list all Career & Technical Education courses offered in your district by secondary school.

Name of Secondary School: Wilby High School

Career Cluster/Area of Concentration Alignment	Title of CTE Course	2014-15 Enrollment
For all CTE courses, if applicable, specify the area of		What was the approximate
concentration that the course is aligned that includes		total enrollment for this
the instruction of the competencies of the 2015		course, including all sections?
Connecticut Performance Standards and Competencies		_
(PS&C).		
Arts, Audio Video Tech, and Comm. Services/Video	Video Production	33
Production Systems	Graphic Technology	35
Business & Admin. Services/Accounting	Accounting	7
Business & Admin. Services/Business Management	Introduction to Business	14
	Entrepreneurship	16
	MS Office Multi-Media	231
	Word Processing I	21
	Word Processing II	12
	Databases	18
	Business Law	8
Architecture and Construction/Computer Aided	Architectural CAD	18
Drafting and Design	Intro to Drafting & CAD	7
	Principles of Technology	60
Architecture and Construction/Wood Technology	Construction	81
	Advanced Construction	28
<b>Education and Training Services/Early Childhood</b>		
<b>Education and Services</b>		
Financial Services/Personal Finance	Personal Finance	68
	Personal Finance II	13
Health Services/Medical Careers Education &	Allied Health I	15
Certified Nurse Assisting (CNA)	Allied Health II	15
Human Services/Early Childhood Education and	Child Development	36
Services	Child Development II	16

Hospitality & Tourism/Nutrition and Food	Foods I	68
Production		
Hospitality & Tourism/Culinary and Food	Culinary Arts	44
Production	Culinary Arts II	24
Hospitality & Tourism/Marketing Education	Marketing	28
Info. Tech. Telecom Services/Computer Information	Cisco Networking	5
Systems	Technology of Computers I	18
	Technology of Computers II	12
	Electronics	29
	Computer Technology II	15
Manufacturing/Computer Aided Drafting and		
Design		
Scientific Research, Engr. and Tech Services/Pre-	Engineering Design	47
Engineering Technology		
Transportation, Dist. and Logistics	Power Technology (Automotive Services)	34
Services/Automotive Technology	Auto Technology	31
	Advanced Auto Technology	13
Wholesale/Retail Sales and Services/Marketing		
Education		
Wholesale/Retail Sales and Services/Textiles and	Clothing I	61
Design	Advanced Clothing	34

# Carl D. Perkins IV

# CAREER & TECHNICAL EDUCATION TEACHERS AND CERTIFICATION INFORMATION CHART

Please list all CTE teacher's certification and e-mail address.

Name of Secondary School: Crosby High School

Name of CTE Teacher	Education Certification	CTE COURSES TAUGHT	E-mail Address
	Endorsements	List all CTE courses taught by this teacher.	of teacher
	List by endorsement number(s)		
	the certification(s) that this		
	teacher currently holds.		
Ana Ramos	010, 089, 092	Accounting I, Microsoft Word/Multimedia	aramos@waterbury.k12.ct.us
Catherine Ieronimo	010, 089	Computers II, Spreadsheets/Databases	cieronimo@waterbury.k12.ct.us
David Jurewicz	047, 092	Mechanical CAD, Video Production	djurewicz@waterbury.k12.ct.us
Diane Forte	013, 010	Microsoft Word/Multimedia	dforte@waterbury.k12.ct.us
Francis Dabbo	Long term substitute - no longer certified	Automotive Tech I & II, Advanced Auto	fdabbo@waterbury.k12.ct.us
Janet Wilson	046	Advanced Foods I & II, Advanced	jwilson@waterbury.k12.ct.us
		Clothing	
Jeanne Bissonnette	047	Architectural CAD, Mechanical CAD,	jbissonnette@waterbury.k12.ct.us
		Graphic Communication	
Joanna Crudele	010, 029, 092	Microsoft Word/Multimedia	jcrudele@waterbury.k12.ct.us
John Alfredson	047	Video Production I & II	jalfredson@waterbury.k12.ct.us
John Dillon	085, 089, 090	Entrepreneurship, Marketing I & II,	jdillon@waterbury.k12.ct.us
		Personal Finance	
Kevin Buda	047, 090	Electronics I & II, Technology of	kbuda@waterbury.k12.ct.us
		Computers	1
Kevin Sudell	098	Construction I & II(Wood Technology),	ksudell@waterbury.k12.ct.us
		Advanced Wood	
Kirk Palladino	090, 098	Culinary I & II	kpalladino@waterbury.k12.ct.us
Leah Pygatt	045	Child Development I & II	lpygatt@waterbury.k12.ct.us
Margaret Frigon	103	Allied Health I & II	mfrigon@waterbury.k12.ct.us
Maria Golightly	010, 026, 106, 107	Microsoft Word/Multimedia, Business	mgolightly@waterbury.k12.ct.us
		Law	
Michele Lucas	045	Clothing I, Foods I, Advanced Foods I	mlucas@waterbury.k12.ct.us

Paul Gwiazdoski	047, 092	Graphics Communication, Intro to Engineering, Advanced Graphic Communication	pgwiazdoski@waterbury.k12.ct.us
Paula DeSantis	013, 045	Foods I	pdesantis@waterbury.k12.ct.us
Wanda Casey	010, 092	Microsoft Word/Multimedia	wcasey@waterbury.k12.ct.us
Wanda Faucher	103, 108, 109	Allied Health I & II	wfaucher@waterbury.k12.ct.us

### SECONDARY Continuous Improvement Plan Templates: 2015-16 Carl D. Perkins IV

# CAREER & TECHNICAL EDUCATION TEACHERS AND CERTIFICATION INFORMATION CHART

Please list <u>all</u> CTE teachers for all CTE courses offered in your school district by school. Include each CTE teacher's certification and e-mail address.

Name of Secondary School: Kennedy High School

Name of CTE Teacher	Education Certification	CTE COURSES TAUGHT	E-mail Address
	Endorsements	List all CTE courses taught by this teacher.	of teacher
	List by endorsement number(s)	(1) (2) (1) (2) (3) (4) (4) (4) (4) (4) (4) (4) (4) (4) (4	
	the certification(s) that this		
	teacher currently holds.		
Barbara Marcucio	046 (retiring June 2015)	Child Development I, II, Adv. Child Dev.	bmarcucio@waterbury.k12.ct.us
Cassandra Fann-Pierce	045	Child Development I, Advanced Clothing,	cfannpierce@waterbury.k12.ct.us
		Fashion Design, Child Dev.	
Donald Mancuso	135, 047, 092	Arch. CAD I, II, Graphic Communication I,	dmancuso@waterbury.k12.ct.us
	50° 200	Communications	
Doreen Kinney	001, 010 (retiring June 2015)	Intro to Business, Multi Media, Office Word	dkinney@waterbury.k12.ct.us
Edward Distefano	047 (retiring June 2015)	Electronics I, Graphic Communication I,	edistefano@waterbury.k12.ct.us
		Technical Drafting	
Jeanne Sasso	010, 013, 092	Accounting I & II, Multi Media, Office	jsasso@waterbury.k12.ct.us
		Word	
Jeffrey Lucian	010, 013, 092	Spreadsheets, Databases	jlucian@waterbury.k12.ct.us
Kenneth Ludwig	035, 047, 092	Mechanical CAD I, Graphic	kludwig@waterbury.k12.ct.us
922*0	307 600	Communication I, Principles of Tech.	
Kevin Danaher	047	Construction I & II	kdanaher@waterbury.k12.ct.us
Laura Graham	010	Business Law, Personal Finance I & II,	lgraham@waterbury.k12.ct.us
		Multi Media, Office Word	
Linda Miceli	103	Allied Health I	lmiceli@waterbury.k12.ct.us
Lorraine Langlais	001, 046	Early Childhood Educ. I, II -NVCC	llanglais@waterbury.k12.ct.us
Michael Conway	047, 098	Graphic Communication I & II, Video	mconway@waterbury.k12.ct.us
•	320	Production I & II	
Pamela O'Connor	103	Allied Health II	poconnor@waterbury.k12.ct.us
Pedro DosSantos	010, 013	Marketing I & II, Multi Media, Office	pdossantos@waterbury.k12.ct.us
	*	Word,	

# SECONDARY Continuous Improvement Plan Templates: 2015-16 Carl D. Perkins IV

# CAREER & TECHNICAL EDUCATION TEACHERS AND CERTIFICATION INFORMATION CHART

Please list <u>all</u> CTE teacher's certification and e-mail address.

Name of Secondary School: Waterbury Career Academy (2014-15, grades 9 & 10 only, 2015-16 grades 9, 10 & 11)

Name of CTE Teacher	Education Certification	CTE COURSES TAUGHT	E-mail Address
	Endorsements	List all CTE courses taught by this teacher.	of teacher
	List by endorsement number(s)		or touchor
	the certification(s) that this		
	teacher currently holds.		
David Nicholson	032	Information Technology	dnicholson@waterbury.k12.ct.us
Jessica Thompson	113	<b>Exploratory Human Services</b>	jthompson@waterbury.k12.ct.us
Jose Ferreira	047	<b>Exploratory Information Tech</b>	jferreira@waterbury.k12.ct.us
Katie Malvaso-Garcia	045	Early Childhood Education	kmalvaso@waterbury.k12.ct.us
Kenneth Sirois	047	Exploratory Manufacturing	ksirois@waterbury.k12.ct.us
Linda Richard	103, 108, 109	Foundations of Health	lrichard@waterbury.k12.ct.us
Lisa Durkin	103, 108, 109	Exploratory Health	ldurkin@waterbury.k12.ct.us
Michael Blasavage	042	Graphic Design	mblasavage@waterbury.k12.ct.us
Michael Retano	047	CAD I	mretano@waterbury.k12.ct.us

# SECONDARY Continuous Improvement Plan Templates: 2015-16 Carl D. Perkins IV

# CAREER & TECHNICAL EDUCATION TEACHERS AND CERTIFICATION INFORMATION CHART

Please list <u>all</u> CTE teacher's certification and e-mail address.

Name of Secondary School: Wilby High School

Name of CTE Teacher	<b>Education Certification</b>	CTE COURSES TAUGHT	E-mail Address
	Endorsements	List all CTE courses taught by this teacher.	of teacher
	List by endorsement number(s)		
	the certification(s) that this		
	teacher currently holds.		
Anita Watkins	045, 092	Clothing I, Advanced Clothing	awatkins@waterbury.k12.ct.us
Anthony D'Agostino	010, 106	MS Office Word, MS Office Multi Media,	adagostino@waterbury.k12.ct.us
2		Personal Finance, Yearbook Production,	
		Marketing I	
Anthony Mango	098	Culinary Arts I, Culinary Arts II	amango@waterbury.k12.ct.us
Brian Canney	010	Graphic Tech I, Computer Tech II,	bcanney@waterbury.k12.ct.us
		Spreadsheets/Databases, MS Office Word,	
		MS Office Multi Media	
Cesar Alvarez	006, 047, 068	Intro to Drafting and CAD, Principles of	calvarez@waterbury.k12.ct.us
	20 20	Tech., Arch. CAD	
Gene Capuano	010	MS Office Word, MS Office Multi Media,	gcapuano@waterbury.k12.ct.us
VI		Word Processing I	
James Battistrada	034, 047 (retiring June 2015)	Construction I, Construction II, Advanced	jbattistrada@waterbury.k12.ct.us
	100 Mari	Construction	
James Distasio	010	Intro to Business, MS Office Multi Media,	jdistasio@waterbury.k12.ct.us
		personal Finance	
Jason Segaci	042, 098	Transferring from WAMS to Wilby 15-16	jsegaci@waterbury.k12.ct.us
Jeremy Rubock	047, 092	Electronics, Tech. of Computers I, Cisco	jrubock@waterbury.k12.ct.us
	4907	Networking I, Graphic Tech I	
Joanne Tichon	046, 102, 092	Foods I, Child Development I, Child	jtichon@waterbury.k12.ct.us
	900 30	Development II	
Joyce Iannicelli	010	Accounting I, Business Law, MS Office	jiannicelli@waterbury.k12.ct.us
		Word, MS Office Multi Media	

Joyce Williams	072, 103	Allied Health I	jwilliams@waterbury.k12.ct.us
Lynne Palleria	002, 010, 089, 092	Foods I, Entrepreneurship, MS Office	lpalleria@waterbury.k12.ct.us
		Word, MS Office Multi Media, Finance II	
Nancy DiPaola	103, 104	Allied Health II, Allied Health Theory	ndipaola@waterbury.k12.ct.us
Steven Sudell	047, 090, 098, 091	Engineering Design, Principles of	ssudell@waterbury.k12.ct.us
		Technology, Video Production I	
Vincent Boucher	047	Advanced Auto Tech, Power Tech, Video	vboucher@waterbury.k12.ct.us
		Production I	37.

#### Carl D. Perkins IV

# CAREER & TECHNICAL EDUCATION CONCENTRATION & CONCENTRATORS

#### Overview

- 1. All secondary schools receiving Perkins funds must align their CTE courses with the Connecticut State Performance Standards and Competencies, if applicable, positioning all CTE courses to provide instruction in a portion, if not all, of the competencies in a specific area of concentration.
- 2. A concentrator is any student who has received instruction in all of the competencies of one of the 21 state recognized areas of concentration, identified in the Connecticut State Performance Standards and Competences (2015 version).
- 3. To receive Perkins funds, a secondary school must have:
  - At least one area of concentration that results in concentrators;
  - A minimum of ten (10) concentrators unless reasons preventing this minimum number are provided on this template; and
  - A plan for the continuous improvement of:
    - o concentrator scores (skill attainment) in the Connecticut Statewide CTE Assessment;
    - o the number of concentrators to be tested in 2016.

#### Instructions

Please complete the following concentration/concentrator template by secondary school.

Name of Secondary School: Crosby High School

2015 Areas of Concentration	Number of Concentrators in this area of concentration (students tested) 2014	Submit a brief description of your Continuous Improvement Plan, relative to Concentration/ Concentrators for one or more of the following goals:  Improve concentrator scores (skill attainment) in the Connecticut State-wide CTE Assessment; Increase the percentage of concentrators who meet or exceed the federally negotiated cut score of 65 percent; Increase the number of concentrators to be tested in 2016; or Add an additional area(s) of concentration in 2016.
Video Production Systems	18	
Accounting		
Business Management		
Computer Aided Drafting and Design		

Wood Technology	9	
Early Childhood Education and Services		
Personal Finance		
Medical Careers Education	11	
Certified Nurse Assisting (CNA)		
Nutrition and Food Production	72	
Culinary and Food Production		
Marketing Education		
Computer Information Systems	36	
Computer Aided Drafting and Design		
Pre-Engineering Technology		
Automotive Technology	10	
Marketing Education		
Textiles and Design	11	
For All Areas of Concentration		<ul> <li>Align instruction to CTE Performance Standards &amp; Competencies (2015 Edition &amp; Common Core State Standards)</li> <li>CTE Coordinator (District Level)</li> <li>provide leadership and support for CTE curriculum revision</li> <li>recommend appropriate professional development</li> <li>organize professional development for CTE teachers across the district to impact more teachers</li> <li>facilitate standardization of CTE instruction in the 4 high schools</li> <li>collaborate with guidance departments to market CTE courses and programs</li> <li>monitor CTE course enrollment and concentrator data</li> <li>review data team and common planning teams information pertaining to CTE courses</li> <li>Curricula Review and Revision Calendar</li> <li>Professional Development</li> <li>Technology Integration</li> </ul>

#### Carl D. Perkins IV

# CAREER & TECHNICAL EDUCATION CONCENTRATION & CONCENTRATORS

#### Overview

- 1. All secondary schools receiving Perkins funds must align their CTE courses with the Connecticut State Performance Standards and Competencies, if applicable, positioning all CTE courses to provide instruction in a portion, if not all, of the competencies in a specific area of concentration.
- 2. A concentrator is any student who has received instruction in all of the competencies of one of the 21 state recognized areas of concentration, identified in the Connecticut State Performance Standards and Competences (2015 version).
- 3. To receive Perkins funds, a secondary school must have:
  - At least one area of concentration that results in concentrators;
  - A minimum of ten (10) concentrators unless reasons preventing this minimum number are provided on this template; and
  - A plan for the continuous improvement of:
    - o concentrator scores (skill attainment) in the Connecticut Statewide CTE Assessment;
    - o the number of concentrators to be tested in 2016.

#### Instructions

Please complete the following concentration/concentrator template by secondary school.

Name of Secondary School: Kennedy High School

2015 Areas of Concentration	Number of Concentrators in this area of concentration (students tested) 2014	Submit a brief description of your Continuous Improvement Plan, relative to Concentration/ Concentrators for one or more of the following goals:  Improve concentrator scores (skill attainment) in the Connecticut State-wide CTE Assessment; Increase the percentage of concentrators who meet or exceed the federally negotiated cut score of 65 percent; Increase the number of concentrators to be tested in 2016; or Add an additional area(s) of concentration in 2016.
Video Production Systems	7	
Accounting	6	
Business Management		
Computer Aided Drafting and Design	8	

Wood Technology	9	
Early Childhood Education and Services	50	
Personal Finance	1	
Medical Careers Education	1	
Certified Nurse Assisting (CNA)	11	
Nutrition and Food Production		
Culinary and Food Production		
Marketing Education	2	
Computer Information Systems	22	
Computer Aided Drafting and Design		
Pre-Engineering Technology		
Automotive Technology	9	
Marketing Education	4	
Textiles and Design	10	
For All Areas of Concentration		Align instruction to CTE Performance Standards & Competencies (2015 Edition & Common Core State Standards)  CTE Coordinator (District Level)  provide leadership and support for CTE curriculum revision  recommend appropriate professional development  organize professional development for CTE teachers across the district to impact more teachers  facilitate standardization of CTE instruction in the 4 high schools  collaborate with guidance departments to market CTE courses and programs  monitor CTE course enrollment and concentrator data  review data team and common planning teams information pertaining to CTE courses  Curricula Review and Revision Calendar Professional Development Technology Integration

#### Carl D. Perkins IV

# CAREER & TECHNICAL EDUCATION CONCENTRATION & CONCENTRATORS

#### Overview

- 1. All secondary schools receiving Perkins funds must align their CTE courses with the Connecticut State Performance Standards and Competencies, if applicable, positioning all CTE courses to provide instruction in a portion, if not all, of the competencies in a specific area of concentration.
- 2. A concentrator is any student who has received instruction in all of the competencies of one of the 21 state recognized areas of concentration, identified in the Connecticut State Performance Standards and Competences (2015 version).
- 3. To receive Perkins funds, a secondary school must have:
  - At least one area of concentration that results in concentrators;
  - A minimum of ten (10) concentrators unless reasons preventing this minimum number are provided on this template; and
  - A plan for the continuous improvement of:
    - o concentrator scores (skill attainment) in the Connecticut Statewide CTE Assessment;
    - o the number of concentrators to be tested in 2016.

#### Instructions

Please complete the following concentration/concentrator template by secondary school.

Name of Secondary School: Waterbury Career Academy (2014-15, grades 9 & 10 only, 2015-16 grades 9, 10 & 11)

2015 Areas of Concentration	Number of Concentrators in this area of concentration (students tested) 2014	Submit a brief description of your Continuous Improvement Plan, relative to Concentration/ Concentrators for one or more of the following goals:  Improve concentrator scores (skill attainment) in the Connecticut State-wide CTE Assessment; Increase the percentage of concentrators who meet or exceed the federally negotiated cut score of 65 percent; Increase the number of concentrators to be tested in 2016; or Add an additional area(s) of concentration in 2016.
Video Production Systems	N/A	
Accounting	N/A	
Business Management	N/A	
Computer Aided Drafting and Design	N/A	

Wood Technology	N/A	
Early Childhood Education and Services	N/A	
Personal Finance	N/A	
Medical Careers Education	N/A	
Certified Nurse Assisting (CNA)	N/A	
Nutrition and Food Production	N/A	
Culinary and Food Production	N/A	
Marketing Education	N/A	
Computer Information Systems	N/A	
Computer Aided Drafting and Design	N/A	
Pre-Engineering Technology	N/A	
Automotive Technology	N/A	
Marketing Education	N/A	
Textiles and Design	N/A	
For All Areas of Concentration		<ul> <li>Align instruction to CTE Performance Standards &amp; Competencies (2015 Edition &amp; Common Core State Standards)</li> <li>CTE Coordinator (District Level)</li> <li>provide leadership and support for CTE curriculum revision</li> <li>recommend appropriate professional development</li> <li>organize professional development for CTE teachers across the district to impact more teachers</li> <li>facilitate standardization of CTE instruction in the 4 high schools</li> <li>collaborate with guidance departments to market CTE courses and programs</li> <li>monitor CTE course enrollment and concentrator data</li> <li>review data team and common planning teams information pertaining to CTE courses</li> <li>Curricula Review and Revision Calendar</li> <li>Professional Development</li> <li>Technology Integration</li> </ul>

#### Carl D. Perkins IV

# CAREER & TECHNICAL EDUCATION CONCENTRATION & CONCENTRATORS

#### Overview

- 1. All secondary schools receiving Perkins funds must align their CTE courses with the Connecticut State Performance Standards and Competencies, if applicable, positioning all CTE courses to provide instruction in a portion, if not all, of the competencies in a specific area of concentration.
- 2. A concentrator is any student who has received instruction in all of the competencies of one of the 21 state recognized areas of concentration, identified in the Connecticut State Performance Standards and Competences (2015 version).
- 3. To receive Perkins funds, a secondary school must have:
  - At least one area of concentration that results in concentrators;
  - A minimum of ten (10) concentrators unless reasons preventing this minimum number are provided on this template; and
  - A plan for the continuous improvement of:
    - o concentrator scores (skill attainment) in the Connecticut Statewide CTE Assessment;
    - o the number of concentrators to be tested in 2016.

#### Instructions

Please complete the following concentration/concentrator template by secondary school.

Name of Secondary School: Wilby High School

2015 Areas of Concentration	Number of Concentrators in this area of concentration (students tested) 2014	Submit a brief description of your Continuous Improvement Plan, relative to Concentration/ Concentrators for one or more of the following goals:  Improve concentrator scores (skill attainment) in the Connecticut State-wide CTE Assessment; Increase the percentage of concentrators who meet or exceed the federally negotiated cut score of 65 percent; Increase the number of concentrators to be tested in 2016; or Add an additional area(s) of concentration in 2016.
Video Production Systems		
Accounting		
Business Management		
Computer Aided Drafting and Design		

Wood Technology	11	
Early Childhood Education and Services	14	
Personal Finance		
Medical Careers Education		
Certified Nurse Assisting (CNA)	15	
Nutrition and Food Production		
Culinary and Food Production	15	
Marketing Education		
Computer Information Systems	8	
Computer Aided Drafting and Design		
Pre-Engineering Technology	22	
<b>Automotive Technology</b>	5	
Marketing Education		
Textiles and Design	15	
For All Areas of Concentration		<ul> <li>Align instruction to CTE Performance Standards &amp; Competencies (2015 Edition &amp; Common Core State Standards)</li> <li>CTE Coordinator (District Level)</li> <li>provide leadership and support for CTE curriculum revision</li> <li>recommend appropriate professional development</li> <li>organize professional development for CTE teachers across the district to impact more teachers</li> <li>facilitate standardization of CTE instruction in the 4 high schools</li> <li>collaborate with guidance departments to market CTE courses and programs</li> <li>monitor CTE course enrollment and concentrator data</li> <li>review data team and common planning teams information pertaining to CTE courses</li> <li>Curricula Review and Revision Calendar</li> <li>Professional Development</li> <li>Technology Integration</li> </ul>

#### Carl D. Perkins IV

# CAREER & TECHNICAL EDUCATION Career & Technical Student Organizations (CTSO) (DECA, FBLA, FCCLA, FFA, HOSA, SkillsUSA, TSA)

#### Overview

To receive Perkins funding a secondary school must have at least one of the seven national CTSO's listed above. The current Perkins legislation restricts the use of funds for CTSO's. Connecticut has stipulated that funds under the category of CTSO may only be used for:

- The purchase of organizational CTE instructional or leadership materials;
- The cost of bus transportation for a CTSO leadership training event that is open to all students from the school, where paid membership is NOT a requirement for participation; or
- The payment of a stipend to CTSO chapter advisors that may not exceed \$1,500.00 per organization.
- REQUIREMENT To receive funds for CTSO's under the stipulations stated above, the school must have national organizational documentation that national and/or state dues were paid during the 2014-15 school year. If the school plans to charter a new chapter or restart a chapter of a CTSO during the 2015-16 school year, while requesting allowable CTSO funding, the school must submit a commitment letter on school letterhead with the CIP, stating the CTSO to be joined and the time frame when paid dues for a minimum of ten (10) students will be submitted to the national organization.

#### Instructions

Please complete the following career & technical education student organization template by secondary school.

Name of Secondary School: Crosby High School, Kennedy High School, Waterbury Career Academy

Name of CTSO	Number of 2014-15 Paid state/national student memberships	2014-15 Number of paid CTSO members who attended the annual CTSO state conference.	Name(s) of Chapter Advisors
DECA (Crosby)	30	0	John Dillon
DECA (Kennedy)	47	0	Jeanne Sasso
HOSA-Health Occupations Students of America (WCA)	14	14	Linda Richard RN, BSN
FCCLA (Wilby Culinary Arts)	10	16	Anthony Mango

# Secondary Continuous Improvement Plan Template: 2015-16

# Carl D. Perkins IV

Core Indicators: State targets for 2013-14, for secondary schools, are listed below. Utilizing the data provided by the state located at <a href="http://www.sde.ct.gov/sde/cwp/view.asp?a=2678&q=320802&sdePNavCtr=|#45488">http://www.sde.ct.gov/sde/cwp/view.asp?a=2678&q=320802&sdePNavCtr=|#45488</a>, enter your actual performance levels for 2012-13 and 2013-14.

District: Waterbury Public Schools	Date: May 15, 2015
Career pathway/area of concentration identified for improvement:	Cluster:

Core Indicator Data	State Target 2013-14	Actual Perf. 2012-13	Actual Perf. 2013-14	Strategies for Improvement	Professional Development
Academic Attainment					
Reading	91.00%*	58.03%	N/A for 2013-14 only		
Math	90.00%*	45.13%	N/A for 2013-14 only		
Technical Skill Attainment	47.50%	35.50%	40.85%		
Graduation/Completion	94.00%*	N/A	N/A		
Placement (Military, Employment, Advanced Placement)	52.00%	100%	100%		
Nontraditional Participation	40.00%	38.70%	37.70%		
Nontraditional Completion	36.00%	N/A	N/A		

# Postsecondary Continuous Improvement Plan Template: 2015-16 Carl D. Perkins IV

All Core Indicators: Utilizing the data provided by the community college 2013-14. Identify and insert professional development activities that will be	- · · · · · · · · · · · · · · · · · · ·
College Career Pathways Institution:	Date:
Cluster area identified for improvement:	

Core Indicator Data	State Target 2013-14	Actual Performance 2012-13	Actual Performance 2013-14	Strategies for Improvement	Professional Development
Technical Skill Attainment	93.00%				
Credential, Certificate, or Degree	18.00%				
Student Retention or Transfer	76.00%				
Student Placement	72.20%				
Nontraditional Participation	33.50%				
Nontraditional Completion	37.00%				

Identify plans for expansion: (include plans for additional pathways/clusters, identifying activities, professional development and resources to support the expansion.)

# Connecticut Career and Technical Education 2008-2013 Crosswalk to 16 Federal Clusters, 34 Career Pathways and 21 Areas of Concentration and Assessment

		16 Career Clusters	34 Career Pathways	Areas of Concentration/Assessment
rogram	F Agriculture, Food and Natural Resources (Harold Mackin)		Animal Science	Animal Science Aquaculture and Marine-Related Technologies
ing F			Environment & Natural Resources	Natural Resources and Environmental
ounsel			Plant Science	Aquaculture and Marine-Related Technology
ol C			Power, Structural and Technology	Plant Science
)cho			Aquaculture & Marine Sciences	Agriculture Mechanics
ive S	F	Architecture and Construction	Design/Pre-construction	Computer Aided Drafting and Design
ens	525/3TE/00000000000000000000000000000000000	(Harold Mackin)	• Visual Arts	Wood Technology
Ompreh	M	Arts, Audio/Video Technology and Communications (Harold Mackin)	<ul><li>Performing Arts</li><li>Audio Visual Technology and Film</li></ul>	Video Production Systems
CT (	M	Business, Management and	Accounting	Accounting
sment (		Administration (Lee C. Marcoux)	<ul><li>Business Management</li><li>Entrepreneurship</li></ul>	Business Management 5
Asses	M	Education and Training (Lee C. Marcoux)	Teaching/Training	Early Childhood Education and Services
and	F	Finance (Lee C. Marcoux)	<ul> <li>Investing and Personal Finance</li> </ul>	Personal Finance
ration	M	Government and Public Administration (Lee C. Marcoux)	Government and Public Administration	N/A attive
eer Pathways and 20 Areas of Concentration and Assessment CT Comprehensive School Counseling Program	M	Health Sciences (Lori P. Matyjas)	<ul> <li>Therapeutic Services</li> <li>Health Information</li> <li>Supportive Services</li> <li>Diagnostic Services</li> <li>Biotech Research and Development.</li> </ul>	Business Management  Early Childhood Education and Services  Personal Finance  N/A  Medical Careers Education Certified Nurse Assisting (CNA)  Nutrition and Food Production Culinary and Food Production Marketing Education  Early Childhood Education and Services  Computer Information Systems
ys and 20 A	M	Hospitality and Tourism (Lee Marcoux and Dr. Stephen Hoag)	<ul> <li>Restaurants/Food Marketing and Management</li> <li>Travel &amp; Tourism: Marketing and Management</li> </ul>	Nutrition and Food Production Culinary and Food Production Marketing Education
athwa	M	Human Services (Lee Marcoux)	<ul><li>Early Childhood Development and Services</li><li>Family and Community Services</li></ul>	Early Childhood Education and Services
Car	E-y-	Information Technology (Lee C. Marcoux)	Computer Information Systems and Communications     Computer Program/Software Development	Computer Information Systems
sters, 3	M	Law, Public Safety, Corrections and Security (Lee C. Marcoux)	Introduction of Law	Business Management
ral Clu	F	Manufacturing (Harold Mackin)	<ul> <li>Manufacturing Production Process</li> <li>Development</li> </ul>	Computer Aided Drafting and Design
Crosswalk to 16 Federal Clusters, 34	M	Marketing, Sales and Service (Dr. Stephen Hoag)	<ul> <li>Distribution and Logistics</li> <li>Marketing Information, Management and Research</li> <li>International Marketing</li> <li>Retail Merchandising</li> </ul>	Marketing Education  Textiles and Design
Crossw	F	Science, Technology, Engineering & Mathematics –STEM (Harold Mackin)	<ul> <li>Engineering and Technology</li> <li>Science and Mathematics</li> </ul>	Pre-Engineering Technology
	F	Transportation, Distribution and Logistics - (Harold Mackin)	Transportation, Distribution and Logistics     (F/M indicates properties)	Automotive Technology

Key: M = Males F = Females (F/M indicates areas that are non-traditional to the gender listed.)

# CONNECTICUT STATE DEPARTMENT OF EDUCATION Academic Office



## CARL D. PERKINS GRANT APPLICATION SECONDARY BASIC GRANT

### **GRANT PERIOD**

July 1, 2015 to June 30, 2016

# GRANT COVER PAGE <u>To Be Completed and Submitted with the Grant Application</u>

Applicant (Fiscal Agent)		Program Funding Dates	
(Name, Address, Telephone, Fo	x, E-Mail)	From July 1, 2015 to June 30,	2016
Waterbury Public Schools		Preliminary Funding Amou	nt· \$414 433
236 Grand Street, 1 <sup>st</sup> Floor		Check Program Areas Fund	
Waterbury, CT 06702		Proposal:	<i>g</i>
Phone: 203-574-8004			
Fax: 203-574-8010		☐ Agricultural Educat	
Email: lbrown@waterbury.k	12.ct.us	X Business and Finan	
		X Cooperative Work	
Contact Person		X Family and Consun	
(Name, Address, Telephone, Fo	ıx, E-Mail)	X Marketing Education	on
T ' All D C	N7 *.	X Medical Careers	N.
Louise Allen Brown, Grant	writer	X Technology Educat	ion
Waterbury Public Schools 236 Grand Street, Room 120		Charlest Connections Applie	
Waterbury, CT 06702		Check if Consortium Applic	ation
Phone: 203-346-3506		Participating Districts: (list districts)	
Fax: 203-597-3436		Larries parties (Fib.	and retoj
Email: lbrown@waterbury.k	12 ct us		
Eman. iorown(a) wateroury.k	12.01.05		
I, _Dr. Kathleen M. Ouellett chief administrative official, appropriateness and accuracy will comply with all relevant In addition, funds obtained objectives as stated herein.  Signature of Authorized Administrative Official	submit this proposal on y of the information cont t requirements of the stat	behalf of the applicant agend tained herein, and certify that the and federal laws and regul	t this proposal, if funded, ations.
Name (typed):	Dr. Kathleen M. Ouellette		Date
College/Agency:	Waterbury Public Scho	ools	
3 0 7			

# **CONNECTICUT STATE DEPARTMENT OF EDUCATION**Career and Technical Education (CTE)

# Carl D. Perkins ED 114 and Budget Narrative Secondary and Postsecondary Education 2015-16

Carl D. Perkins Career and Technical Education Improvement Act of 2006 Public Law 109-270

Due: May 15, 2015

Academic Office Hartford, Connecticut

# Carl D. Perkins Grant Secondary and Postsecondary ED 114 and Budget Narrative

Each district/community college must complete the ED 114 utilizing the 2014-15 Perkins grant allocation, which will serve as the preliminary grant allocation until the 2015-16 allocations become final. The state will make adjustments to the 2015-16 budgets to reflect the final allocations.

Local plans will be evaluated based upon core indicator performance levels. Plans must target funds to:

- address specific strategies for improvement
- assure that the program is such size, scope and quality to improve the quality of career and technical education.

If the local recipient fails to meet at least 90 percent of an agreed upon performance level for any of the indicators of performance, it will have to develop and implement an improvement plan.

The State may, after an opportunity for a hearing, withhold all or part of a local recipient's funding if the local meets any one of the three criteria below:

- Fails to implement the required improvement plan.
- Makes no improvement within one year of implementing the improvement plan.
- Fails to meet at least 90 percent of a performance for the same performance indicator three years in a row.

The ED 114 should be entered and certified on the State Prepayment Grant System. Instructions to enter the ED 114 on the grant system can be found on page 13.

Each district/community college must submit the ED 114 and budget narrative, *irrespective of means of transmittal or postmark date*, by 4:30 p.m. on Friday, May 15, 2015. Proposals submitted become the property of the CSDE and a part of the public domain. One original and one copy of all sections of the grant with original signatures, including the ED 114 and budget narrative, must be mailed or delivered to Lori Matyjas to the address below.

Mailing Address	Delivery Address
Lori Matyjas, Program Manager	Lori Matyjas, Program Manager
Connecticut State Department of Education	Connecticut State Department of Education
Academic Office	Academic Office
P.O. Box 2219	165 Capitol Avenue, Room #215
Hartford, CT 06145	Hartford, CT 06106

ED 114 FISCAL YEAR 2016

GRANTE	E NAME: Waterbury Public Schools		VENDOR CODE:
GRANT '	TITLE: CARL D. PERKINS CAREER AND T	FECHNICAL EDUCA	TIONAL IMPROVEMENT ACT OF 2006
PROJEC	T TITLE: SECONDARY BASIC GRANT		
CORE-C	Γ CLASSIFICATION: FUND: 12060	SPID: 20742	PROGRAM: 84010
BUDGET	REFERENCE: 2016		CHARTFIELD1: 170002 CHARTFIELD2:
	GRANT PERIOD: 7/1/2015 - 6/30/2016	AUTHO	RIZED AMOUNT: \$
	RIZED AMOUNT by SOURCE:	OVER DUE C	CIT DIX YA YUMUTU TO A LET O
CODES	OCAL BALANCE: \$ CARRY- DESCRIPTIONS	OVER DUE:S	CURRENT DUE: \$ BUDGET
111A	NON-INSTRUCTIONAL		BUDGET
111B	INSTRUCTIONAL		
200	PERSONAL SERVICES-EMPLOYEE BENI	DETTC	
321	TUTORS	LELIS	
322	IN SERVICE		
330	EMPLOYEE TRAINING AND DEVELOPM	TENT SERVICES	
510	STUDENT TRANSPORTATION SERVICES		
580	TRAVEL		***************************************
600	SUPPLIES		
700	PROPERTY		
917	INDIRECT COSTS		
	TOTAL		
XANR	AGRICULTURE AND NATURAL RESOUR	RCES	
XAVC	ARTS, AUDIO VIDEO TECH, AND COMM	I. SERVICES	
XBAS	BUSINESS AND ADMIN. SERVICES		
XCON	CONSTRUCTION		
XETS	EDUCATION AND TRAINING SERVICES		
XFS	FINANCIAL SERVICES		
XHS	HEALTH SERVICES		
XHSS	HUMAN SERVICES		
XHT	HOSPITALITY & TOURISM		
XITS	INFO. TECH. TELECOM. SERVICES		
XLP	LEGAL AND PROTECTIVE SERVICES		
XMAN	MANUFACTURING	NO ODDIVICES	
XPAG_	PUBLIC ADMINISTRATION/GOVERNME		
XSRT	SCIENTIFIC RESEARCH, ENGR. AND TE		
XTDL XWRS	TRANSPORTATION, DIST. AND LOGISTI		
AWKS	WHOLESALE/RETAIL SALES AND SERV	TICES	
	ORIGINAL REQUEST DATE		
	REVISED REQUEST DATE		IENT OF EDUCATION DATE OF AGER AUTHORIZATION APPROVAL

## ED 114 FISCAL YEAR 2016 BUDGET FORM FUNDING STATUS:

GRANTE	E NAME: Waterbury Public	Schools	VENDOR CODE:
GRANT T	TITLE: CARL D. PERKINS CAR	EER AND TECHNICAL EDU	CATIONAL IMPROVEMENT ACT OF 2006
PROJEC'	T TITLE: POSTSECONDARY BA	ASIC GRANT	
CORE-C	T CLASSIFICATION: FUND: 12	060 SPID: 20742	PROGRAM: 84011
BUDGET	REFERENCE: 2016 CI	HARTFIELD1: 170002	CHARTFIELD2:
	GRANT PERIOD: 7/01/2015-0	5/30/2016	AUTHORIZED AMOUNT: \$
AUTHOR	RIZED AMOUNT by SOURCE:		
	AL BALANCE: \$	CARRY-OVER DUE:\$	CURRENT DUE: \$
CODES	DESC	RIPTIONS	BUDGET
111A	NON-INSTRUCTIONAL		
111B	INSTRUCTIONAL		
200	PERSONAL SERVICES EMPLO	OYEE BENEFITS	
321	TUTORS		
322	IN SERVICE		
323	PUPIL SERVICES		
330	EMPLOYEE TRAINING AND I	DEVELOPMENT SERVICES	
510	STUDENT TRANSPORTATION	SERVICES	
580	TRAVEL		
600	SUPPLIES		
700	PROPERTY		
	TOTAL		
XANR	AGRICULTURE AND NATURA		
XAVC	ARTS, AUDIO VIDEO TECH, A	ND COMM. SERVICES	
XBAS	BUSINESS AND ADMIN. SERV	ICES	
XCON	CONSTRUCTION		
XETS	EDUCATION AND TRAINING	SERVICES	
XFS	FINANCIAL SERVICES		
XHS	HEALTH SERVICES		
XHSS	HUMAN SERVICES		
XHT	HOSPITALITY & TOURISM		
XITS	INFO. TECH. TELECOM. SERV	.,	
XLP	LEGAL AND PROTECTIVE SE	RVICES	
XMAN	MANUFACTURING		
XPAG	PUBLIC ADMINISTRATION/G		
XSRT	SCIENTIFIC RESEARCH, ENG		
XTDL	TRANSPORTATION, DIST. AN	.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
XWRS	WHOLESALE/RETAIL SALES	AND SERVICES	

 ORIGINAL REQUEST DATE		
	STATE DEPARTMENT OF EDUCATION	DATE OF
 _DATE OF REVISED REQUEST DATE	PROGRAM MANAGER AUTHORIZATION	APPROVAL

**ED 114 Budget Form Object Code Descriptions and Budget Narrative** 

Code 111A	Non-Instructional Amounts paid to administrative employees of the grantee not involved in providing direct services to pupils/clients. Include all gross salary payments for these individuals while they are on the grantee payroll including overtime salaries or salaries paid to employees of a temporary nature.				
	Name of Position	Career Cluster/Area of Concentration	Description of Duties	Compensation Formula/Total	Amount
	CTE Coordinator (part time)	All Career Clusters/Areas of Concentration	District level coordination, support and facilitation of CTE program. Collaborate with school based CTE staff to improve CTE. Lead implementation of Carl D. Perkins Grant.	\$32 - \$38/hr. based on union contract for extra duty work approx. 10 hrs/wk, on average, 10 mths.	12,000
	CTE Test Administrators	All Career Clusters/Areas of Concentration	CTE Testing and related administrative duties	300/school @ 4 high schools	1,200
AND THE PROPERTY OF THE PROPER	Clerical Assistance	All Career Clusters/Areas of Concentration	Extra duty salary for performing clerical/ secretarial services.	2,500.00 paid @ extra duty hrly rate per union contract	2,500
111B	Instructional Salaries for employees providing direct instruction/counseling to pupils/clients. This category is used for both counselors and teachers. Include all salaries for these individuals while they are on the grantee payroll including overtime salaries or salaries of temporary employees. Substitute teachers or teachers hired on a temporary basis to perform work in positions of either a temporary or permanent nature are also reported here. Tutors or individuals whose services are acquired through a contract are not included in the category. A general rule of thumb is that a person for whom the grantee is paying employee benefits and who is on the grantee payroll is included; a person who is paid a fee (such as a private consultant) with no grantee obligation for benefits is not.			16,640	
NAS NEW CONTRACTOR OF THE PARTY	Name of Position	Career Cluster/Area of Concentration	Description of Duties	Compensation Formula/Total	Amount

		Obje	et		Amount	
12	Teachers	All Career	Curriculum	\$32/hr x approx. 20	10,240	
WSSMIII STATE OF THE STATE OF T		Clusters/Areas of	review and	teachers x approx.	, , , ,	
SECTION SECTIO		Concentration	revision to align	16/hrs		
			CTE curricula			
			with CT CTE			
i de la companya de l			Performance			
Nasarana A			Standards and			
			Competencies – 2015 Edition and			
No.			Common Core			
			State Standards			
	Teachers	All Career	CTE workshop	\$32/hr per union	6.400	
WIND IN COLUMN TO THE PARTY OF	Cachers	Clusters/Areas of	for all CTE	contract x approx. 50	6,400	
		Concentration	teachers	teachers x approx.		
		Conconduction	conducted in out-	2/hrs x 2 meetings		
No. 100 (100 (100 (100 (100 (100 (100 (100			of -school time	Z/ms x Z meetings		
200	Personal Services - Emp	lovee Benefits		1		
	Amounts paid by the gran		employees whose sa	laries are reported in		
a constant	objects 111A and 111B.					
	addition to that amount. S					
One of the last	directly to employees, these payments are nevertheless part of the cost of personal					
200 F 100 F	services. Included are the					
200000000000000000000000000000000000000	contribution, retirement contribution, tuition reimbursement, unemployment					
north and a second	compensation, and workmen's compensation insurance.					
- Constitution of the Cons	Name of Position	Career	Description of	Compensation	Amount	
		Cluster/Area of	Duties	Formula/Total		
and the same of th		Concentration				
322	In-service (Instructional	Program Improve	ment Services)		10.200	
322	In-service (Instructional Payments for services per			chers and supervisors	10,200	
322	Payments for services per	formed by persons q	ualified to assist tea		10,200	
322		formed by persons q he teaching process.	ualified to assist tea This category inclu	ıdes curriculum	10,200	
322	Payments for services per to enhance the quality of t consultants, in-service training	formed by persons q he teaching process. ining specialists, etc.	ualified to assist tea This category inclu , who are not on the	ides curriculum grantee payroll.	,	
322	Payments for services per to enhance the quality of t consultants, in-service training.  Individual/Organizatio	formed by persons q he teaching process. ining specialists, etc.  Who will be	ualified to assist tea This category inclu , who are not on the Title of event,	des curriculum grantee payroll.  Detail student or	10,200 Amount	
322	Payments for services per to enhance the quality of t consultants, in-service training	formed by persons q he teaching process. ining specialists, etc.  Who will be receiving this	ualified to assist tea This category inclu , who are not on the	grantee payroll.  Detail student or teacher measured	,	
322	Payments for services per to enhance the quality of t consultants, in-service training.  Individual/Organizatio	formed by persons q he teaching process. ining specialists, etc.  Who will be receiving this service? Include	ualified to assist tea This category inclu , who are not on the Title of event,	des curriculum grantee payroll.  Detail student or teacher measured outcomes in either	,	
322	Payments for services per to enhance the quality of t consultants, in-service training.  Individual/Organizatio	formed by persons q he teaching process. ining specialists, etc.  Who will be receiving this	ualified to assist tea This category inclu , who are not on the Title of event,	Detail student or teacher measured outcomes in either improved	,	
322	Payments for services per to enhance the quality of t consultants, in-service training.  Individual/Organizatio	formed by persons q he teaching process. ining specialists, etc.  Who will be receiving this service? Include	ualified to assist tea This category inclu , who are not on the Title of event,	Detail student or teacher measured outcomes in either instruction or	,	
322	Payments for services per to enhance the quality of t consultants, in-service training.  Individual/Organizatio	formed by persons q he teaching process. ining specialists, etc.  Who will be receiving this service? Include	ualified to assist tea This category inclu , who are not on the Title of event,	Detail student or teacher measured outcomes in either improved instruction or measured learning	,	
322	Payments for services per to enhance the quality of t consultants, in-service training.  Individual/Organizatio	formed by persons q he teaching process. ining specialists, etc.  Who will be receiving this service? Include	ualified to assist tea This category inclu , who are not on the  Title of event, date, location	Detail student or teacher measured outcomes in either instruction or	Amount	
322	Payments for services per to enhance the quality of t consultants, in-service trail  Individual/Organization providing in-service	formed by persons q he teaching process. ining specialists, etc.  Who will be receiving this service? Include # staff	ualified to assist tea This category inclu , who are not on the Title of event,	Detail student or teacher measured outcomes in either improved instruction or measured learning outcomes	,	
322	Payments for services per to enhance the quality of t consultants, in-service trail  Individual/Organization providing in-service	formed by persons q he teaching process. ining specialists, etc.  Who will be receiving this service? Include # staff  Business	ualified to assist tea This category inclu , who are not on the  Title of event, date, location  Google Apps,	Detail student or teacher measured outcomes in either improved instruction or measured learning outcomes  Teachers will learn	Amount	
322	Payments for services per to enhance the quality of t consultants, in-service trail  Individual/Organization providing in-service	formed by persons q he teaching process. ining specialists, etc.  Who will be receiving this service? Include # staff  Business Teachers	ualified to assist tea This category inclu , who are not on the  Title of event, date, location  Google Apps, Professional Day	Detail student or teacher measured outcomes in either improved instruction or measured learning outcomes  Teachers will learn how to incorporate	Amount	
322	Payments for services per to enhance the quality of t consultants, in-service trail  Individual/Organization providing in-service	formed by persons q he teaching process. ining specialists, etc.  Who will be receiving this service? Include # staff  Business Teachers	ualified to assist tea This category inclu , who are not on the  Title of event, date, location  Google Apps, Professional Day Workshop 8/24/15 or 8/25/15,	Detail student or teacher measured outcomes in either improved instruction or measured learning outcomes  Teachers will learn how to incorporate Google Apps into our technology curriculum.	Amount	
322	Payments for services per to enhance the quality of t consultants, in-service trail  Individual/Organization providing in-service	formed by persons q he teaching process. ining specialists, etc.  Who will be receiving this service? Include # staff  Business Teachers	ualified to assist tea This category inclu , who are not on the  Title of event, date, location  Google Apps, Professional Day Workshop 8/24/15 or	Detail student or teacher measured outcomes in either improved instruction or measured learning outcomes  Teachers will learn how to incorporate Google Apps into our technology	Amount	

Code	Park House Mark	Obje	et	SECTION OF STREET	Amount
		·		Google site for educational purposes.	
Solution	cal Education ns, LLC Gregorio)	Tech Ed Teachers 4	MasterCAM University- Ongoing online certification training, Dates TBD, WCA	Teacher certification course for MasterCAM University – Measured in successful completion of each course module.	1,200
CREC		Tech Educ. Teachers 20	Technology Policy Development, August 2015, Location TBD		1,000
CREC		Tech Educ. Teachers 20	Curriculum Revision Infusing Technology, August 2015, Location TBD		1,000
CCAT		Tech Educ. Teachers 20	Cutting Edge Technology, November 2015, Location TBD		1,000
CCAT		Tech Educ. Teachers 20	Manufacturing Career Advancement, January 2015, Location TBD		1,000
CREC		Tech Educ. Teachers 20	NGSS, Combining Engineering, Technology, and Science, Dates TBD, Location TBD		2, 000
TBD		Allied Health & FCS Teachers Approx. 24	Curriculum/ Lesson Plan Alignment to CTE Performance Standards and Competencies (2015)		1,000
TBD		Business 16	Curriculum/ Lesson Plan Alignment to CTE Performance		1,000

Code	MARKET STREET	Obje	ct		Amount
			Standards and Competencies		
			(2015)		
220	Employee Tuoising and	Davidan mant Carri			4
330	Employee Training and Development Services Services supporting the professional and technical development of school district personnel, including instructional, administrative, and service employees. Included are course registration fees (that are not tuition reimbursement), charges from external vendors to conduct training courses (at either school district facilities or off-site), and other expenditures associated with training or professional development by third-party vendors.				4,555
	Individual/Organizatio n providing in-service	Who will be receiving this service? Include # staff	Title of event, date, location	Detail student or teacher measured outcomes in either improved instruction or measured learning outcomes	Amount
	CREC	Allied Health I 2 Crosby HS Business Faculty 4	CTE State Conf., Oct. 21, 2015, Crowne Plaza, Cromwell, CT	CTE Standards Update and CTE Evidence Guides. Any new legislation is shared.	600
	CT Business Educators Association	Crosby HS Business Faculty 4	CBEA Conf., Oct. 14, 2015, Crowne Plaza, Southbury, CT	Faculties are exposed to new innovative technologies to improve instruction and increase student achievement.	400
	Personal Finance Conference/CT. State Dept. of Education	Crosby HS Business Faculty 2	Teaching Financial Literacy, April 9, 2016, Crowne Plaza, Southbury, CT	Workshops provided to teachers who teach Personal Finance and new materials/programs are shared for CTE teachers.	200
	National Business Education Association	Crosby HS Business Faculty 2	NBEA 2016 Annual Conv., March 22-26, 2016, The Cosmopolitan Hotel, Las Vegas, Nevada	Teachers are exposed to new innovative technologies, strategies and methods to improve instruction and increase student achievement.	1,740 (reg. fees/ workshops/ reception)
	Personal Finance Convention	Kennedy HS Business Teacher 1	Personal Finance Convention, October 2015, Southbury, CT	Teaching to new content areas for performance standards and	175

Code		Obje	ci		Amount
COLLEGE TRANSPORTE CONTROL				competencies for CT career and technical education.	
	Connecticut Business Education Association	Wilby HS Business Teacher 3	Business, Finance & Technology Career Development Annual Conference, November 21, 2015, Crowne Plaza, Southbury, CT	Workshops by professional speakers on current/future trends & best practices for use in the Business classroom, i.e.: Literacy in the Business classroom	240
	International Center for Leadership in Education, Inc.	Wilby HS Business Teacher 1	24 <sup>th</sup> Annual Models School Conference, June 26-29, 2016, Orlando, Florida	Conference will provide strategies for using technology to create relevant learning environments and build digital literacy for today's connected learners. Embracing rigor, relevance, and relationship to prepare students for the skills they will need for tomorrow's careers.	500
	National Assoc. for the Education of Young Children	All Early Childhood Education Courses and All Child Dev. Courses 2	NAEYC National Conference, Nov. 18-21, 2015 Orlando, Fla.,	As mentors to Early Childhood Education students, it is important to show professionalism by participating in a national organization. Up-to-date child development practices obtained from the conference will be disseminated into the curriculum and to students and will be measured through observation and content knowledge based	700

Code			) jeet		Amount
				testing. As teachers, (especially our new full time Child Development teacher) we will be able to bring a new enthusiasm to our curriculum as measured by new ideas incorporated into our lesson plans.	
510		sporting pupils to and tals for field trips and		activities. Included are or transporting	26,340
	Faculty member(s) identified as supervisor of student travel	Course(s) utilizing student transportation  Estimate # of students to be transported	Title of event, date, location, transportation company	Quantity/Cost per unit	Amount
No well-related to the transmission of the latest to the l	Joyce Williams	Allied Health I 15	Clinical Site, Dates TBD, Cheshire House, Durham Transp.	18 @ 50.00	900
AND	Linda Miceli	Allied Health I 15	Clinical Site, Dates TBD, Cheshire House, Durham Transp.	15 @ 50.00	750
	Linda Miceli	Allied Health I 10	Visit to Assisted Living Facility, Dates TBD, Village at East Farms, Durham Transp.	2 @ 240.00	480
	Linda Miceli Megan Frigon Joyce Williams	Allied Health 48	"Bodies Exhibit", Date TBD, CT if available otherwise travel to NY or Boston for exhibit, bus company TBD	1 @ 1,500.00	1,500
	Megan Frigon	Allied Health I 15	Clinical Site, Dates TBD, Cheshire House, Durham Transp.	12 @ 50.00	600

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	Megan Frigon	Allied Health I 15	Visit to Alzheimer's Unit, Dates TBD, Village at East Farms, Durham Transp.	2 @ 240.00	480
	Wanda Faucher	Allied Health II 15	Career Fair, Date TBD, Hartford Hospital, Durham Transp.	1 @ 300.00	300
We desirably des	Ana Ramos	Accounting Students 10	CT CPA Conference, October 23, 2015, UCONN Storrs, Durham Transp.	1 @ 500.00	500
	Laura Graham	Personal Finance 55	NY Financial District, 10/1/2015, Bus company TBD	1 @ 1,925.00	1,925
A STATE OF THE STA	Laura Graham	Business Law 55	Hartford Supreme Court, 5/2/2016, Hartford, CT. Durham Transp.	1 @ 500.00	500
CONTRACTOR AND	Jeanne Sasso	Accounting 15	CPA Careers Conference, October 2015, UCONN Storrs, Durham Transp.	1 @ 300.00	300
	Jeanne Sasso	Marketing/DECA 25	Leadership Conference, October 2015, Meriden, CT First Student	1 @ 305.00	305
AND	Jeanne Sasso	Marketing/DECA 40	Sports Seminar and College Fair, November 2015, Bridgeport, CT, First Student	1 @ 325.00	325
	Jeanne Sasso	Marketing/DECA 15	State Careers Development Conference, February 2016, Southington, CT First Student	1 @ 300.00	300
	Jeanne Sasso	Marketing/DECA 50	Business Marketing Day, May 2016, Six Flags, Jackson, NJ US Coachways	1 @ 1,750.00	1,750

Code		Ol:	ject		Amount
	Jeanne Sasso	Marketing/DECA 40	Career in Sports Seminar, February 2016, Univ. of Htfd., W. Htfd, CT First Student	1 @ 300.00	300
AN THE STATE OF TH	Anthony D'Agostino	Marketing/DECA 20	DECA Leadership Conference, October 2015, Southington, CT, Durham Transp.	1 @ 350.00	350
AND	Anthony D'Agostino	Personal Finance 40	Wall Street Tour, Sept./Oct. 2015, New York City Land Jet Bus	1 @ 1,800.00	1,800
птемпей депидатими по передина	Joyce Iannicelli	Accounting 14	Accounting CPA Conference, November 2015, Location TBD, First Student	1 @ 300.00	300
NATE OF THE PROPERTY OF THE PR	Joyce Iannicelli	Business Law 14	Wtby. Courthouse, May 2016, Waterbury, CT. First Student	1 @ 200.00	200
THE REAL PROPERTY OF THE PROPE	Anita Watkins	Advanced Clothing/Fashion Design 30	Information Session, May 2016, Fashion Inst., NY Land Jet	1 @ 1,800.00	1,800
	Anita Watkins	Advanced Clothing 35	Charity Donation, December 2015, Carolyn's Place, Waterbury, Durham Transp.	1 @ 300.00	300
	Lorraine Langlais	All Early Childhood Education Courses 75	Infant/CPR Certification, November 2015, NVCC Campus, Durham Transp.	1 @ 190.00	190
	Lorraine Langlais	UConn Individual and Family Development Class, ECE II Class 28	State Conference/ Child Dev. Center Observ., May 2015, UCONN Storrs, Wollenberg Bus	1 @ 450.00	450
	Lorraine Langlais	UConn Individual and Family Development Class, ECE II Class 28	Classroom Teacher Observations, Date TBD, Duggan Elem. Durham Transp.	1 @ 190.00	190

Code		Oli	ject		Amount
	e Langlais	UConn Individual and Family Development Class 20	Assisted Living Interviews, Date TBD, Village at East Farms, Waterbury, Durham Transp.	1 @ 190.00	190
Lorrain	e Langlais	UConn Individual and Family Development Class 20	Medical Facility tour/speakers, Date TBD, St. Mary's Hospital, Wtby., Durham Transp.	1 @ 190.00	190
Lorrain	e Langlais	UConn Individual and Family Development Class 20	School Environ., Date TBD, WAMS/UCONN Wtby. Campus, Durham Transp.	1 @ 190.00	190
Lorrain	e Langlais	Early Childhood Education II 8	Articulation requirement, Fall 2015, Mattatuck Museum Durham Transp.	1 @ 190.00	190
Lorrain	e Langlais	Early Childhood Education II, UConn Individual and Family Development 28	Early Childhood Ed. Research Program Observ., Fall 2015, Eastern Ct State Univ., Durham Transp.	1 @ 285.00	285
Joanne		Child Development 30	Day Care School Visit, May 2016, NVCC & Country Garden Preschool, Waterbury, CT Durham Transp.	1 @ 300.00	300
Joanne	Tichon	Child Development II 20	Young Consumer May 2016, Shop Rite, Wtby. Durham Transp.	1 @ 300.00	300
	Mancuso	Architectural CAD 1 & 2	Trip to World Trade Center site and Museum, Date TBD, NYC, Luxury Bus Lines	1 @ 1,500.00	1,500
Jeremy	Rubock	Auto, Engineering Design 20	Electrathon Race, Date TBD, Lime Rock, Durham Transp.	1 @ 700.00	700

Code	Carl St. Physical St.	Ol	oject		Amount
	Donald Mancuso Jeremy Rubock Michael Retano Paul Gwiazdoski		NVCC Advanced Manufacturing Technology Center, Dates TBD, Waterbury, CT Durham Transp.	4 @ 280.00	1,120
	Kevin Sudell		SeaPerch, Dates TBD, CCSU School of Engineering, Science and Technology Durham Transp.	4 @ 285.00	1,140
	Donald Mancuso Jeremy Rubock Michael Retano Paul Gwiazdoski		UCONN School of Engineering, Dates TBD, UCONN Storrs Durham Transp.	4 @ 285.00	1,140
	Anthony Mango	Culinary 30-40	Johnson and Wales or Culinary Institute of America, May 2016, Rhode Island or NY, Premier Bus Lines	1 @ 1,800.00	1,800
	John Dillon	Marketing I & II Entrepreneurship 30	DECA Initial Conference, September 2015, Aqua Turf Rest., Southington, CT	1 @ 500.00	500
580	Travel Expenditures for tran	sportation, hotel and c	other expenses associate	ted with staff travel.	7,281
	School/district position (CTE teacher, principal, etc.)	Courses to be improved by attendance	Title of event, date, location	Itemization of costs	Amount
	Waterbury Career Academy/CTE teacher	ALL Health Services	Health Science Master Teacher Institute, 11/12-11/14/15, Chicago, IL	Hotel: 3 nights = \$700.00 Airfare: Roundtrip=\$500.00	1,200
	Crosby HS/Business Faculty	All Business Courses	CBEA, October 14, 2015, Southbury, CT	Mileage: 4 x 20 miles x \$0.575/mile	46

Code	700 2 5 6	Ol	bject		Amount
	Crosby HS/Business Faculty	All Business Courses	CTE State Conference, October 22, 2015, Cromwell, CT	Mileage: 4 x 20 miles x \$0.575/mile	46
	Crosby HS/Business Faculty	Personal Finance	Teaching Financial Literacy to Millennials, April 9, 2016, Crowne Plaza, Southbury, CT	Mileage: 2 x 20 miles x \$0.575/mile	23
	Crosby HS/Business Faculty	Personal Finance, Computer Information Systems	NBEA 2016 Annual Convention, March 22-26, 2016, The Cosmopolitan Hotel, Las Vegas, Nevada	Hotel:5 nights @ \$200/night=\$1,000.00 Airfare: Roundtrip= 2 @ \$800.00 = \$1,600.00	2,600
	Wilby HS/CTE Teacher (Business)	All business courses: Entrepreneurship, International Business, Tech courses, Personal Finance, etc.	24 <sup>th</sup> Annual Models School Conference, June 26-29, 2016, Orlando, Florida	Airfare: \$400.00 Hotel: \$600.00 Shuttle Service to/from airport to hotel: \$30.00	1,030
	Kennedy HS/ FCS Teachers	All Early Childhood Education Courses and All Child Dev. Courses	NAEYC National Conference, Nov. 18-21, 2015 Orlando, Fla.,	Airfare: 2 @ \$500.00=\$1,000.00 Hotel: 4 nights @ \$200/night=\$800.00 Parking:\$45.00 Car Rental:\$300.00 Mileage:104 x \$0.575=\$60.00	2,205
	Kennedy HS/ FCS Teacher	UConn Individual and Family Development	Required Certification Training, Fall/Spring UCONN Storrs Campus	2 x 114 miles @ \$0.575 = \$131.00	131
600	Supplies Expenditures for non-consumable items purchased for instructional use. Examples include software, DVDs, calculators, etc.				
	Career Cluster/ Area of Concentration	Name of course supplies are requested for	List each supply item, description and vendor	Quantity and cost per unit	Amount
	XHS/Health Services	Allied Health I	Item # 21260, Act+Fast Anti- Choking Blue Trainer, Moore Medical	2 @ 146.00	292.00

Code		)bject		Amount
XHS/Health Services	Allied Health I	Item # LF00934U, Life/form Pressure Ulcer/Bedsore Models-Light, Nasco	1 @ 360.00	360.00
XHS/Health Services	Allied Health I	Item # 21669, Chronic Care Challenges Simulation Glasses Set, Moore Medical	1 @ 26.00	26.00
XHS/Health Services	Allied Health I	Item # 24088, Adult Ostomy Bag, Moore Medical	2 @ 10.00	20.00
XHS/Health Services	Allied Health I	Item # 98671, Human Ear, Moore Medical	1 @ 162.00	162.00
XHS/Health Services	Allied Health I	License for mthly PEAK "Nursing Assistant" articles, PEAK Development Resources LLC	1 @ 200.00	200.00
XHS/Health Services	Allied Health I & II	Item # SDC-450, SMART Document Camera, CBS	2 @ 665.00	1,330.00
XHS/Health Services	9 <sup>th</sup> grade Exploratory	Item # 02-20-90N, Digital BP Unit, Pocket Nurse	1 @ 668.00	668.00
XHS/Health Services	9 <sup>th</sup> grade Exploratory	Item # 02-74-6903N, Sure Temp Plus Kit, Pocket Nurse	1 @ 400.00	400.00
XHS/Health Services	9 <sup>th</sup> grade Exploratory	Item # 10-81-6228N, Ear Model, Pocket Nurse	1 @ 73.00	73.00
XHS/Health Services	9 <sup>th</sup> grade Exploratory	Item # 10-81-6210N, Eye Model, Pocket Nurse	1 @ 82.00	82.00
XHS/Health Services	9 <sup>th</sup> grade Exploratory	Item # 10-81-4195N, Spine Column, Pocket Nurse	1 @ 105.00	105.00
XHS/Health Services	9 <sup>th</sup> grade Exploratory	Item # 03-50-1323N, Biohazard Can, Pocket Nurse	1 @ 183.00	183.00
XHS/Health Services	9 <sup>th</sup> grade Exploratory	Item # 03-78-8537N, Sharps Container, Pocket Nurse	3 @ 10.00	30.00

Code		Dbject		Amount
XHS/Health Services	10 <sup>th</sup> grade Foundations – CPR Training	Item # 07-71-5011N, BVM-Laerdal Bag II, Pocket Nurse	1 @ 16.00	16.00
XHS/Health Services	10 <sup>th</sup> grade Foundations — CPR Training	Item # 07-71-5021N, BVM-Laerdal Bag II- pedi, Pocket Nurse	1 @ 16.00	16.00
XHS/Health Services	10 <sup>th</sup> grade Foundations — CPR Training	Item # 07-71-4053N, CPR Masks, Pocket Nurse	10 @ 9.00	90.00
XHS/Health Services	10 <sup>th</sup> grade Foundations — Infection Control	Item # 30-50-0282N, Step on Waste Can, Pocket Nurse	1 @ 75.00	75.00
XHS/Health Services	10 <sup>th</sup> grade Foundations – Infection Control	Item # 03-12-2044N, Red Bio Bags, Pocket Nurse	1 @ 9.00	9.00
XHS/Health Services	10 <sup>th</sup> grade Foundations – Infection Control	Item # 03-18-0103N, Specimen Bags, Pocket Nurse	40 @ \$.15	6.00
XHS/Health Services	11 <sup>th</sup> grade Allied Health	Item # 09-83-4032N, Mosby's Allied Health Dictionary, Pocket Nurse	10 @ 43.00	430.00
XHS/Health Services	11 <sup>th</sup> grade Allied Health	Item # 02-49-6415N, Hemocult Test Cards- Med. Asst., Pocket Nurse	1 @ 96.00	96.00
XHS/Health Services	11 <sup>th</sup> grade Nurse Assistant – State testing	Item # 05-68-1414N, Cafeteria Tray, Pocket Nurse	4 @ 4.00	16.00
XHS/Health Services	11 <sup>th</sup> grade Nurse Assistant – State testing	Item # 05-68-8229N, Variety Food Kit, Pocket Nurse	1 @ 154.00	154.00
XHS/Health Services	11 <sup>th</sup> grade Nurse Assistant – State testing	Item # 04-50-1250N, Step Stool, Pocket Nurse	1 @ 40.00	40.00
XHS/Health Services	11 <sup>th</sup> grade Nurse Assistant	Item #011-81-0934N, Pressure Ulcer Models, Pocket Nurse	1 @ 360.00	360.00
XHS/Health Services	11 <sup>th</sup> grade Nurse Assistant	Item # 05-61-350N, Specimen Hat, Pocket Nurse	3 @ 2.00	6.00
XHS/Health Services	11 <sup>th</sup> grade Nurse Assistant	Item # 05-39-2051N, Specimen Cup, Pocket Nurse	30 @ 0.20	6.00

Code		bject		Amound
XHS/Health Services	11 <sup>th</sup> grade Allied Health – Medical Assistant	Item # 07-71-1103N, Nasal cannula – adult, Pocket Nurse	10 @ 0.90	9.00
XHS/Health Services	11 <sup>th</sup> grade Allied Health – Medical Assistant	Item # 07-71-1103N, Nasal cannula – pedi, Pocket Nurse	5 @ 1.60	8.00
XHS/Health Services	11 <sup>th</sup> grade Allied Health – Medical Assistant	Item # 11-81-4008N, Instrument Bundle, Pocket Nurse	1 @ 130.00	130.00
XHS/Health Services	11 <sup>th</sup> grade Allied Health – Medical Assistant	Item # 08-50-1503N, Mayo Stand, Pocket Nurse	1 @ 152.00	152.00
XHS/Health Services	11 <sup>th</sup> grade Allied Health – Medical Assistant	Item # 08-58-010N, Instrument Tray w/cover, Pocket Nurse	1 @ 20.00	20.00
XHS/Health Services	11 <sup>th</sup> grade Allied Health – Medical Assistant	Item # 08-10-6000N, OR Towels, Pocket Nurse	10 @ 2.00	20.00
XHS/Health Services	11 <sup>th</sup> grade Allied Health – Medical Assistant	Item # 02-02-0099N, BBL-Culture Swabs, Pocket Nurse	15 @ 1.34	20.00
XHS/Health Services	11 <sup>th</sup> grade Allied Health – Medical Assistant	Item # 02-91-1024N, 2 Bank Illuminator, Pocket Nurse	1 @ 278.00	278.00
XHS/Health Services	11 <sup>th</sup> grade Allied Health – Medical Assistant	Item # 04-50-3313N, Privacy Screen, Pocket Nurse	1 @ 175.00	175.00
XBAS/Business & Admin. Services	MultiMedia	Item # NID7100, Nikon D7100 Camera, B & H Photo	1 @ 997.00	997.00
XBAS/Business & Admin. Services	MultiMedia	Item #NI1830035VR, Nikon 18-300mm Lense, B & H Photo	1 @ 897.00	897.00
XBAS/Business & Admin. Services	MultiMedia	Item # NI8518G, Nikon 85mm Lense, B & H Photo	1 @ 447.00	447.00
XBAS/Business & Admin. Services	MultiMedia	Item # 3082335, Canon 35mm Lense, CDW-G	1 @ 610.00	610.00
XBAS/Business & Admin. Services	MultiMedia	Item # 976050, Canon 17-55mm Lense, CDW-G	1 @ 992.00	992.00

Code			Object		Amount
	XBAS/Business & Admin. Services	MultiMedia	Item # 692810, Canon 200mm Lense, CDW-G	1 @ 878.00	878.00
	XBAS/Business & Admin. Services	MultiMedia	Item # HEWL1957A, HP Scanjet 4050, WB Mason	3 @ 199.00	597.00
	XBAS/Business & Admin. Services	MultiMedia	Item # VER97394, Portable Hard Drive, WB Mason	2 @ 189.00	378.00
	XBAS/Business & Admin. Services	MultiMedia	Item # VER49189, Flash Drives, WB Mason	2 @ 125.00	250.00
	XBAS/Business & Admin. Services	MultiMedia	Item # VER44048, USB Memory, WB Mason	8 @ 8.00	64.00
	XBAS/Business & Admin. Services	MultiMedia	Item # LOG980000012, Speakers, WB Mason	3 @ 18.00	54.00
	XBAS/Business & Admin. Services	MultiMedia	Item # LOG0000733, Webcam, WB Mason	2 @ 80.00	160.00
	XBAS/Business & Admin. Services	MultiMedia	Item #CALF3068AV, Headphones, WB Mason	10 @ 19.50	195.00
	XBAS/Business & Admin. Services	MultiMedia	Item # EPSV11H568020, Projectors, WB Mason	2 @ 399.00	798.00
1	XBAS/Business & Admin. Services	MultiMedia	Item # E3E03A-B1H, HP Color OfficeJet 6230 ePrinter, Zones	3 @ 90.35	271.00
	XBAS/Business & Admin. Services	MultiMedia	Item # CF399A, HP Monocrome LaserJet Pro M401 dne, Zones	3 @ 199.00	597.00
	XBAS/Business & Admin. Services	Photography	Item # 8595B003, Canon – EOS Rebel TRI DSLR Camera with 18-55mm IS STM Lens Black, Best Buy	10 @ 700.00	7,000.00
	XBAS/Business & Admin. Services	Photography	Item # 8546B002, Canon – EF-S 55- 250mm f/4.0-5.6 IS STM Zoom Lens	2 @ 299.00	598.00

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			with tripod t3 UV/CPL/NDS filters + hood+ accessory kit Black, Best Buy		
	XBAS/Business & Admin. Services	Photography	Item # C11CB35201, Epson – Stylus Photo R2000 Wireless Photo Printer, Black, Best Buy	1 @ 700.00	700.00
	XBAS/Business & Admin. Services	Photography	Item # LP36512, Lower Pro-Format 160 Camera Bag, Black, Best Buy	10 @ 40.00	400.00
	XBAS/Business & Admin. Services	Photography	Item # SDSDU-064G-A46, Scandisk-Ultra G4 GB SDXC UHS-1 Class 10 Memory Chip, Best Buy	10 @ 50.00	500.00
	XHSS/Human Services	Child Dev. I & II	Item # WA16780H, Smokey Sue for Two, Nasco	1 @ 152.00	152.00
	XHSS/Human Services	Child Dev. I & II	Item # WA28895H, Female/Male Pelvis Model, Nasco	1 @ 139.00	139.00
	XHSS/Human Services	Child Dev. I & II	Item # SB07915H, Cell to Embryo Model, Nasco	1 @ 150.00	150.00
	XHSS/Human Services	Child Dev. I & II	Item # SB32704H, Uterus/Fetus Model, Nasco	1 @ 363.00	363.00
	XHSS/Human Services	Child Development	Item # PP-IM-400M- RC-MS, Medium Skin Infant Manikins, American Red Cross	1 @ 435.00	435.00
	XHSS/Human Services	Child Development	Item # 10310100, RealCare Drug- Affected baby, Realityworks	1 @ 399.00	399.00
	XHT/Hospitality & Tourism	Foods I & II	Item # WA28700H, Math in Foods Curriculum, Nasco	1 @ 50.00	50.00

Code			Object		Amount
	XHT/Hospitality & Tourism	Foods I & II	Item # WA27854H, Foods Selection and Preparation Lab Manual, Nasco	1 @ 60.00	60.00
	XHT/Hospitality & Tourism	Foods I & II	Item # WA22443H, Games & Activities for Food Science & Nutrition, Nasco	1 @ 70.00	70.00
HATTING CONTROL OF THE PARTY OF	XHT/Hospitality & Tourism	Foods I & II	Item # WA32922H, How to Cook Everything: The Basics, Nasco	1 @ 34.00	34.00
ON RELIEVAÇÕES ANTINOMO PROPRIORI PR	XHT/Hospitality & Tourism	Foods I & II	Item # WA32923H, 2000 Recipes for Great Food, Nasco	1 @ 34.00	34.00
	XHT/Hospitality & Tourism	Foods I & II	Item # WA29767H, My Plate Cooking Demo Kit, Nasco	1 @ 49.00	49.00
Harris Attie datiend des Communementers et se	XHT/Hospitality & Tourism	Foods I & II	Item # WA31784(X)H, 50 App Activities for Food Safety and Sanitation, Nasco	1 @ 35.00	35.00
	XHT/Hospitality & Tourism	Foods I & II	Item # WA23228H, Recipe for Writing, Nasco	1 @ 40.00	40.00
	XHT/Hospitality & Tourism	Foods I & II	Item # WA32425H, Four Course FACS, Nasco	1 @ 75.00	75.00
	XHT/Hospitality & Tourism	Foods I & II	Item # WA25307H, Recipe for Reading, Nasco	1 @ 40.00	40.00
	XHT/Hospitality & Tourism	Foods I & II	Item # WA25228H, The FCS Teachers Companion, Nasco	1 @ 60.00	60.00
A CONTRACTOR OF THE CONTRACTOR	XHT/Hospitality & Tourism	Foods I & II	Item # WA25221H, Focus on FACS Bellwork Activities, Nasco	1 @ 45.00	45.00
National Confession and Confession a	XHT/Hospitality & Tourism	Foods I & II	Item # WA31311H, Waring Pro Prof. Deep Fryer, Nasco	1 @ 120.00	120.00

Code		The Section of the Se	Object		Amount
	XHT/Hospitality & Tourism	Foods I & II	Item # WA20242H, Cuisinart Smart Power Blender/Food Processor, Nasco	2 @ 97.00	194.00
	XHT/Hospitality & Tourism	Foods I & II	Item # WA18659H, Cuisinart Smart Power Blender, Nasco	4 @ 84.00	336.00
	XHT/Hospitality & Tourism	Foods I & II	Item # WA23337H, Presto Cool Touch Griddle, Nasco	4 @ 41.00	164.00
	XHT/Hospitality & Tourism	Foods I & II	Item # WA19716H, GE Microwave, Nasco	3 @ 193.00	579.00
	XHT/Hospitality & Tourism	Foods I & II	Item # WA24072H, Cuisinart Hand Blender, Nasco	2 @ 74.00	148.00
	XHT/Hospitality & Tourism	Culinary	Winco Insulated Plastic Food Carrier, Warehouse Restaurant Supply Store	2 @ 199.00	398.00
	XHT/Hospitality & Tourism	Culinary	Dolly for IFT-1 food carrier, Warehouse Restaurant Supply Store	1 @ 163.00	163.00
	XHT/Hospitality & Tourism	Culinary	Winco Serving Tray, Warehouse Restaurant Supply Store	12 @ 6.00	72.00
	XETS/Education and Training Services	Child Development	Item # 41195, Adjustable Table 72x20 Black top/Black Frame, National Business Furniture	10 @ 321.00	3,210.00
	XETS/Education and Training Services	Child Development	Item # 52182, Square Black Stack Chair	30 @ 64.00	1,920.00
	XETS/Education and Training Services	Child Development	Item # 60412 04660412000P, Kenmore Top Freezer refrigerator w/wire shelves (white)6041, Sears	1 @ 499.00	499.00

Code			Object	The State of the S	Amount
	XETS/Education and Training Services	Child Development	Item # F421, Jumbo Eyedroppers, Beyond Play, LLC,	2 @ 17.00	34.00
	XETS/Education and Training Services	Child Development	Item # F896, Colormorph Molecule Ball, Beyond Play, LLC	1 @ 6.00	6.00
	XETS/Education and Training Services	Child Development	Item # F383, Pre-Printing Practice, Beyond Play, LLC	1 @ 17.00	17.00
	XETS/Education and Training Services	Child Development	Item # G968, Shakin the Chute CD, Beyond Play, LLC	1 @ 17.00	17.00
	XETS/Education and Training Services	Child Development	Item # G428, Playtime Parachute Fun CD, Beyond Play, LLC	1 @ 17.00	17.00
	XETS/Education and Training Services	Child Development	Item # H023, Cylinders, Beyond Play, LLC	1 @ 24.00	24.00
	XETS/Education and Training Services	Child Development	Item # H626, Cubes, Beyond Play, LLC	1 @ 24.00	24.00
	XETS/Education and Training Services	Child Development	Item # G022, Oball, Beyond Play, LLC	2 @ 9.00	18.00
	XETS/Education and Training Services	Child Development	Item # F339, Design and Drill Activity Center, Beyond Play, LLC	1 @ 40.00	40.00
	XETS/Education and Training Services	Early Childhood Education I	Item # ATC-6, Lock and Roll Storage Tubs, Constructive Playthings	1 @ 50.00	50.00
	XETS/Education and Training Services	Early Childhood Education I	Item # CPX-1008, Tough Totes, Constructive Playthings	5 @ 7.00	35.00
	XETS/Education and Training Services	Early Childhood Education I	Item # PGL-2, Action Fun Appliances, Constructive Playthings	1 @ 50.00	50.00
	XETS/Education and Training Services	Early Childhood Education I	Item # LER 2690, Teaching Cash Register, Constructive	1 @ 55.00	55.00

Code			Dbject		Amount
			Playthings		
A STATE OF THE STA					
	XETS/Education	Early Childhood	Item # WLN-16,	1 @ 90.00	90.00
2000	and Training	Education I	Wooden Doll Buggy,		
and the state of t	Services		Constructive		
NAME OF THE OWNER, WHEN THE OW	XETS/Education	Early Childhood	Playthings Item # MTC-261,	1 @ 13.00	12.00
The state of the s	and Training	Education I	Stethoscope,	1 @ 13.00	13.00
VIA TITLE OF THE PARTY OF THE P	Services	Education	Constructive		
			Playthings		
THE PARTY OF THE P	XETS/Education	Early Childhood	Item # MTC-440,	1 @ 70.00	70.00
THE PART OF THE PA	and Training	Education I	Pick-A-Peg,		
TPARTE IN THE PARTE IN THE PART	Services		Constructive		
	XETS/Education	Early Childhood	Playthings Item # WOW-300,	1 @ 30.00	20.00
	and Training	Education I	Giant Peg Grading	1 @ 30.00	30.00
	Services	Education	Board,		
			Constructive		
			Playthings		
	XETS/Education	Early Childhood	Item # KRP-643,	1 @ 50.00	50.00
	and Training	Education I	Deluxe Marble Run,		
	Services		Constructive Playthings		
	XETS/Education	Early Childhood	Item # WIN-565,	1 @ 300.00	300.00
New Property Company	and Training	Education I	Carry-all School Bus	1 (12 500.00	300.00
	Services		Trike,		
			Constructive		
STATE OF THE PROPERTY OF THE P	7,556,751		Playthings		
o de la companya de	XETS/Education	Early Childhood	Item # 78BC8349,	1 @ 249.00	249.00
MAC WAR	and Training Services	Education I, II & Uconn classes	Building Mathematical		
e de la companya de	Scrvices	Ocomi ciasses	Competencies,		
war sand			Insight Media		
e de la constante de la consta	XETS/Education	Early Childhood	Item # 78BC8440,	1 @ 149.00	149.00
Remains	and Training	Education I, II &	The Role of		
	Services	Uconn classes	Mandated Child		
PENISANGII			Abuse Reporters,		100 A
	XETS/Education	Early Childhood	Insight Media Item # 78BC8038,	1 @ 229.00	229.00
WANTED TO THE PERSON OF THE PE	and Training	Education I, II &	How Results Can be	1 (0) 227.00	449.00
	Services	Uconn classes	Misleading,		
A CONTACTOR OF THE CONT			Insight Media		
The state of the s	XETS/Education	Early Childhood	Item # 3525-DVD,	1 @ 80.00	80.00
Name of the last	and Training	Education 1 &	The Brain: Dev.		
	Services	Uconn classes	Memory in Dev.		
			Brains Birth to Five, Learning Zone		
			Express		
BOOKATION OF THE PROPERTY OF T	The same and the s				- was a second and the second and th

Code			Dbject		Amount
	XETS/Education and Training Services	Early Childhood Education I & Uconn classes	Item # 3494-DVD, Child Development Theorists, Learning Zone Express	1 @ 80.00	80.00
	XETS/Education and Training Services	Early Childhood Education I & Uconn classes	Item # 300042, Child Development Careers, Learning Zone Express	1 @ 80.00	80.00
	XETS/Education and Training Services	Early Childhood Education I & Uconn classes	Item # 100129, 50 APP Activities for Child Development, Learning Zone Express	1 @ 35.00	35.00
referenties of complete for the factor of comple	XETS/Education and Training Services	Early Childhood Education	Item # 543628, When You Just Have to Roar Book, Red Leaf Press	1 @ 16.00	16.00
THE STATE OF THE S	XETS/Education and Training Services	Early Childhood Education	Item # 541055, CDA Prep DVD for Center Based Preschool, Red Leaf Press	1 @ 20.00	20.00
	XETS/Education and Training Services	Early Childhood Education	Item # 593943, Another Encyclopedia of Theme Activities, Red Leaf Press	1 @ 25.00	25.00
The state of the s	XETS/Education and Training Services	Early Childhood Education	Item # 418501, The Language of Art Set, Red Leaf Press	1 @ 125.00	125.00
Note that the state of the stat	XETS/Education and Training Services	Early Childhood Education	Item # 540405, One, Two, What Can I Do, Red Leaf Press	1 @ 40.00	40.00
SPORTEGO STATE CONTRACTOR TO STATE CONTRACTOR	XETS/Education and Training Services	Early Childhood Education	Item # 535501, Room Arrangement as a Teaching Strategy, Red Leaf Press	1 @ 60.00	60.00
WAS THE PROPERTY OF THE PROPER	XETS/Education and Training Services	Early Childhood Education	Item # 150366, Preschoolers Development DVD Set, Red Leaf Press	1 @ 325.00	325.00
	XETS/Education and Training Services	Early Childhood Education	Item # 405859, A Child's Mind, Red Leaf Press	1 @ 125.00	125.00

Code			Object		Amount
XETS/Ed and Train Services	ing	Early Childhood Education	Item # 405875, Guiding Behavior in Early Childhood, Red Leaf Press	1 @ 125.00	125.00
XETS/Ed and Train Services	ing	Early Childhood Education	Item # 835002, Concept Clips, Red Leaf Press	1 @ 90.00	90.00
XHSS/Hu Services	8	Early Childhood Education 9 <sup>th</sup> & 10 <sup>th</sup> Grade	Item # WA25760H, Fiskars Premium Classroom Pack/pointed Tip Scissors, Nasco	2 @ 64.00	128.00
XHSS/Ht Services	1	Early Childhood Education 9 <sup>th</sup> & 10 <sup>th</sup> Grade	Item # WA22879, Rolling 10 drawer organizer, Nasco	2 @ 72.00	144.00
XCON/A and Const		Construction	Item # 719200, Jet Variable Speed Wood Lathe, Tools Plus	4 @ 800.00	3,200.00
XCON/A and Const	enteres a contraction of a contract of the con	Construction	Item # JS572EL, Bosch Top Handle Jig Saw, Tools Plus	2 @ 250.00	500.00
and Const	truction	Construction	Item # ROS20VSC5, Bosch Random Orbital Sander	4 @ 60.00	240.00
XCON/A and Const		Construction	Item # VMIDUP, Vega Midi Duplicator, Penn State Industries	4 @ 300.00	1,200.00
and Const	truction	Construction	Item # VMIDUPT, Template Adapter, Penn State Industries	4 @ 35.00	140.00
XCON/A and Const		Construction	Item # VMIDUPXK, Diamond Shaped Cutter & Kit, Penn State Industries	4 @ 110.00	440.00
XCON/A and Const		Construction	Item # PKM-FLC, Maxi-Mandrel, Penn State Industries	4 @ 18.00	72.00
and Const	truction	Construction	Item # PKMSTS1, Mandrel Saver, Penn State Industries	4 @ \$17.00	68.00
XCON/A and Const		Construction	Item # SS100KITSF, School Equipment Package, Penn State Industries	4 @ 695.00	2,780.00

Code	行 <b>与</b> 对于1000年(4)		Object	AND AND STREET	Amount
	XCON/Architecture and Construction	Construction	Item # TPL7MM1, Slimline Pen Set 1 Duplicating Template, Penn State Industries	4 @ 12.55	50.00
	XCON/Architecture and Construction	Construction	Item # TPL7MM2, Slimline Pen Set 2 Duplicating Template, Penn State Industries	4 @ \$12.55	50.00
	XCON/Architecture and Construction	Construction	Item # TPLMONT, Designer Pen & Pencil Duplicating Template, Penn State Industries	4 @ 5.20	21.00
	XCON/Architecture and Construction	Construction	Item # TPL14, Wine Bottle Stopper Duplicating Template, Penn State Industries	4 @ 10.45	42.00
	XCON/Architecture and Construction	Construction	Item # PKP12, Mini Penlights, Penn State Industries	4 @ 10.45	42.00
	XCON/Architecture and Construction	Construction	Item # CHESSET2, Chessmen Starter Set, Penn State Industries	4 @ 20.00	80.00
	XTDL/ Transportation, Dist. and Logistics Services	Auto – Power – Transportation	Item # OEXM710B, Metric-Combo Wrench Set, Snap-On Tools	1 @ 165.00	165.00
	XTDL/ Transportation, Dist. and Logistics Services	Auto – Power – Transportation	Item # OEXS715K, SAE Combo Wrench Set, Snap-On Tools	1 @ 305.00	305.00
	XTDL/ Transportation, Dist. and Logistics Services	Auto – Power – Transportation	Item # V0806 B, Open End Wrench Set, Snap-On Tools	1 @ 106.00	106.00
	XTDL/ Transportation, Dist. and Logistics Services	Auto – Power – Transportation	Item # EXDMS48, Extractor Set, Snap-On Tools	1 @ 313.00	313.00
	XTDL/ Transportation, Dist. and Logistics Services	Auto – Power – Transportation	Item # YA700 B, Steel Service Jack, Snap-On Tools	1 @ 400.00	400.00
	XTDL/ Transportation, Dist. and Logistics Services	Auto – Power – Transportation	Item # GA237, Steel Stamps 0-9, Snap-On Tools	1 @ 18.00	18.00

Code	neternova po policio de C	bject		Amount
XTDL/ Transportation, Dist. and Logistic Services		Item # GA238, Steel Stamps A-Z, Snap-On Tools	1 @ 54.00	54.00
XTDL/ Transportation, Dist. and Logistic Services		Item # YA8610B, Universal Brake Caliper Tool, Snap-On Tools	1 @ 193.00	193.00
XTDL/ Transportation, Dist. and Logisti Services	Auto – Power – Transportation	Item # CT8850, Impact Gun, Snap-On Tools	1 @ 468.00	468.00
XAVC/Arts, Aud Video Tech., and Comm. Services		Item # 28D0550, Lexmark Color LaserJet Multifunction Printer CX410DE, Zones	2 @ 674.00	1,348.00
XAVC/Arts, Aud Video Tech., and Comm. Services		Item # MAMP03955, MakerBot Digitizer Desktop 3D Scanner	1 @ 799.00	799.00
XTDL/ Transportation, Dist. and Logisti Services	Auto I, Auto II	Item # 1049289, Jump Starter, Brodhead Garrett	1 @ 618.00	618.00
XTDL/ Transportation, Dist. and Logisti Services	Auto I, Auto II	Item # 1047672, Dial Indicator, Brodhead Garrett	1 @ 228.00	228.00
XTDL/ Transportation, Dist. and Logisti Services	Auto I, Auto II	Item # ESI725, Battery Charging System Tester, Century Tool & Equipment	1 @ 239.00	239.00
XTDL/ Transportation, Dist. and Logisti Services	Auto I, Auto II	Item # MDTAMP100, Digital AMP Clamp Meter, Century Tool & Equipment	1 @ 170.00	170.00
XITS/ Info. Tech Telecom Service		Item # HWIC-2T, Cisco High Speed expansion module, CDW-G	3 @ 499.00	1,497.00
XITS/ Info. Tech Telecom Service		Item # CAB-SS- V35MT, Cisco V.35 cable, 10 ft., blue CDW-G	3 @ 74.00	222.00

Code		0	bject		Amount
Teleco	Info. Tech. om Services	Cisco Networking	Item # CAB-SS- V35FC, Cisco V.35 cable, 10 ft., CDW-G	3 @ 74.00	222.00
18 1	Info. Tech. om Services	Cisco Networking	Item # CAB- CONSOLE-USB, Cisco USB cable, 6 ft., CDW-G	3 @ 33.00	99.00
10 1	Info. Tech. om Services	Cisco Networking	Item # CAB- CONSOLE-RJ45, Cisco serial cable, 6 ft., CDW-G	3 @ 26.00	78.00
IR i	Info. Tech. om Services	Cisco Networking	Item # 9356B001, Canon PowerShot ELPH 150 IS, CDW-G	6 @ 120.00	720.00
IP	Info. Tech. om Services	Cisco Networking	Item # SDSDB- 004G-B35, SanDisk – flash memory card, 4 GB, SDHC, CDW-G	12 @ 8.00	96.00
	Info. Tech. om Services	Cisco Networking	Item # U352-000- MD, Tripp Lite USB 3.0 SuperSpeed Multi Drive Smart Card Flash Reader/Writer, CDW-G	4 @ 36.00	144.00
18	N/ recture and ruction	Architecture	Item # 850615, Contractor Grade Clamping Miter Box, Midwest Technology Products	4 @ 62.00	248.00
IR I	I/ ecture and ruction	Architecture	Item # 192968, Corner Clamp, Midwest Technology Products	12 @ 12.00	144.00
IB .	N/ recture and ruction	Architecture	Item # 192990, 4- Corner Framing Clamps, Midwest Technology Products	4 @ 26.50	106.00
18	N/ recture and ruction	Architecture	Item # 305735, Craftsman Spring Clamp Set, 6 piece, Midwest Technology Products	4 @ 16.20	65.00

Code			Object		Amount
	XCON/ Architecture and Construction	Architecture	Item # 962532, Columbian Woodcraft Vise, 4- 1/2", Midwest Technology Products	4 @ 40.00	160.00
	XCON/ Architecture and Construction	Architecture	Item # 281151, 6" Coping Saw, Midwest Technology Products	2 @ 9.00	18.00
	XCON/ Architecture and Construction	Architecture	Item # 192086, Style 1400 C-clamps, Midwest Technology Products	4 @ 12.00	48.00
	XCON/ Architecture and Construction	Architecture	Item # 192100, Style 1400 C-Clamps, Midwest Technology Products	4 @ 19.00	76.00
	XCON/ Architecture and Construction	Architecture	Item # 281008, Great Neck End Nipper Pliers, 6"L, Midwest Technology Products	6 @ 11.00	66.00
	XCON/ Architecture and Construction	Architecture	Item # 619067, The Original Long Nose Locking Pliers w/ wire cutter, Midwest Technology Products	6 @ 14.00	84.00
	XCON/ Architecture and Construction	Architecture	Item # 307016, MultiMaster Snips, Midwest Technology Products	6 @ 22.00	132.00
	XCON/ Architecture and Construction	Architecture	Item # 312829, Half Round Wood File, Midwest Technology Products	6 @ 18.00	108.00
	XCON/ Architecture and Construction	Architecture	Item # 511202, Short Ferrule File Handle, Midwest Technology Products	4 @ 2.00	8.00
	XCON/ Architecture and Construction	Architecture	Item # 613839, Zona Ultra-Thin Saw Razor Saw, Midwest Technology Products	4 @ 8.00	32.00
	XCON/ Architecture and Construction	Architecture	Item # 845020, Stanley Classic 99 Retractable Utility Knife,	4 @ 7.00	28.00

Code		Object		Amount
		Midwest Technology Products		
XCON/ Architecture and Construction	Architecture	Item # 528351, Marshalltown Polyethylene handle Steel Blade Putty Knives, Midwest Technology Products	4 @ 5.00	20.00
XCON/ Architecture and Construction	Architecture	Item # 855082, Stanley Sliding T- Bevel, Midwest Technology Products	4 @ 6.00	24.00
XCON/ Architecture and Construction	Architecture	Item # 486985, Johnson Heavy Duty Aluminum Line Level, 3"L, Midwest Technology Products	6 @ 3.50	21.00
XCON/ Architecture and Construction	Architecture	Item # 853891, Stanley High Impact ABS Plastic Level, Midwest Technology Products	6 @ 5.16	31.00
XCON/ Architecture and Construction	Architecture	Item # 486970, Structo-Cast Try/Miter Squares, Midwest Technology Products	4 @ 6.50	26.00
XCON/ Architecture and Construction	Architecture	Item # 487030, Structo-Cast Rafter Angle Squares, Midwest Technology Products	4 @ 11.00	44.00
XCON/ Architecture and Construction	Architecture	Item # 410915, High-temp 40W Glue Gun, Midwest Technology Products	6 @ 8.50	51.00
XCON/ Architecture and Construction	Architecture	Item # 619569, Quick-Grip One- handed Mini Bar Clamp, 12", Midwest Technology Products	6 @ 14.00	84.00
XCON/ Architecture and Construction	Architecture	Item # 619585, Quick-Grip One- handed Mini Bar Clamp, 6",	6 @ 13.00	78.00

Code			Object		Amount
VISCHII DANI SANI SANI SANI SANI SANI SANI SANI S			Midwest Technology Products		
	XCON/ Architecture and Construction	Architecture	Item # 281173, Extra Mark Power Tape Rule, Midwest Technology Products	2 @ 4.00	8.00
	XCON/ Architecture and Construction	Architecture	Item # 343104, Dremel 3000 Variable Speed Rotary Tool Kit, 24- piece, Midwest Technology Products	2 @ 101.00	202.00
	XCON/ Architecture and Construction	Architecture	Item # 343411, Dremel Rotary Tool Super Accessory Kit, 160-piece, Midwest Technology Products	4 @ 48.00	192.00
	XCON/ Architecture and Construction	Architecture	Item # 343850, Dremel Rotary Tool MultiPro Chuck, Midwest Technology Products	4 @ 13.30	53.00
	XCON/ Architecture and Construction	Architecture	Item # 482786, Magnifier Lamp, Midwest Technology Products	2 @ 32.00	64.00
	XCON/ Architecture and Construction	Architecture	Item # 260298, Skil 10" Bench Drill Press w/Laser, Midwest Technology Products	2 @ 168.00	336.00
	XCON/ Architecture and Construction	Architecture	Item # 242921, DeWalt ½" 14.4V Cordless Drill Kit, Midwest Technology Products	2 @ 302.00	604.00
ACLES AND ACCOUNTS	XCON/ Architecture and Construction	Architecture	Item # 774025, Shop-Vac Micro Vacuum, Midwest Technology Products	2 @ 55.00	110.00
AND ADDRESS OF THE PROPERTY OF	XCON/ Architecture and Construction	Architecture	Item # 847800, Stanley Contractor Grade Mini Hack Utility Hacksaw Frame, Midwest Technology	2 @ 8.00	16.00

Code			)bject		Amount
			Products		
IB i	N/ tecture and truction	Architecture	Item # 260290, Skil 9" Band Saw w/Light, Midwest Technology Products	2 @ 185.00	370.00
IB .	N/ tecture and truction	Architecture	Item # 242921, DeWalt XRP Battery Pack, 14.4V, Midwest Technology Products	2 @ 97.00	194.00
	portation, and Logistics	Auto I, Auto II, Power Tech	Item # 566267 255-850, Miller Protection Started Pack, Midwest Technology Products	8 @ 192.00	1,536.00
	portation, and Logistics	Auto I, Auto II, Power Tech	Item # 885410 92160, Leather Apron, Midwest Technology Products	8 @ 25.30	203.00
	portation, and Logistics	Auto I, Auto II, Power Tech	Item # 772729 80211, Cutting Goggle, Midwest Technology Products	5 @ 18.30	92.00
	portation, and Logistics	Auto I, Auto II, Power Tech	Item # 405623 1421-0062, Storage Tube, Midwest Technology Products	3 @ 26.00	78.00
	portation, and Logistics	Auto I, Auto II, Power Tech	Item # 619460 18SP, Locking C-Clamp, Midwest Technology Products	4 @ 32.00	128.00
XTD Trans	L/ portation, and Logistics	Auto I, Auto II, Power Tech	Item # 772667 90445, Eye Face Wash Station, Midwest Technology Products	1 @ 289.00	289.00
Dist. Servi	portation, and Logistics ces	Auto I, Auto II, Power Tech	Item # 772579 39150, Shade 5 Face Shield, Midwest Technology Products	4 @ 40.50	162.00
Resea	Γ/Scientific arch, Engr. and Services	CAD and Drafting, Engineering Design, Architecture	MakerBot 3D Digitizer, MakerBot	2 @ 799.00	1,598.00

Code		0	bject		Amount
Services	rtation, Pove de Logistics	to I, Auto II, wer Tech	Item # 335924, 18V Cordless Hammer drill, Northern Tool and Equipment	1 @ 249.00	249.00
Services	rtation, Por d Logistics	to I, Auto II, wer Tech	Item # 24925, Fuel Transfer Pump, Northern Tool and Equipment	1 @ 200.00	200.00
XMAN/ Manufao		etals chnology	Item # 12-2454, Metal Gauge NF, Paxton Patterson	2 @ 29.50	59.00
XMAN/ Manufac		etals chnology	Item # 12-2456, Metal Gauge Fe, Paxton Patterson	2 @ 28.00	56.00
XMAN/ Manufac		etals chnology	Item # 12-2426, Divider 6", Paxton Patterson	20 @ 19.20	384.00
XMAN/ Manufac		etals chnology	Item # 12-2428, Outside Caliper, Paxton Patterson	20 @ 19.50	390.00
XMAN/ Manufac	1	etals chnology	Item # 12-2430, Inside Caliper, Paxton Patterson	20 @ 20.50	410.00
XMAN/ Manufao		etals chnology	Item # 12-2096, Starrett V-Block and Clamp, Paxton Patterson	2 @ 120.00	240.00
XMAN/ Manufac		etals chnology	Item # 12-0070, Starrett Vocational Tool Chart/set, Paxton Patterson	1 @ 37.00	37.00
XMAN/ Manufac		etals chnology	Item # 12-2328, Starrett Steel Combination Square Set 12", Paxton Patterson	20 @ 95.25	1,905.00
XMAN/ Manufac		etals chnology	Item # 12-27776, Outside Micrometer 0-1", Paxton Patterson	20 @ 28.25	565.00
XMAN/ Manufa		etals chnology	Item # 10-2830, 6-piece File Assortment, Paxton Patterson	3 @ 75.00	225.00
XMAN/ Manufa		etals chnology	Item # 10-2630, Three Square File 10", Paxton Patterson	10 @ 16.70	167.00

Code		Object		Amount
XMAN/ Manufacturing	Metals Technology	Item # 24-0013, Sellstrom Auto Darkening Helmet, Paxton Patterson	10 @ 117.00	1,170.00
XMAN/ Manufacturing	Metals Technology	Item # 2575-3002, Medium Duty Live Center, Paxton Patterson	2 @ 53.00	106.00
XMAN/ Manufacturing	Metals Technology	Item # 24-2740, Weldcraft TIG torch, Paxton Patterson	2 @ 120.00	240.00
XMAN/ Manufacturing	Metals Technology	Item # 24-2448, TIG Accessory Kit, Paxton Patterson	2 @ 65.50	131.00
XMAN/ Manufacturing	Metals Technology	Item # 44-3234, 52- piece Clamping Kit, Paxton Patterson	1 @ 130.00	130.00
XMAN/ Manufacturing	Metals Technology	Item # 44-3246, R-8 Collet Rack, Paxton Patterson	1 @ 41.00	41.00
XMAN/ Manufacturing	Metals Technology	Item # 44-0010, JET 24-piece Milling Kit, Paxton Patterson	1 @ 395.00	395.00
XMAN/ Manufacturing	Metals Technology	Item # 44-0008, JET 22-piece Turning Kit, Paxton Patterson	1 @ 300.00	300.00
XMAN/ Manufacturing	Metals Technology	Item # 12-0080, Starrett Depth Attachment for 6" Caliper, Paxton Patterson	1 @ 72.00	72.00
XMAN/ Manufacturing	Metals Technology	Item # 12-2464, Adjustable Trammel, Paxton Patterson	1 @ 45.00	45.00
XMAN/ Manufacturing	Metals Technology	Item # 12-2450, Carbide Tip Scriber, Paxton Patterson	20 @ 7.00	140.00
XMAN/ Manufacturing	Metals Technology	Item # 45-0166, R-8 Round Collet Set, Paxton Patterson	1 @ 115.00	115.00
XTDL/ Transportation, Dist. and Logistics Services	Auto I, Auto II, Power Tech	Item # 35-0100, Protective Eyewear Cabinet, Paxton Patterson	1 @ 780.00	780.00

Code		Object		Amount
XTDL/ Transportation, Dist. and Logistics Services	Auto I, Auto II, Power Tech	Item # 24-2220, Liquid Proof Gloves, Paxton Patterson	6 @ 3.00	18.00
XTDL/ Transportation, Dist. and Logistics Services	Auto I, Auto II, Power Tech	Item # 18-3382, Plastigauge .001- .007, Paxton Patterson	2 @ 11.00	22.00
XTDL/ Transportation, Dist. and Logistics Services	Auto I, Auto II, Power Tech	Item # 18-3384, Plastigauge .007020, Paxton Patterson	2 @ 16.00	32.00
XTDL/ Transportation, Dist. and Logistics Services	Auto I, Auto II, Power Tech	Item # 131TMPB, ¼" General Service Set, Snap-On Inc.	1 @ 525.00	525.00
XTDL/ Transportation, Dist. and Logistics Services	Auto I, Auto II, Power Tech	Item # RKRFC72, Kit Ratchet, Snap-On Inc.	1 @ 10,00	10.00
XTDL/ Transportation, Dist. and Logistics Services	Auto I, Auto II, Power Tech	Item # RKRF80, Kit Ratchet, Snap-On Inc.	1 @ 10.00	10.00
XTDL/ Transportation, Dist. and Logistics Services	Auto I, Auto II, Power Tech	Item # FC72, Ratchet, Snap-On Inc.	1 @ 80.00	80.00
XTDL/ Transportation, Dist. and Logistics Services	Auto I, Auto II, Power Tech	Item # FR80, Ratchet, Snap-On Inc.	1 @ 110.00	110.00
XTDL/ Transportation, Dist. and Logistics Services	Auto I, Auto II, Power Tech	Item # FKF80, Ratchet, Snap-On Inc.	1 @ 100.00	100.00
XTDL/ Transportation, Dist. and Logistics Services	Auto I, Auto II, Power Tech	Item # KF80, Ratchet, Snap-On Inc.	1 @ 90.00	90.00
XTDL/ Transportation, Dist. and Logistics Services	Auto I, Auto II, Power Tech	Item # S80A, Ratchet, Snap-On Inc.	1 @ 150.00	150.00
XTDL/ Transportation, Dist. and Logistics Services	Auto I, Auto II, Power Tech	Item # BRUTUS3R250D, Torque Wrench ½", Snap-On Inc.	1 @ 429.00	429.00
XTDL/ Transportation, Dist. and Logistics	Auto I, Auto II, Power Tech	Item # QD275, Torque Wrench 3/8", Snap-On Inc.	1 @ 295.00	295.00

Code	PATRICIA DE SANCIA	0	bject	E ALL THE LOCK THE	Amount
	Services				
	XTDL/ Transportation, Dist. and Logistics Services	Auto I, Auto II, Power Tech	Item # QD1200, Torque Wrench 1/4", Snap-On Inc.	1 @ 275.00	275.00
	XTDL/ Transportation, Dist. and Logistics Services	Auto I, Auto II,	Item # DSO-3200C, Digital Storage Oscilloscope, Sun Equipment Corp.	1 @ 957.00	957.00
	XCON/ Architecture and Construction	Woods Construction, Replace degraded machines and Power Tools missing parts.	Item # 2403-22, Milwaukee M12 Fuel ½" Drill/Driver Kit, Tools Plus	2 @ 169.00	338.00
	XCON/ Architecture and Construction	Woods Construction, Replace degraded machines and Power Tools missing parts.	Item # JS572EBL, Bosch Barrel-Grip Jig Saw Kit + l-Box-2, Tools Plus	2 @ 239.00	478.00
	XCON/ Architecture and Construction	Woods Construction, Replace degraded machines and Power Tools missing parts.	Item # 2600-22-2, Bahco 22" x 10pt Superior Hand Saw, Tools Plus	1 @ 50.00	50.00
	XCON/ Architecture and Construction	Woods Construction, Replace degraded machines and Power Tools missing parts.	Item # 9, Vaughan Type 9, 10 oz. Trim Hammer, Tools Plus	6 @ 17.00	102.00
	XCON/ Architecture and Construction	Woods Construction, Replace degraded machines and Power Tools missing parts.	Item # 11-414, Plumb Rip Claw Hammer, Tools Plus	4 @ 19.00	76.00
	XCON/ Architecture and Construction	Woods Construction, Replace degraded machines and Power Tools missing parts.	Item # 58-930, Stanley Contractor's Cushion Grip Nail Set, Tools Plus	4 @ 9.00	36.00
	XCON/ Architecture and Construction	Woods Construction, Replace degraded machines and	Item # 16-150, Stanley Short Blade Wood Chisel Set, Tools Plus	4 @ 10.00	40.00

Code		0	bject	EF 1845. 1347.44.6	Amount
		Power Tools missing parts.			
	XCON/ Architecture and Construction	Woods Construction, Replace degraded machines and Power Tools missing parts.	Item # 16-971, Stanley FatMax Short Blade Chisel Set, Tools Plus	2 @ 55.00	110.00
	XCON/ Architecture and Construction	Woods Construction, Replace degraded machines and Power Tools missing parts.	Item # 301-5, Bahco Coping Saw,5 pk, Tools Plus	3 @ 60.00	180.00
	XCON/ Architecture and Construction	Woods Construction, Replace degraded machines and Power Tools missing parts.	Item # DW1969, DeWalt Pilot Point HSS Wood-Metal Drill Bit Set, Tools Plus	2 @ 60.00	120.00
ū	XCON/ Architecture and Construction	Woods Construction, Replace degraded machines and Power Tools missing parts.	Item # 63144, Wilton Pivot Jaw Woodworking Vise, Tools Plus	2 @ 165.00	330.00
	XCON/ Architecture and Construction	Woods Construction, Replace degraded machines and Power Tools missing parts.	Item # DSB5010, Bosch Daredevil Spade Bit Set w/Extension, Tools Plus	2 @ 22.00	44.00
	XCON/ Architecture and Construction	Woods Construction, Replace degraded machines and Power Tools missing parts.	Item # DSB5010, DeWalt Phillips 2" Power Bit, Tools Plus	50 @ 1.00	50.00
	XITS/ Info. Tech. Telecom Services	Electronics	Item # 03PV324, Electronic Work Center, Electronix Express	6 @ 90.00	540.00
	XITS/ Info. Tech. Telecom Services	Electronics	Item # 0603ZD98, Economy Soldering Station, Electronix Express	8 @ 15.25	122.00
	XITS/ Info. Tech. Telecom Services	Electronics	Item # 606793111, Tip Conical, Electronix Express	16 @ 1.00	16.00

Code		C	Dbject		Amount
	XITS/ Info. Tech. Telecom Services	Electronics	Item # 60512, Economy 3 wire soldering iron, Electronix Express	10 @ 4.00	40.00
	XITS/ Info. Tech. Telecom Services	Electronics	Item # 60838, Helping Hand, Electronix Express	12 @ 6.00	72.00
	XITS/ Info. Tech. Telecom Services	Electronics	Item # 0608RD7382, Desolder Pump, Electronix Express	6 @ 5.50	33.00
	XITS/ Info. Tech. Telecom Services	Electronics	Item # 60200, Mini diagonal cutter, Electronix Express	24 @ 1.50	36.00
	XITS/ Info. Tech. Telecom Services	Electronics	Item # 29BDPD600, Rechargeable Drill, Electronix Express	4 @ 35.00	140.00
	XITS/ Info. Tech. Telecom Services	Electronics	Item # 03WCB102, Breadboard, Electronix Express	20 @ 4.25	85.00
	XSRT/Scientific Research, Engr. and Tech Services	Principles of Engineering	Item # 72-4584, Dragster Race System — Manual Start, Paxton Patterson	1 @ 680.00	680.00
700	In accordance with the	uch machinery, tools, ne Connecticut State ( ory are all items of e	Comptroller's definition quipment with a value of	of equipment, Fover \$1,000 and the	257,812
	Career Cluster/ Area of Concentration	Name of course equipment is requested for and Rationale for Use	List each item, description and vendor	Quantity and cost per unit	Amount
	XHS/Health Services	Allied Health, To enhance student learning related to Vital Signs specific to Blood Pressure Equipment used in specialized clinical areas.	GE Carescape V100 Patient Monitor w/DINAMAP Technology Medical Device Depot	2 @ 2,995.00	5,990.00

Code	0	bject	Maria San Albania	Amount
XHS/Health Services	Foundations – Vital Signs, This item is tied directly to our Medical assistant curriculum. The BP arm is included in the essential skill set for Medical Assisting: Measuring and Recording Vital Signs and is a part of the certification requirements. The BP arm will be utilized with all students of the Health Services strand, Vital Signs is embedded as an essential career skill in all of our curriculums.	Item # 11-81-1129N, BP Training Arm – 3 year warranty, Pocket Nurse	1 @ 1,150.00	1,150.00
XHS/Health Services  XBAS/Business & Admin. Services	Allied Health — Medical Assistant, This item is tied directly to our Medical assistant curriculum. The EKG machine is included in the essential skill set for Medical Assisting: Recording and Mounting an EKG and is a part of the certification requirements. Multimedia, Computers will be used to teach Microsoft Word/ Multimedia. The students will use	Item # 02-43-5176N, ECG/EKG Machine, 3 year warranty, Pocket Nurse  Item # 10BBS0H300, Thinkcentre M73z AIO Computer, NSI	1 @ 2,600.00  24 @ 1,072.00	2,600.00
	them to perform necessary tasks.			

Code	ALC: U.S. A. S.	0	bject		Amount
	XBAS/Business & Admin. Services	Multimedia, Computers will be used to teach Microsoft Word/ Multimedia. The students will use them to perform necessary tasks.	Item # 20BFS3AG00, ThinkPad T540 Notebook, NSI	3 @ 1,207.00	3,621.00
	XBAS/Business & Admin. Services	Microsoft Office Multimedia, These are on hands courses, requiring the latest hardware and software. This is a required course for technology credit for graduation.	Item # 10A6S1GN00, Thinkcentre M93P Tower, NSI	21 @ 931.00	19,551.00
	XBAS/Business & Admin. Services	Microsoft Office Multimedia, These are on hands courses, requiring the latest hardware and software. This is a required course for technology credit for graduation.	Item#60AFHAR1US, 21.5" E2223s Wide Screen Flat Panel, NSI	21 @ 142.00	2,982.00
	XHT/Hospitality & Tourism	Foods and Advanced Foods  - We have two rooms that do not have demonstration tables. These are needed to show proper technique for whole group learning.	Item # Z11301H, Food Demonstration Table, Nasco	1 @ 1,650.00	1,650.00
	XETS/Education and Training Services	Child Development – There is a need for more computers for student use	Item # 10BBS0H300, Thinkcentre M73z AIO Computer, NSI	5 @ 1072.00	5,360.00
	XHSS/Human Services	Child Development II Mrs. Buerkle's plan is to move	Item # 10281502, 5 Baby Starter Package, Realityworks	1 @ 4,215.00	4,215.00

Code	(A)	0	bject	(A) (A) (A) (A) (A)	Amount
		Wilby High School to smaller learning communities. The anticipation will be a human services pathway which includes Child Development 11. The anticipation of students is greater then has been in the past. Presently, in a class of 16 students I have 4 Baby Think It Over computerized dolls.			
	XAVC/Arts, Audio Video Tech., and Comm. Services	Computer Lab for CAD, Electronics and Graphic Communications  – To replace existing computers that are now outdated.	Item # 10A6S1GN00, Thinkcentre M93P Tower, NSI	24 @ 931.00	22,344.00
	XAVC/Arts, Audio Video Tech., and Comm. Services	Computer Lab for CAD, Electronics and Graphic Communications  – To replace existing computers that are now outdated.	Item#60B0HAR1US, 23" E2323 Wide Screen Plat Panel, NSI	24 @ 163.00	3,912.00
	XMAN/ Manufacturing	Manufacturing, Blueprint Reading, Lathe, Milling, Benchwork, CNC- Supplement activities, theory and resources for students that can be applied to all manufacturing courses.	Item # ToolingU Web-based Software, ToolingU-SME	1 @ 7,200.00	7,200.00

Code	Telephone State of the State of	0	bject	E CONTRACTOR OF THE	Amount
	XMAN/ Manufacturing	Manufacturing, Blueprint Reading, Lathe, Milling, Benchwork, CNC- Engineering Design Software for students to develop Blueprint, CAD and CAM skills.	Item # SE-I-0122, Solidworks Software Package Item # SE-X-0022, Solidworks Software Package, Technical Education Solutions, LLC	1 @ 1,900.00 3 @ 300.00	2,800.00
	XMAN/ Manufacturing	Manufacturing, Blueprint Reading, Lathe, Milling, Benchwork, CNC- Engineering Design Software for students to develop Blueprint, CAD and CAM skills.	MasterCAM for Solidworks Add-on Software Package (20 seat net), MasterCAM for Solidworks Software Maintenance Package (20 seat), MasterCAM for Solidworks Software Package (Inst. License),	1 @ 4,000.00 1 @ 960.00 3 @ 250.00	6,070.00
	XMAN/ Manufacturing	Machine Tools/Devices,	MasterCAM for Solidworks Maintenance Package (3 Inst. Maintenance), Technical Education Solutions, LLC Item # 93-20008, Clear Plastic Top	3 @ 120.00 1 @ 795.00	4,900.00
	wanutacturing	Machine Safety and professional manufacturing simulation	Clear Plastic Top Cover for MiniMill, Item # WL-MM, Work Light, Item # HFP-MM, High Flow Coolant Pump Kit 3/4hp, Item # IPS, Haas Intuitive Programming System, Labor & Delivery	1 @ 495.00 1 @ 895.00 1 @ 1,995.00	
	XTDL/ Transportation, Dist. and Logistics Services	Auto I, Auto II, Allows for coolant in car to be exchanged without starting the engine. Safer for students, no need to spend	Charges Item # RO75700, Robinair Coolant Exchanger, Century Tool & Equipment	1 @ 1,911.00	1,911.00

Code		0	bject	H ZARABANA	Amount
		time warming engine up.			
	XITS/ Info. Tech. Telecom Services	Cisco Networking, Equipment needed for 716 Cisco Networking course	Item # CISCO1941/K9, Cisco 1941 router, CDW-G	3 @ 1,137.00	3,411.00
	XCON/ Architecture and Construction	Woods Construction, Upgrade Table Saw for Safety	SawStop Professional Table Saw, Item # PCS31230, 3HP, 1ph, 230V, Item # TGP236, 36" T-Glide, Item # TSA-ODC, Overarm Dust Collection, Item # OFT30-CNS- 000, Outfeed Table, Item # TSBC-10R2, Standard Brake Cartridge, Item # TSDC-8R2, Dado Brake Cartridge, Item # TSI-SLD, Standard Zero Clearance Insert, Item # TSI-DLD, Dado Zero Clearance Insert, Coastal Tool and	1 @ 2,299.00  1 @ 430.00  1 @ 170.00  1 @ 199.00  1 @ 99.00  1 @ 69.00  1 @ 89.00  1 @ 39.00  1 @ 39.00	3,433.00
	XETS/Education and Training Services  I used XETS because the software is used to control the computers and can be used for any course. Therefore it's Education and Training. Alternatively, it	All Tech Ed courses that use computers. Deep Freeze locks computers so students can't make changes or destroy computer configurations.	Supply Item # DFE0.NA2LA.VU0. E06.SN, Deep Freeze ENT NA EDU Version Upgrade 100+, Item # DFE0.NA2LA.MU1. E06.SN, Deep Freeze ENT NA EDU Maintenance Renewal 1 yr. 100+, Item # DFM0.NA2LA.PL0. E06.SN, Deep Freeze Mac NA EDU Perpetual License	100 @ 12.00 100 @ 4.00 20 @ 20.00	2,080.00

Code	O	bject	THE THE PLANT	Amount
could be XITS, because it's Infromation Technology software that controls machines.  XETS/Education and Training Services	All Computer labs NetOp blocks websites, and allows teachers to control students' computers, and broadcast to all machines.	100+, Item # DFM0.NA2LS.MA1. E06.SN, Deep Freeze Mac NA EDU Maintenance 1 1 yr. 100+ Item # VIS UPG NOLP, V 8.5, UVNOLP 850 Licenses for 100 computers, Net Op	20 @ 4.00 1 @ 1,400.00	1,400.00
XMAN/ Manufacturing	Metals Technology, Upgrade tools and machines in Metal Shop. Use to cut flat stock to length without use band saw.	Item # 44-2314, Beverly Shear B-3, Paxton Patterson	1 @ 1,610.00	1,610.00
XMAN/ Manufacturing	Metals Technology, Used for Melting aluminum for foundry and casting. Used for casting aluminum pieces and then machining them.	Item # 27-0044, N. A. Kroeger Med Capacity Reverberatory Furnace/Natural Gas, Paxton Patterson	1 @ 1,830.00	1,830.00
XMAN/ Manufacturing	Metals Technology, Upgrade Metal shop to include casting and foundry. Cast parts are then machined on lathe and milling machine.	Item # 26-0082, Complete Foundry Program Package w/63-3218 Bench, Paxton Patterson	1 @ 3,700.00	3,700.00

Code		0	bject		Amount
	XTDL/ Transportation, Dist. and Logistics Services	Auto I, Auto II, Power Tech, To meet OSHA standards	Item # 63-1758, Flammables Storage Cabinet, Paxton Patterson	1 @ 1,450.00	1,450.00
	XAVC/ Arts, Audio Video Tech. and Comm. Services	Graphics Technology; Class in printing and graphics design; print brochures, booklets, flyers for student, and school community	Item # A5AY011, BizHub C554e Printer, Item # A2XM013, PC-410 Large Capacity Cassette, Item # A2Y1WY1, FS-535 100 Sheet Stapling Finisher, Item # A109W12, ZU-606 Z-Folding Unit (FS-535), Item # A2Y2WY1, SD-512 Saddle Stitcher (FS-535), Item # A2YRW11, PK-521 2/3 Hole Punch Unit (FS-535), Item # 7640006869, External Keyboard, Item # A4NRWY1, KH-102 Keyboard Holder, Item # A0W4WY2, WT-506 Working Table, Item # XGPCS20DKM, Innovolt Power Manager 20 Amp, Supreme Copy	1 @ 10,766.00  1 @ 715.00  1 @ 1,452.00  1 @ 2,618.00  1 @ 399.00  1 @ 101.00  1 @ 69.00  1 @ 45.00  1 @ 157.00	17,093.00
	XCON/ Architecture and Construction	Woods Construction, Replace degraded machines and Power Tools missing parts.	Item # 1791291K, Powermatic Belt/Disc Sander, Tools Plus	1 @ 1,491.00	1,491.00
	XCON/ Architecture and Construction	Woods Construction, Replace degraded machines and Power Tools missing parts.	Item # 1610084K, Powermatic 8" Jointer, Tools Plus	1 @ 1,940.00	1,940.00
	XCON/ Architecture and Construction	Woods Construction, Replace degraded machines and Power Tools	Item # 708411, JET 708411 Model JOVS- 10 Floor Model Oscillating Spindle Sander,	1 @ 1,275.00	1,275.00

Code	Bell Berlin	0	bject		Amount
		missing parts.	Tools Plus		
	XMAN/ Manufacturing	Graphic Communication 1, 2, & Advanced, 3D Printer used to replicate and turn drawings into actual 3D parts.	MakerBot Replicator 2X, MakerBot	2 @ 2,499.00	4,998.00
	XMAN/ Manufacturing	Graphic Communication 1, 2, & Advanced, 3D Printer used to replicate and turn drawings into actual 3D parts.	MakerBot Replicator Z18 3D Printer, MakerBot Cart for the MakerBot Replicator Z18, Smart Extruder for MakerBot Replicator Z18, MakerBot Filament Case for the MakerBot Replicator Z18	1 @ 6,499.00 1 @ 1,250.00 1 @ 175.00 1 @ 225.00	8,149.00
	XAVC/Arts, Audio Video Tech, and Comm. Services	Video Production	AVID System	Possibly implement over three years	81,968.00
917	Costs incurred by the grantee, which are not directly related to the program but are a result thereof. Grantees must submit indirect cost proposals to the SDE to apply for a restricted and unrestricted rate. Only grantees that have received rate approvals are eligible to claim indirect costs. Please note however, that grantees, who receive the majority of their grant funds other than through the SDE, may use the rate approved by another federal agency.				
					Total

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# ALL FIELD TRIP FORMS MUST BE FAXED (203-574-8010) OR EMAILED TO THE SCHOOL'S INSTRUCTIONAL LEADERSHIP DIRECTOR. ALL FIELD TRIPS REQUEST MUST INCLUDE THE APPROPRIATE COVER SHEET

	TE – MUST BE RECEIVE AUST BE RECEIVED <u>TH</u>		
This request mi	ust be approved prior down payments or i	~	committing any funds such arrangements.
Date Submitted: 30 A	or 2015 Name o	of Travel Agency (if ap	pplicable):
1) Requested by: Ma	jor Mike Simon	Wilby	9-12, Marine JROTC
I	Name of Staff Member	School	Grade level/Subject
2) How many students	? 90		
3) Name of destination	: Peoples State Forest		
4) City/State of destina	tion: Pleasant Valley, CT		
	Friday, 22 May 2015, 8:00 a Day	a.m. Date	Time
	Saturday, 23 May 2015, 110		· me
j	Day	Date	Time
7) Is school in session	during this field trip?Y	es	
8) What unit in the cur	riculum does this field trip s	support?	
JROTC students as include an organiz	n opportunity to plan a camp	oing trip, and live "off ous on land navigation	overnight camping trip will give the grid" for a day. Activities will and wilderness appreciation. There sanitation.
9) What are the Comm	on Core State Standards thi	s field trip supports?	
reinforced as the cl	ass reads information on car he details for this event. Th	mping, and a "Letter o	on Core reading standards will be f Instruction" is prepare by the students will include risk management, and
10) What are the guidi	ng questions from the curric	culum this field trip wi	ll answer?
The guiding question required to organize	on for this field trip will be e a safe and fun camping tri	"what planning, logisting to a state park?"	ical and operations grapes a long to the l

11)	What expected	performances	will be	taught by	this field trip?
-----	---------------	--------------	---------	-----------	------------------

The students will be expected to research information about the Peoples State Park, write a "Letter of Instruction", complete a Risk Management Plan, set up a bivouac site, brief fellow classmates about the four mile hike, identify various trees and telltale signs of markings for various animals.

12) How will you assess the learning that results from this field trip?

The land navigation will be a practical exercise, a hike, that is chaperoned by an adult. The students will use terrain association techniques, mapping skills and the sun support the navigation exercise.

13) Explain what educational value this field trip offers the students:

Students may gain a hands-on appreciation for land navigation, camping, planning organized events, field sanitation, natural science, and practical leadership.

14) Transportation: Type/name of Approved PUC Carrier

Durham Bus, Waterbury.

15) Name(s) and phone number(s) of person(s) responsible for organizing this trip:

Name	Phone Number	Name	Phone Number
1. Major Mike Simon	413-218-9203	4	
2.		5.	
3		6	

16) Name(s) of person(s) supervising students. NOTE: One (1) chaperone for every ten (10) students.

Teacher(s) as chaperones: 1stSgt Wayne Violette, Major Mike Simon

Aides(s) as chaperones:

Parent(s) as chaperones: Mr. Steven Colon, Mr. Azeem Rahamat, Mrs. Rosa Rodriguez, Mr. Israiel Mangual, Mr. Michael Emanuele, Ms. Zelezte Guerrero, Ms. Jessica DeJesus

17) How is this trip financed: (If it's fund raising activities, list the fund raising activities. If it's a grant, give title and number of the grant, student contributions, etc.)

JROTC 2015 Operating Budget

18) What is the approximate			
Everything is provided. T	here is no cost for the stude	ents.	
19) Is any student excluded f	rom attending this trip?	Yes No X If y	es, explain why:
20) What is the approximate	cost all chaperones?		
Everything is provided. T	here is no cost for the stude	ents.	
21) How many substitutes ar	e necessary? None (II	f none specify)	
Teacher	Subject/Grade	Teacher	Subject/Grade
1.		4.	
2.		5.	
3.		6.	
23) This field trip request me  Is this field trip recomme		olicy? Yes X No	]
7 triangements for studen	Daum Ka	<i>))</i>	
	Signature of School		<u>4/38/15</u> Date
	CENTRAL OFF	ICE RESPONSE	
24) This field trip request has		Ŷ	vel 💆
This field trip request has	s been reviewed and is not)	approved	585
	Signature of Superint	endent/Designee/ILD	Date
25) This field trip request approved/denied by the Boar	required Board of Educati d of Education during its m	on action for out of state of the deeting of	or overnight field trip was
	Signature of BOE/	Designee	Date

## REQUEST FOR FIELD TRIP

Revised 07/17/13

ALL FIELD TRIP FORMS MUST BE FAXED (203-574-8010) OR EMAILED TO THE SCHOOL'S INSTRUCTIONAL LEADERSHIP DIRECTOR. ALL FIELD TRIPS REQUEST MUST INCLUDE THE APPROPRIATE COVER SHEET

× OUT OF STATE - MUST BE RECEIVED IN STATE - MUST BE RECEIVED	EIVED <u>FIVE (5) WEEKS</u> TH <u>REE (3) WEEKS</u> PR	PRIOR TO TRIP
This request must be approved po as down payments o	rior to collecting or	Committing any funda areal.
Date Submitted: April 29th, 2015	Name of Travel Agend	
1) Requested by: Amy Densmore	West Side Middle	7/ELA
Name of Staff Member	School	Grade level/Subject
2) How many students? 240	N	
3) Name of destination: Six Flags New Er	ngland	THEOGRAPH And Andread Advantage Andread Advantage Andread Advantage Andread Advantage Andread Advantage Andread
4) City/State of destination: Agawam,	Massachusetts	
5) Departure: Tuesday	6/2/15	8:30 am
Day	Date	Time
6) Return: Tuesday	6/2/15	4:30 pm
Day 7) Is school in session during this field trip?	Date yes	Time
8) What unit in the curriculum does this field tri	Voice and the second se	And the state of t
<ul> <li>This field trip supports the following: N</li> <li>Force &amp; Acceleration</li> <li>Kinematics</li> <li>Rotational and Circular Motion</li> <li>Work, Power, and Energy</li> <li>Conservation of Energy and Momentum</li> </ul>	lewton's Laws of Motion	
9) What are the Common Core State Standards t	his field trip supports?	
The Common Core State Standards this trip sup		
10) What are the guiding questions from the curr	iculum this field trip will:	answer?
How can the motion of an object be described by	A CONTRACTOR OF THE PROPERTY O	DECEMBE
MAY-01-2015 09:06AM From:	ID:CHIEF AC	CADEMIC OFR PROSPROSE HE 100%

11)	What expected	performances	will be	taught	bу	this	field	trin?	

- Use tools to collect physical data for analysis
- Predict and calculate forces acting on a rider at different points during a ride
- Calculate the work and power necessary to move riders through a ride
- Calculate centripetal acceleration and normal forces acting on riders in circular motion

#### 12) How will you assess the learning that results from this field trip?

Students will demonstrate how forces including friction act upon an object to change its position over time and relation to a fixed point of reference while calculating the average of a roller coaster.

### 13) Explain what educational value this field trip offers the students:

Students will experience aspects of acceleration, rotational motion, conservation of energy, and forces – big and small – that are simply impossible to demonstrate in the classroom environment. While the day at the park will be a 'fun' activity, it is also a day of hands-on learning and practical application of the topics they have worked throughout the year to master.

#### 14) Transportation: Type/name of Approved PUC Carrier

Land Jet

15) Name(s) and phone number(s) of person(s) responsible for organizing this trip:

Name	Phone Number	Name	Phone Number
1. Amy Densmore	203-574-8120	4	
2. Shawn Stanco	203-574-8120	5.	Victoria and the second
3.		б	- Section - Sect

## 16) Name(s) of person(s) supervising students. NOTE: One (1) chaperone for every ten (10) students.

Teacher(s) as chaperones: Amy Densmore, Shawn Stanco, Kathleen Ferrucci, Doris Mancini, Darryl Parker, Kevin Kalach, Gayle Warhola, Sarah Martin, Lori Medina, Steve Jette, Mark Palladino, James Sasso, Jane Lescoe, Jenna Milo, Krista Benjamin, Laurie Scurrso, Andrea Torres, Mike Gommola

Aides(s) as chaperones:

Parent(s) as chaperones: Mrs. Recile, Mrs. Aponte, Mrs. Saltarelli, Mrs. Wrigley, Mrs. Vergeli, Mr. Wrinkles

17) How is this trip financed: (If it's fund raising activities, list the fund raising activities. If it's a grant, give title and number of the grant, student contributions, etc.)

The trip is paid for by the students attending.

18) What is the approximate \$50.00	cost per pupil for this trip?	T DANSAGE OF THE PARTY OF THE P	
Approximation of the second se			
19) Is any student excluded	from attending this trip? Ye	S No x	If yes, explain why:
		Market and the second s	
\$50.00 one Book approximate	cost all chaperones?	7////	
\$50.00 per person		NSCHARIONAN III.	periodis.
21) How many substitutes ar	e necessary? 0 (If nor	e specify)	
Teacher	Subject/Grade	Teacher	Subject/Grade
Table 1	1954		2000000
22) The medication(s) and/or participating in the field	procedure(s), as prescribed by	the student(s) physicia	m, will be provided while
Yes No		$\overline{}$	4/30-15
7	Signature of School Nu	rse	Date
23) This field trip request mee	ets the needs of the BOE policy	7 Yes No	
Is this field trip recomme	nded? Yes No		and the second
Arrangements for student	s(s) medial needs have been ma	ide Yes No	
	- Maria Burs	hard and	4-30-15
	Signature of School Prin	ncipal	Date
	CENTRAL OFFICE	RESPONSE	
4) This field trip request has t	peen reviewed and approved at	the Superintendent's 1	evel M
	peen reviewed and is not appro-		) <u>//</u>
<b></b>	AllCellena	~	11-21)-15
	Signature of Superintenden	/Designee/ILD	Date
5) This field trip request recoproved/denied by the Board of	quired Board of Education ac of Education during its meeting	tion for out of state of	or overnight field trip was
·	Signature of BOE/Design	lee	Date
A copy of this requ	iest, when approved, will b	e returned to the Sc	hool Principal

4



## WATERBURY

-9 g = 8. v = 8. g = 8 as eacher " folds" g "area

CENTRAL OFFICE: RECEIVED STAMP/INITIALED

## FIELD TRIP REQUEST FAX/EMAIL COVER SHEET

School Name: Center for Global Leadership & Service: Global Leadership Institute
Your Name: Jamella Le (c/o Anne Marie Cullina)
Today's Date: 5/12/2015
Date/s of Field Trip 5/18/2015
In State □ Out of State ☒
Number of students 20
Number of chaperones Z2
Nurse's Signature: □
Principal's Signature: □
Number of Pages Attached:  (In duding cover)  4

TEVA 5/14 which

Revised 07/17/13

REQUEST FOR FIELD TRIP
ALL FIELD TRIP FORMS MUST BE FAXED (203-574-8010) OR EMAILED TO THE SCHOOL'S INSTRUCTIONAL LEADERSHIP DIRECTOR. ALL FIELD TRIPS REQUEST MUST INCLUDE THE APPROPRIATE COVER SHEET

	IN STATE – MUST BE RECEIVED THREE (3) WEEKS PRIOR TO TRIP
-	This request must be approved prior to collecting or committing any funds such as down payments or making definite arrangements.
D	rate Submitted: 5 12 2015 Name of Travel Agency (if applicable):
1)	Requested by: Jamella Lee (1/0 Anne Waterburn thigh Schools 10th
	Name of Staff Member School Grade level/Subject
2)	How many students? 20 (10 from Waterburg Public Schools)
3)	Name of destination: New York, New York J
4)	City/State of destination: United Nations
5)	Departure: Monday 5/18/2015 7:30 dm  Day Date Time
6)	Return: Monday 5/18/2015 9:45pm  Day Date Time
	) Is school in session during this field trip?
	) What unit in the curriculum does this field trip support?
	History: Perspectives, History: Causation & Argumentation Geography: Global Interconnections Changing Spatial Patterns
9	What are the Common Core State Standards this field trip supports?
	History 9-12.4 (Perspectives)
	History 9-12.11 (Causation & Argumentation)
1	Geography 9-12.4 (Global Interconnections: Changing Spatial Patterns
A	What are the guiding questions from the curriculum this field trip will answer?  What is the current role of the U.S. in World Affair ? What should be the world by
	affect its current policies or actions?
B	How did to Great Depression & INVIT contribute to and great homes to the U.S. in World Affairs in a way that influences foreign policy tray?
	How did the Great Depression & UNI contribute to and present barries to the U.S. as a just see thow did the voices of women in the Great Depression & UNI advance the course of gender equity in America? the world? In what ways were injust silvered.
0	How has international alliences shifter during the 20th (2111) century as a result of glibalization, comprising of
	for human might 2 than die human might after WWIT look to until the word a him to like a man I have

11) What expected performa	nces will be taught by this fi	ield trip?	
		Floring Carlot C	
	-		
2) How will you assess the	learning that results from th	is field trip?	
Paper - integrating	several of the u	nits above	
		mentioned	
2) Francis vibrat al anti-	ll d' - C -1 d + ' - CC +	1 1	NW-
3) Explain what educationa	I value this field trip offers t	he students:	
to some of the maj in perspective fields. Sto government will be heigh	lop the next generation is selected in for elected in for elected will be hered.	of global Meadure this to the United Nations Com- broadened and perspective	nip exposed Waterbury GU SU r nord) and to expect leders is on future correct in internal
4) Transportation: Type/na	ame of Approved PUC Carr	ier	
First Sudent			
5) Name(s) and phone num	ber(s) of person(s) responsib	ole for organizing this trip:	
Name	Phone Number	Name	Phone Number
1. Anne Mane Cultinon	903.574.X014	4	
2. Timella Lee	614 240.9081 (all) 800.945.7588 (Mu)	5.	
3		6	
() Name (a) a factor (b)		2 (7)	
o) Name(s) or person(s) sup	pervising students. NOTE:	One (1) chaperone for every	ten (10) students.
Teacher(s) as chaperones:	Anne Mene Cultim		
Aides(s) as chaperones:	Jamella La	The second of th	
Andes(s) as enaperones.	Pobul Falcetti		
Parent(s) as chaperones:			
		199111000	
7) How is this trip finance	d: (If it's fund raising activi	ties, list the fund raising activ	vities. If it's a grant, give
	, student contributions, etc.)		
The Edward E. Ford F Center for Globel Lee	andation Education Lend aderhip & Service: Glob	ership Grant Initiative of Lendership Institute (	Supports the ELI) program.
8) What is the approximate	cost per pupil for this trip?		
494	* * *	-	
	-		

19) Is any student excluded from attending this trip? Yes X No If yes, explain why:			
Yes, this trip is only fir students in the Globel beadership Institute program. The program was opened fir all Water burga high school students to apply in the fall. The students selected			
20) What is the approximate of	Ford grant as a part ost all chaperones?	of the GLI projour.	
481			
21) How many substitutes are	necessary? (If	none specify)	
Teacher	Subject/Grade	Teacher	Subject/Grade
1.		4.	
2.		5.	
3.		6.	
22) The medication(s) and/or participating in the field to		by the student(s) physician	, will be provided while
	Signature of School	Nurse	Date
23) This field trip request meets the needs of the BOE policy? Yes No Received Late			
Arrangements for students(s) medial needs have been made Yes No  Signature of School Principal  Date			
			Date
	CENTRAL OFFI	CE RESPONSE	
24) This field trip request has	been reviewed and approve	ed at the Superintendent's le	evel
This field trip request has	been reviewed and <u>is not</u> a	pproved	
	Signature of Superinte	ndent/Designee/ILD	Date
25) This field trip request required Board of Education action for out of state or overnight field trip was approved/denied by the Board of Education during its meeting of			
	Signature of BOE/I	Designee	Date

A copy of this request, when approved, will be returned to the School Principal.

# #12

## COMMITTEE ON SCHOOL FACILITIES & GROUNDS

WORKSHOP:

Thurs., May 14, 2015 (Carrington School)

**BOARD MEETING:** 

Thurs., May 21, 2015

TO THE BOARD OF EDUCATION WATERBURY, CONNECTICUT

### LADIES AND GENTLEMEN:

With the approval of the Committee on School Facilities and Grounds, the Superintendent of Schools recommend approval of the use of school facilities, at no charge, by the following school organizations and/or City departments:

GROUP	FACILITIES AND DATES/TIMES		
C. Damore	Wilson gym: Wed., May 27th 5:00-7:00pm (Family Science Night)		
	Wilson gym: Wed., May 20th 4:30-6:30pm (Family Fitness Night)		
R. Augelli	Washington café: Tues., May 19th 5:00-6:30pm (Family Fitness Night)		
T. Edwards	Wilby classrm.: Tues. & Thurs. 5/12/15-6/11/15 2:00-3:30pm		
0	(after school mentoring program) (started prior to Bd. Mtg.)		
A.Simms	Rotella aud.: MonWed. August 3, 4,5 8:00am-3:00pm (Prof. Dev.)		
T. Rodriguez	Sprague gym: Fri., June 12th 5:30-7:00pm (Pre-School graduation)		
J. Pilicy	Duggan café: Thurs., May 28th 3:00-7:30pm (PBIS semi-formal dance)		
M. Rocco	W.Cross gym: Wed., June 10th 5:00-9:00pm (PTA Social)		

Approved:	
Felix M. Rodriguez	Kathleen M. Ouellette, Ed. D.
	Superintendent of Schools

03/13/2008 10:40 FAX 2035748032

SCHOOL BUSINESS OFFICE

2001

# SCHOOL PERSONNEL USE ONLY

PATE: 5/6/15

,	
TO:	SCHOOL BUSINESS OFFICE
FROM:	Cristina Damore-PL.
FACULTIE)	RSIGNED HEREBY MAKES APPLICATION FOR USE OF SCHOOL  S (AFTER REGULAR SCHOOL HOURS) AS FOLLOWS:
NAME OF	SCHOOL REQUESTED: WOODVIN WILSON Elementary. TORIUM X GYMNASIUM I SWIMMING POOL I CAFEROOMS
	QUESTED: 5/27/15
<del>- FOR HI</del> LE FC	FROM 5.00 amps TO 7.00 amps
Famile display free b	Schence Wight will be held to Students in Ventions, Families will receive ooks, educational material and parents ive an opprotunity to Complete the parent on line in the computer lab. Cristing, Dames. APPLICANT

Please note the following provisions:

When the public is invited to an activity, police and fire departments must be notified.

These arrangements must be made in person at police and fire headquarters.

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## SCHOOL PERSONNEL

,	TO: SCHOOL BUSINESS OFFICE
<sup>on</sup>	FROM: Cristina Danine-parent Liaison
/	THE UNDERSIGNED HEREBY MAKES APPLICATION FOR USE OF SCHOOL FACILITIES (AFTER REGULAR SCHOOL HOURS) AS FOLLOWS:
	MAME OF SCHOOL REQUESTED: WOODING WILSON Elementery  - AUDITORIUM DI GYMMASIUM DI SWIMMING POOL DICATEROOMS
	DATES REQUESTED: 5/20/15 FROM 4:30 amps TO 6:30. amps
en anderski kilderski kanada ander vin verv	TOR THE FOLLOWING PURPOSES:
and the second section of the section of t	Foruly Tunba night for Students and  parents to primate physical primess  there is no charge for this event in parents
	Cantina Dama APPLICANT

Please note the following provisions:
When the public is invited to an activity, police and fire departments must be notified. These arrangements must be made in person at police and fire headquarters.

## SCHOOL PERSONNEL USE ONLY

MAY ... 4 2015

	DATE: May 4, 2015
TO:	SCHOOL BUSINESS OFFICE
FROM:	WASHINGTON SCHOOL
	igned hereby makes application for use of school facilities (after regular rs) as follows:
NAME OF	SCHOOL REQUESTED: WASHINGTON SCHOOL
Audito	orium Gymnasium Swimming Pool Y Café/Rooms
	E CONTRACTOR OF THE PERSON OF
DATES RE	QUESTED: TUESDAY, MAY 19, 2015
	FROM: 5:00 p.m. am/pm TO: 6:30 p.m. am/pm
FOR THE F	FOLLOWING PURPOSES:
FAMILY	FITNESS NIGHT AND CHORAL CONCERT
7.41 7.41	
	Rojanne augelle
	APPLICANT
	Roxanne Augelli, Princ

Please note the following provisions:

When the public is invited to an activity, police and fire departments must be notified. These arrangements *must* be made in person at the police and fire headquarters.

·TO: SCHOOL BUSINESS OFFICE FROM: The undersigned hereby makes application for use of school facilities (after regular school hours) as follows: NAME OF SCHOOL REQUESTED: Swimming Pool Gymnasium DATES REQUESTED: TO: 3,30 FROM: 200pm any FOR THE FOLLOWING PURPOSES:

Please note the following previsions:

When the public is invited to an activity, police and fite departments must be notified. These arrangements must be made in person at the police and fire headquarters.

## SCHOOL PERSONNEL USE ONLY

DATE: May 7, 2015

10:	SCHOOL BUSINESS OFFICE
FROM:	Amy Simms, Supervisor of Special Education
school hours)	ned hereby makes application for use of school facilities (after regular as follows:  CHOOL REQUESTED: Rotella
M Auditoriu	um Gymnasium Swimming Pool Café/Rooms
DATES REQI	UESTED: August 3 <sup>rd</sup> , 4 <sup>th</sup> and 5 <sup>th</sup> FROM: 8:00 am TO: 3:00 pm
FOR THE FO	LLOWING PURPOSES:
Professional d Programs.	evelopment for the ABA Therapists in the Generali/ Wallce/Crosby
	Amy Simms
	APPLICANT

These arrangements *must* be made in person at the police and fire headquarters.

When the public is invited to an activity, police and fire departments must be notified.

Please note the following provisions:



Mer 7 2013

## SCHOOL PERSONNEL USE ONLY

	DATE: 5/1/2015
TO:	SCHOOL BUSINESS OFFICE
FROM:	Jabitha Rodriquez School Readiness Director
The undersig	gned hereby makes application for use of school facilities (after regulars) as follows:
NAME OF S	school requested: Spraque Elementary School
Auditor	rium Gymnasium Swimming Pool Café/Rooms
DATES REG	QUESTED: June 12, 2015
	FROM: 5:30 am/pm TO: 7:00 am/pm
FOR THE F	OLLOWING PURPOSES:
heques	ting the space for a Small Pre-School
	thon Ceremony for parents and families
	Jalento R. J. 203-573-0264 APPLICANT

Please note the following provisions:

When the public is invited to an activity, police and fire departments must be notified. These arrangements *must* be made in person at the police and fire headquarters.

			DATE:	4/28/15
TO:	SCHOOL BUSINESS	OFFICE		A CONTRACTOR OF THE PROPERTY O
FROM:	· · · · · · · · · · · · · · · · · · ·	ricy		
The undersign school hours)	æd hereby makes applica as follows:	tion for use of	school facili	ies (after regular
NAME OF SC	HOOL REQUESTED: _	Du	ggan	
LI Auditoriu	n 🔲 Gympasium	swire	wing Pool	Café/Rooms
DATES REQUI	ESTED:	128/1	S	
	From: 3	/	TO;	2:30 am/pm
OR THE FOLL	<u>OWING PURPOSES:</u>			
Stude	ns will r	iave f	<u> PBIS:</u>	Semi-
tormal	dence o	m 5/c	<del>2</del> 8./15	from.
5-7	pm.	Hillaria de la companio de la compa	Mark Market and August	
·			John	LICANT

Please note the following provisions:

When the public is invited to an activity, police and fire departments must be notified.

These arrangements must be made in person at the police and fire headquarters.

# SCHOOL PERSONNEL USE ONLY

MAY 12 2015

DATE: SIII
TO: SCHOOL BUSINESS OFFICE
FROM: 19. CEOSS SONOS.
The undersigned hereby makes application for use of school facilities (after regular school hours) as follows:
NAME OF SCHOOL REQUESTED: 13 1955
Auditorium Gymnasium Swimming Pool Café/Rooms
DATES REQUESTED: Section 15 am/pm TO: 97 (X) am/pm
FOR THE FOLLOWING PURPOSES:
APPLICANT

Please note the following provisions:

When the public is invited to an activity, police and fire departments must be notified. These arrangements *must* be made in person at the police and fire headquarters.

# Communications



Packet week ending: 5//2/



236 Grand Street Waterbury, CT 06702

(203) 574-6761

## The City of Waterbury Connecticut

Department of Human Resources
Office of the Civil Service Commission

May 7, 2015

Colleen McCasland 140 Joseph St. Waterbury, CT 06705

Dear Ms. McCasland:

We are pleased to receive your acceptance of our offer of employment for the position of Part-time Office Aide for the Education Department – Duggan School, Requisition #15-50 at \$9.47 per hour.

We have scheduled your orientation for Thursday, May 14, 2015 at 11:00 a.m. at the Department of Human Resources located at 236 Grand Street in Waterbury. You must attend this orientation session in order to work for the City. Your first day reporting to the Education Department – Duggan School was May 4, 2015.

At the orientation, we will provide you with a brief overview of the City, review its employment practices and complete all required paperwork.

This is a <u>part-time</u> position working in the Waterbury School System <u>10 months</u> a year during school hours <u>up</u> <u>to 19 hours</u> per week.

This position <u>does not provide health insurance benefits</u>. Please refer to the CSEA – Local 2001 contract for other available fringe benefits by visiting our website at <u>www.waterburyct.org</u>.

Please call us prior to the orientation session if you should have any questions regarding the process.

We look forward to working with you.

Again, welcome to the City of Waterbury.

Sincerely.

Lisa Dunn

Human Resources Generalist

LD/sd

cc: Board of Education

Dr. Ouellette, Supt. of Schools

Cathy Diana, Acting HR Generalist - Educ.

Patricia Frageau, Principal @ Duggan Schl

file



236 Grand Street Waterbury, CT 06702

(203) 574-6761

# The City of Waterbury Connecticut

Department of Human Resources
Office of the Civil Service Commission

May 8, 2015

Kyle Garcia 42 Garden Circle Waterbury, CT 06704

Dear Mr. Garcia:

Welcome to employment with the City of Waterbury. Your name is being certified to the Education Department – Special Education for the position of Administrative Support Specialist I, Req. #15-14;HRIS #2015031 at \$13.78 per hour. Please contact Wendy Owen, Director of Special Education at (203) 574-8017 with any questions you may have in regards to this position.

We have scheduled your orientation for Thursday, May 14, 2015 at 10:00 a.m. at the Department of Human Resources located at 236 Grand Street in Waterbury. You must attend this orientation session in order to work for the City. Your first day reporting to your new department/supervisor will be May 15, 2015 at your regular scheduled time.

At the orientation, we will provide you with a brief overview of the City, review its employment practices and complete all required paperwork. You will also be required to provide documentation, mandated by the federal government, to establish your right to work in this country. We have included a sheet that outlines the documents that are acceptable to meet this requirement. You cannot start work without providing us these documents. In addition, if you are an employee eligible for benefits, it is useful to bring the social security numbers and birth dates of your spouse and children in order to complete the insurance enrollment forms.

Please call us prior to the orientation session if you should have any questions regarding the process.

Your new probationary period in accordance with your applicable contract will be 6 months in duration. The department head will be responsible for executing your probationary evaluation no later than 6 months from your first day in your new position.

Again, welcome to the City of Waterbury.

Sincerely

Lisa Dunn

Human Resources Generalist

LD/sd

cc Board of Education

Wendy Owen, Director of Spec Educ

Dr. Ouellette, Supt. of Schools

file