

Massachusetts Department of Elementary & Secondary Education

Office for Career/Vocational Technical Education



Vocational Technical Education Framework



Legal & Protective Services Occupational Cluster

Criminal Justice (VCRIMJ)

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Massachusetts Department of Elementary and Secondary Education
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Commissioner's Letter



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Mitchell D. Chester, Ed.D.
Commissioner

July 2014

Dear Colleagues,

I am pleased to present to you the *Massachusetts Vocational Technical Education Frameworks*, adopted by the Department of Elementary and Secondary Education in June 2014. These frameworks, one for each of the 44 vocational technical programs, include standards in multiple strands representing all aspects of the industries that students in the vocational technical education program are preparing to enter.

The frameworks also include a crosswalk between the technical standards and relevant standards in Massachusetts Curriculum Frameworks to support effective integration of academic and technical content.

The comments and suggestions received during revision of the 2007 *Massachusetts Vocational Technical Education Frameworks* have strengthened these frameworks. We will continue to work with schools and districts to implement the 2014 *Massachusetts Vocational Technical Education Frameworks* over the next several years, and we encourage your comments.

I want to thank everyone who worked with us to create challenging learning standards for Massachusetts students. I am proud of the work that has been accomplished.

Sincerely,

Mitchell D. Chester, Ed.D.
Commissioner of Elementary and Secondary Education

Introduction

Overview & Organization and Key Changes

Overview

The Massachusetts Department of Elementary and Secondary Education understands the necessity of maintaining current Vocational Technical Education Frameworks which ensure career/vocational technical education students across the Commonwealth are taught the most rigorous standards aligned to the needs of business and industry.

With the advent of the Massachusetts Teaching & Learning System the Office for Career/Vocational Technical Education (CVTE) recognized the significance of including career/vocational technical education in the system and developed a comprehensive plan for including vocational technical education. The plan was designed in a Two Phase Process. Phase One included the revision of strands two, three, and six, of all of the Vocational Technical Education Frameworks. Phase Two consisted of three major components (projects) all equally crucial;

1. The revision of Strands One, Four, and Five to complete the revision of all six strands of the Vocational Technical Education Frameworks;
2. Statewide Professional Development on all revised strands, with training on strands two, three, and six delivered fall 2013, and training on strands one, four, and five delivered spring 2014;
3. The creation and development of additional Model Curriculum Unit (MCU) Teams.

The Office for Career/Vocational Technical Education Framework Team, with support from consultants, began Phase One in the 2012-2013 school year, to revise three of the six strands contained in all of the Vocational Technical Education (VTE) Frameworks. The state was organized into “Collaborative Partnerships” comprised of teams of project administrators, highly qualified subject matter educators, and business and industry partners, whose task was to revise Strand Two – Technical, Strand Three – Embedded Academics, and Strand Six – Technology Literacy. Each team met with a vocational advisory committee which included business and industry representatives and postsecondary education professionals, whose mission was to review and revise the team’s draft document during the revisionary process. Once strand two was revised, academic teachers (typically one English Language Arts teacher, one Mathematics teacher, and one Science teacher) worked with the technical subject matter teachers to develop a crosswalk between academic curricula standards and the technical standards, and provided examples of embedded academic content.

The Office for Career/Vocational Technical Education solicited statewide input from technical and academic teachers and administrators at the annual Massachusetts Association of Vocational Administrators (MAVA)/Massachusetts Vocational Association (MVA) - Connecting for Success Conference. Each framework team met with their content colleagues and reviewed the draft revisions and obtained valuable feedback. Additionally, all drafts were reviewed and revised by the Massachusetts Vocational Technical Teacher Testing Program, to ensure appropriate measurable language.

Project consultants designed a new template to ensure all framework teams entered new standards and additional resources in a consistent manner. The framework teams created an “Appendix” listing potential industry recognized credentials attainable by secondary students; lists of professional, student, and relevant government organizations; and useful resources and websites. ** It is important to note that although most Framework Teams provided information for the “Appendix”, not all teams did. Therefore, sub-headings within the “Appendix” without information have been deleted. Disclaimer: Reference in the Appendices Section to any specific commercial products, processes, or services, or the use of any trade, firm or corporation name is for the information and convenience of the public, and does not constitute endorsement or recommendation by the Massachusetts Department of Elementary and Secondary Education.*

The Office for Career/Vocational Technical Education facilitated a comprehensive vetting process throughout the Commonwealth. During the fall of 2012 districts throughout Massachusetts solicited feedback from each Vocational Program’s Advisory Committee members at the Fall Board meetings. Additionally, the Office for Career/Vocational Technical Education met with various licensing boards at the Massachusetts Division of Professional Licensure and provided the applicable draft framework to each board for review. All framework drafts were posted on the CVTE website for public comment. Comments and suggested revisions received were shared with each framework team for response and edits, as appropriate.

The Phase I Process was completed on an accelerated timetable and resulted in all Vocational Technical Education Frameworks; Strand Two and Strand Six, revised with current, rigorous, relevant standards. Strand Three has been redesigned into a crosswalk which directly correlates academic and technical standards. An appendix of useful material for technical teachers recommended by their peers was added to each framework.

Phase II of the Framework Revision Process consisted of three major projects;

1. The Strands One, Four & Five Project, to complete the revision of all six strands of the Vocational Technical Education Frameworks;
2. Statewide Professional Development on all revised strands, with training on strands two, three, and six delivered fall 2013, and training on strands one, four, and five delivered spring 2014;
3. The creation and development of additional Model Curriculum Unit (MCU) Teams.

The Strands One, Four, & Five Project began in the fall of 2013 with the formation of a leadership team and three work groups. Co-Managers led the leadership team comprised of three Strand Coordinators who facilitated work teams and reviewed, researched, and revised these common strands. All skills specific to the vocational technical program have been included into Strand Two Technical.

The Strand One Team revised the safety knowledge and skills that all students need to acquire. The team included relevant issues (i.e., bullying, climate), laws, regulations, guidelines and policies pertaining to safety.

The Strand Four Team revised the Employability Knowledge and Skills that all students need to acquire. Teams considered current research on career readiness, including the work of the College Career Readiness Task Force convened by the Department, changes in workplace, technological changes that impact how people perform their work (i.e., communications methods), and included standards that

emphasize the need for lifelong learning and adaptability given the multiple career changes over and an individual's working life. The team recommended this strand be renamed to: Career Readiness.

The Strand Five Team revised the Management & Entrepreneurship Knowledge and Skills that all students need to acquire. All business owners and employees must possess management and financial skills to be productive members of society. Skills included financial knowledge and basic business management skills.

All Strand One, Four and Five Project Teams worked collaboratively with staff from the Department of Elementary and Secondary Education and the Advisors of the Massachusetts Career and Technical Student Organizations to crosswalk standards to national Career & Technical Student Organizations Curricula, as applicable.

The Office for Career/Vocational Technical Education contracted the MAVA Consultant Team to work closely with the office to complete all of the work accomplished during Phase II of the Project.

A remarkable amount of work was accomplished through the efforts of hundreds of professionals who collaborated and diligently supported this work. The Office for Career/Vocational Technical Education is grateful for all the support received from the field, particularly all of the teachers (technical and academic), administrators, advisory committee members, business and industry representatives, the Division of Professional Licensure - boards, the Massachusetts Association of Vocational Administrators, the MAVA Consultants, and the Massachusetts Vocational Association, whose contributions were tremendous.

Special thanks to all staff in the Office for Career/Vocational Technical Education and the CVTE Framework Revision Team who provided guidance and numerous contributions during Phase One of the project.

Organization and Key Changes

This section contains the following:

- Highlights of Changes to the Vocational Technical Education Frameworks; which includes a summary of changes made to each strand.
- Organization of the Frameworks – Strand Two illustrates structure of topic headings, standards and objectives, and performance examples.

Highlights of Changes to the Vocational Technical Education Frameworks:

Strand One:

Safety and Health Knowledge and Skills have been revised to contain the safety standards that are common to all programs. The Strand One Team worked collaboratively with staff from the Department of Elementary and Secondary Education and the Advisors of the Career and Technical Student Organizations (CTSO) to crosswalk standards to national CTSO Curricula, as applicable.

- No objectives were deleted, only modified.
- Language and wording was clarified.
- Additions included a focus on maintaining a safe school and workplace in terms of creating a positive climate/environment.
- Student safety credential program has been revised.
- Safety attire has been revised.
- Emergency equipment and fire safety has been revised.
- Many new Performance Examples have been included.
- Within each strand, standards and objectives were grouped under Topic Headings, which are displayed in bold. Each standard is followed by a performance example. See the section below titled: “Organization of the Frameworks – Strand Two”. All strands were organized in that manner, with the exception of the former Strand Three.

Strand Two:

The Technical Standards Knowledge and Skills have been revised to reflect business and industry changes since the adoption of the 2007 Vocational Technical Education Frameworks (VTEF). There are additional changes to Strand Two below:

- The Technical Knowledge and Skills (Strand Two) section contains standards specific to the particular vocational program; suffix “a” (as common to all programs) and suffix “c” (as common within a cluster) have been removed.
- Each VTEF Strand Two begins with safety and health knowledge and skills specific to the particular vocational program.
- Within each strand, standards and objectives were grouped under Topic Headings, which are displayed in bold. Each standard is followed by a performance example. See the section below titled: “Organization of the Frameworks – Strand Two”. All strands were organized in that manner, with the exception of the former Strand Three.

- Strand Two of the Frameworks for Animal Science, Environmental Science and Technology, and Horticulture, begin with core standards required for all participants in the programs, followed by a series of standards organized in concentrations. See the section below titled: “Organization of the Frameworks – Strand Two” for more information.
- An update to some of the vocational programs framework is the addition of advanced or supplemental standards which are noted in Strand Two by an asterisk (*). *These standards are not required, but are provided as suggestions that districts may choose to use to increase the depth of a particular topic, or add additional topics, particularly for advanced students or for those seniors who do not participate in cooperative education.* See the section below titled: “Organization of the Frameworks – Strand Two” for more information.

Strand Three:

Since the purpose of Strand Three was to correlate academic content that was *embedded* in the knowledge and skills necessary to perform certain technical skills, it was logical to highlight those connections through a crosswalk between the academic curriculum standards and the technical standards (Strand Two). The crosswalk directly correlates the English Language Arts (2011) and Mathematics (2011) Frameworks, incorporating the Common Core Standards and the Science and Technology/Engineering Frameworks. The crosswalk can be found in the appendix of each vocational framework. The crosswalk also includes performance examples which illustrate integrated academic and technical content.

- Embedded Academics has been replaced with a crosswalk between the academic curriculum standards and the technical knowledge and skills standards. The crosswalk is located in the Appendices.

Strand Four:

Employability (and Career Readiness) Knowledge and Skills focused on providing students with general knowledge and skills to be college and career ready. The Strand Four Team worked collaboratively with staff from the Department of Elementary and Secondary Education and the Advisors of the Career and Technical Student Organizations to crosswalk standards to national CTSO Curricula, as applicable.

- Language and wording were clarified.
- Additions included a focus on providing students with skills for employability/career readiness.
- Modifications included Career Exploration & Navigation, Communication in the Workplace, and Work Ethic & Professionalism.
- New Performance Examples have been included.
- Within each strand, standards and objectives were grouped under Topic Headings, which are displayed in bold. Each standard is followed by a performance example. See the section below titled: “Organization of the Frameworks – Strand Two”. All strands were organized in that manner, with the exception of the former Strand Three.

Strand Five:

Strand Five contains Management and Entrepreneurship Knowledge and Skills that are general for all students. The Strand Five Team worked collaboratively with staff from the Department of Elementary and Secondary Education and the Advisors of the Massachusetts Career and Technical Student Organizations to crosswalk standards to national Career & Technical Student Organizations Curricula, as applicable.

- Language and wording were clarified and organized into a logical format.
- The Strand Five Team felt that the 2007 curriculum remained valid.
- Additions included a focus on providing students with skills for management and entrepreneurship applicable to all vocational programs.
- Modifications included Starting and Managing a Business, Marketing, and Financial Concepts & Applications in Business, and Legal/Ethical/Social Responsibilities.
- New Performance Examples have been included.
- Within each strand, standards and objectives were grouped under Topic Headings, which are displayed in bold. Each standard is followed by a performance example. See the section below titled: "Organization of the Frameworks – Strand Two". All strands were organized in that manner, with the exception of the former Strand Three.

Strand Six

Strand Six Technology Literacy Knowledge and Skills has been replaced with the 2008 Massachusetts Technology Literacy Standards and Expectations Framework.

Appendix¹

Each framework contains an “Appendix” section which includes an Embedded Academic Crosswalk, Industry Recognized Credentials, Statewide Articulation Agreements, Professional, Governmental, and Student Organizations, Resources, and relevant websites.

The Appendix² contains:

- Embedded Academic crosswalks for English Language Arts, Mathematics, and Science & Technology/Engineering.
- Statewide Articulations: Current statewide Articulation Agreements and/or Apprenticeship Programs available to the specific vocational program are listed on this page. The development of new statewide articulations continues, and therefore these pages will be revised as new agreements are finalized.
- Industry-Recognized Credentials: Technical Teacher Teams generated lists of credentials for the vocational programs. Program Advisory Committees throughout the state reviewed and provided recommendations through the validation process. *The credential list has been provided as a resource only and districts are not obligated to provide all of the specified credentials for students.*
- Other: These pages provide lists of reference materials, government agencies, professional and student organizations, and useful websites created by each framework team. These are intended as helpful resources for technical teachers, identified by peers. These are not recommended or required by the Department of Elementary & Secondary Education.

¹ *Note: Although most Framework Teams provided information for the “Appendix”, not all teams did. Therefore, sub-headings within the “Appendix” without information have been deleted.*

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Organization of the Frameworks – Strand Two

The Vocational Technical Education Frameworks contain knowledge and skills covering all aspects of industry, reflected in six strands: Safety and Health, Technical, Embedded Academics, Employability, Management and Entrepreneurship, and Technological.

Within each strand, standards and objectives were grouped under topic headings, which are displayed in bold. Each standard is followed by a performance example. In the excerpt below, 2.A is the topic; 2.A.01 is the first standard and 2.A.01.01 and 2.A.01.02 are the objectives under that standard.

2.A Automotive Technology Specific Safety Practices

- 2.A.01 Identify and describe safety procedures when dealing with different types of automotive lifts according to current industry standards.
- 2.A.01.01 Demonstrate procedures for safe lift operations.
 - 2.A.01.02 Demonstrate safe use, placement and storage of floor jacks and jack stands.

2.A.01 Performance Example:

- Student will set up lift using manufacturer’s suggested lift points.

- 2.A.02 Demonstrate and describe safety procedures when dealing with high pressure systems including necessary ventilation according to current industry standards.
- 2.A.02.01 Describe and demonstrate the importance of safety procedures to be used when servicing high pressurized systems (fuel systems, brakes, air conditioning, suspension, hydraulic systems, etc.).
 - 2.A.02.02 Describe and demonstrate safe use of oxygen/acetylene torches and electric welding equipment.
 - 2.A.02.03 Demonstrate ventilation procedures to be followed when working in the lab/shop area.

2.A.02 Performance Example:

- Student will relieve fuel system pressure to perform necessary repairs.

- 2.A.03 Identify and describe safety procedures when dealing with electrical circuits according to current industry standards.
- 2.A.03.01 Describe safety procedures to be followed when servicing supplemental restraint systems.
 - 2.A.03.02 Demonstrate safety awareness of high voltage circuits of electric or hybrid electric vehicles and related safety precautions.

2.A.03 Performance Example:

- Safely disable Supplemental Restraint System (SRS) air bag for repair using manufacturer’s recommendations.

There are additional changes to some of the Frameworks Strand Two (Technical Knowledge and Skills). Specifically, Strand Two of the Frameworks for Animal Science, Environmental Science and Technology and Horticulture begin with core standards required for all participants in the programs, followed by a series of standards organized in concentrations. For example, Strand Two of the Horticulture Framework begins with the core standards required of all Horticulture students

(Topics 2.A through 2.I). These standards are followed by the three concentrations: Arboriculture (Topics 2.J through 2.L), Greenhouse Management and Floriculture (Topics 2.J. through 2.L) and Landscape and Turf Management (Topics 2.M through 2.Q).

Advanced / Supplemental Standards (Not Required)

Another variation that is new to the revised Strand Two Frameworks is the addition of advanced or supplemental standards which are noted with the use of an asterisk (*). *These standards are not required, but are provided as suggestions that districts may choose to use to increase the depth of a particular topic, or add additional topics, particularly for advanced students or for those seniors who do not participate in cooperative education.*

The following is an example from Automotive Technology, where entire topics were added:

Advanced Automotive Technology Technical Knowledge and Skills

Note: The following competencies are optional, supplementary competencies suitable for advanced students. These are not required.

2.CC Demonstrate appropriate engine repair techniques.

2.CC.01 Perform appropriate cylinder Head Repair.

2.CC.01.01* Diagnose, remove and replace cylinder head(s).

2.CC.01.02* Clean and visually inspect a cylinder head for cracks; check gasket surface areas for warpage and surface finish; check passage condition; determine necessary action.

The following is an example from the Strand Two Radio and Television Broadcasting Framework that shows the addition of an advanced objective, 2.B.04.08*:

2.B.04 Explain concepts fundamental to shooting in cinema and video.

- 2.B.04.01 Compare and contrast a single-camera and a multiple-camera production.
- 2.B.04.02 Explain the importance of shooting for the edit (i.e., match on action, sequencing, coverage).
- 2.B.04.03 Explain the importance of continuity.
- 2.B.04.04 Explain the 180° Rule line, and its application in various cinema scenarios.
- 2.B.04.05 Identify and establish a specific point-of-view when shooting from a script.
- 2.B.04.06 Analyze the methods in which specific shots can evoke emotion from an audience.
- 2.B.04.07 Define drop frame and non-drop frame code shooting and explain how to account for both when preparing for an edit.
- 2.B.04.08* Describe various cinematographic methods necessary when shooting scenes that incorporate post-production visual effect

2.B.04 Performance Examples:

- Students will list similarities and differences of single-camera and multiple-camera shoots.
- Students will describe multiple shooting considerations that are useful in streamlining the editing process.

Legal & Protective Services Occupational Cluster

Criminal Justice Framework (VCRIMJ)

Strand 1: Safety and Health Knowledge and Skills

1.A Fundamentals of Health and Safety

- 1.A.01 Describe and apply health and safety regulations.
- 1.A.01.01 Identify, describe and apply health and safety regulations that apply to specific tasks and jobs. Students must complete a safety credential program, e.g., Occupational Safety and Health Administration 10, CareerSafe and ServSafe.
 - 1.A.01.02 Identify, describe and apply Environmental Protection Agency (EPA) and other environmental protection regulations that apply to specific tasks and jobs in the specific occupational area.
 - 1.A.01.03 Identify, describe and apply Right-To-Know (Hazard Communication Policy) and other communicative regulations that apply to specific tasks and jobs in the specific occupational area.
 - 1.A.01.04 Explain procedures for documenting and reporting hazards to appropriate authorities.
 - 1.A.01.05 Identify and describe potential consequences for non-compliance with appropriate health and safety regulations.
 - 1.A.01.06 Identify and list contact information for appropriate health and safety agencies and resources.

1. A.01 Performance Examples:

- List and define OSHA Health and Safety Regulations, EPA and other environmental protection regulations to occupational area.
- List and define Right-to-Know regulations and reporting of hazards and contact information for appropriate health and safety agencies.
- List the laws and rules of regulatory agencies governing sanitation and safety.
- Utilize OSHA as well as health and safety websites for purposes of research.

- 1.A.02 Demonstrate appropriate health and safety practices based on the specific occupational area.
- 1.A.02.01 Identify, describe and demonstrate the effective use of Safety Data Sheets (SDS).
 - 1.A.02.02 Read and interpret chemical, product and equipment labels to determine appropriate health and safety considerations.
 - 1.A.02.03 Identify, describe and demonstrate personal, shop and job site safety practices and procedures.
 - 1.A.02.04 Demonstrate safe dress and use of relevant safety gear, personal protective equipment (PPE) and ergonomics, e.g., wrist rests, adjustable workspaces, equipment, gloves, proper footwear, earplugs, eye protection and breathing apparatus.

- 1.A.02.05 Demonstrate appropriate safe body mechanics, including appropriate lifting techniques and ergonomics.
- 1.A.02.06 Locate emergency equipment, first aid kit, SDS information directories and emergency action/response plan/escape routes in your lab, shop and classroom, including labels and signage that follow OSHA Hazard Communication Program (HAZCOM), eyewash stations, shower facilities, sinks, fire extinguishers, fire blankets, telephone, master power switches and emergency exits.
- 1.A.02.07 Demonstrate the safe use, storage, and maintenance of every piece of equipment in the lab, shop and classroom, e.g., the OSHA Lockout/Tagout Program (LOTO).
- 1.A.02.08 Describe safety practices and procedures to be followed when working with and around electricity, e.g., ground fault circuit interrupter (GFCI) and frayed wiring.
- 1.A.02.09 Handle, store, dispose of and recycle hazardous, flammable and combustible materials, according to EPA, OSHA and product specifications.
- 1.A.02.10 Demonstrate appropriate workspace cleaning, sanitation, disinfection and sterilization procedures required in specific occupational areas, e.g., Workplace Housekeeping OSHA Regulations.

1. A.02 Performance Examples:

- Identify, describe and demonstrate the use of SDS.
- List and demonstrate shop dress code, safety procedures and location of emergency equipment in labor classroom.
- Define and demonstrate safe storage and maintenance of equipment and proper disposal or recycling of hazardous, flammable and combustible materials.
- Identify, describe and demonstrate the Universal Precautions set of guidelines.

- 1.A.03 Demonstrate appropriate responses to situations that may threaten health and safety.
 - 1.A.03.01 Describe First Aid procedures for potential injuries and other health concerns in the specific occupational area.
 - 1.A.03.02 Describe the importance of emergency preparedness and an emergency action/response plan.
 - 1.A.03.03 Describe procedures used to handle emergency situations, defensive measures and accidents, including identification, reporting, response, evacuation plans and follow-up procedures.
 - 1.A.03.04 Identify, describe and demonstrate safety practices in specific occupational areas used to avoid accidents.
 - 1.A.03.05 Identify and describe fire protection, protection, precautions and response procedures.
 - 1.A.03.06 Discuss the role of the individual and the company/organization in ensuring workplace safety including transportation to and from school, school activities and the workplace.
 - 1.A.03.07 Discuss ways to identify, prevent and report school and workplace violence, discrimination, harassment and bullying.
 - 1.A.03.08 Demonstrate positive and appropriate behavior that contributes to a safe and healthy environment in school and the workplace.

1. A.03 Performance Example:

- Define first aid procedures and protocols used to handle emergency situations and practices used to avoid accidents.
- View safety videos and discuss the role of workplace safety.
- Attend or participate in a human rights alliance organization presentation.
- Observe and/or demonstrate the appropriate use of a fire extinguisher using the (PASS) technique: Pull, Aim, Squeeze, Sweep.
- Review and discuss specific policies, procedures and protocols regarding discrimination, harassment and bullying.
- Discuss and/or role-play proper and respectful behavior that contributes to a positive climate.
- Discuss and/or demonstrate behavior that contributes to a collaborative/teamwork environment.

Selected Websites

- Bullying Prevention and Intervention Resources : www.doe.mass.edu/bullying
- Centers for Disease Control and Prevention: www.cdc.gov
- Environmental Protection Agency : www.epa.gov
- “Lost Youth – Four Stories of Injured Young Workers” – WorkSafeBC:
<http://www2.worksafebc.com/Publications/Multimedia/Videos.asp?reportid=34291>
- Massachusetts Department of Elementary and Secondary Education. (2011). Career/Vocational Technical Education Safety Guide: www.doe.mass.edu/cte
- Massachusetts Department of Elementary and Secondary Education: www.doe.mass.edu
- Massachusetts Emergency Management Agency: www.mass.gov/eopss/agencies/mema
- Massachusetts General Law: www.malegislature.gov
- Massachusetts Health and Human Services: www.mass.gov/dph
- Massachusetts Right to Know Law Summary:
<http://www.mass.gov/lwd/docs/dos/mwshp/hib397.pdf>
- Safety Data Sheet: www.sdsonline.com
- National Fire Protection Association: www.nfpa.org
- Protection of Student Rights: Massachusetts General Law:
<https://malegislature.gov/Laws/GeneralLaws/PartI/TitleXII/Chapter76/Section5>
- Occupational Safety and Health Administration: www.osha.gov
- Readiness and Emergency Management for Schools: www.rems.ed.gov
- Safe and Healthy Learning Environments: www.doe.mass.edu/ssce/safety.html

Strand 2: Technical Knowledge and Skills

2.A Criminal Justice Health and Safety Skills

- 2.A.01 Demonstrate physical fitness, health and police safety.
- 2.A.01.01 Explain the importance of good health and physical conditioning as it relates to law enforcement.
 - 2.A.01.02 Prepare and follow a personalized physical fitness regimen, including daily physical training.
 - 2.A.01.03 Obtain CPR certification
 - 2.A.01.04 Obtain First Aid certification.
 - 2.A.01.05 Demonstrate and use defensive safety strategies.
 - 2.A.01.06 Define the “Proper Use of Force.”
 - 2.A.01.07 Explain the Firearms Classification System.
 - 2.A.01.08 Describe the role of the first responder.
 - 2.A.01.09 Outline the mediation process and the role of the mediator.
 - 2.A.01.10 Identify and manage hazards at a crime scene.

2.A.01 Performance Examples:

- Students will participate in daily physical readiness training and maintain a log of progress toward goals.
- Students will monitor and record one’s own heart rate during cardiovascular training.
- Students will lower body fat to muscle ratio measured by a pre/post test
- Students will increase strength measured by a pre/post test.
- Students will evaluate levels of physical threat/harm to self and others.
- Students will participate in defensive tactics training.
- Students will maintain a daily self assessment journal.

2.B The Trial Court System and Constitutional and Criminal Law

- 2.B.01 Explain the trial court system.
- 2.B.01.01 Create a diagram of the tiered Federal trial court system.
 - 2.B.01.02 Create a diagram of the tiered State trial court system.
 - 2.B.01.03 Distinguish between Subject Matter Jurisdiction and the jurisdiction of the person.
 - 2.B.01.04 Apply personal and subject matter jurisdiction to determine if jurisdiction standards have been met.
 - 2.B.01.05 Describe the duties of the prosecuting and defense attorney.
 - 2.B.01.06 Describe the duties of the court officer.
 - 2.B.01.07 Describe the role of a probation officer.
 - 2.B.01.08 Explain the Restorative Justice model.
 - 2.B.01.09 Summarize the role of Victim Witness Advocate.

2.B.01 Performance Examples:

- Students will determine subject matter and personal jurisdiction by case analysis
- Students will research and report on the different employment opportunities in the trial court system.
- Students will research in professional journals the compensation rate and benefits package of court employees. Report your findings through a well document paper.
- Students will diagram the tiered Federal Court System.
- Students will diagram the tiered State Court System.
- Students will participate in moot court and prepare a summary of your role.

- 2.B.02 Describe criminal procedure and trial procedure.
- 2.B.02.01 Describe the magistrate’s hearing process.
 - 2.B.02.02 Identify all components of a summons.
 - 2.B.02.03 Describe the process of arrest and arraignment.
 - 2.B.02.04 Describe standards of bail and bail requirements.
 - 2.B.02.05 Explain the elements of pretrial release.
 - 2.B.02.06 Explain the elements of a pretrial hearing and a motion hearing.
 - 2.B.02.07 Describe the role that the judge plays in various stages of the criminal justice process.
 - 2.B.02.08 Describe the role of a jury.
 - 2.B.02.09 Compare and contrast the differences between judge and jury trials.
 - 2.B.02.10 Explain the criminal justice system model.

- 2.B.02 Performance Examples:
- Students will participate in all aspects of the Youth Court and will conduct hearings.
 - Students will participate in Moot Court and will present a mock trial.
 - Students will evaluate a criminal case from the summons stage through the jury trial stage.
 - Students will research the structure of a jury and report on the findings.
 - Students will research and compare bail requirements on the state and federal level
 - Students will diagram a criminal case from the complaint through the trial stage.

- 2.B.03 Explain the fundamentals of constitutional law.
- 2.B.03.01 Explain the protections and limitations of the First Amendment of the United States Constitution.
 - 2.B.03.02 Explain the protections and limitations of the Fourth Amendment of the United States Constitution.
 - 2.B.03.03 Explain the protections and limitations of the Fifth Amendment of the United States Constitution.
 - 2.B.03.04 Explain the protections and limitations of the Sixth Amendment of the United States Constitution.
 - 2.B.03.05 Explain the protections and limitations of the Eighth Amendment of the United States Constitution.
 - 2.B.03.06 Explain the protections and limitations of the Thirteenth Amendment of the United States Constitution.
 - 2.B.03.07 Explain the protections and limitations of the Fourteenth Amendment of the United States Constitution.
 - 2.B.03.08 Explain the protections and limitations of the Fifteenth Amendment of the United States Constitution.
 - 2.B.03.09 Explain the protections and limitations of the Massachusetts Declaration of Rights Article I.
 - 2.B.03.10 Explain the protections and limitations of the Massachusetts Declaration of Rights Article II.
 - 2.B.03.11 Explain the protections and limitations of the Massachusetts Declaration of Rights Article III.
 - 2.B.03.12 Explain the protections and limitations of the Massachusetts Declaration of Rights Article IV.
 - 2.B.03.13 Explain the protections and limitations of the Massachusetts Declaration of Rights Article V.

- 2.B.03.14 Explain the protections and limitations of the Massachusetts Declaration of Rights Article X.
- 2.B.03.15 Explain the protections and limitations of the Massachusetts Declaration of Rights Article XI.
- 2.B.03.16 Explain the protections and limitations of the Massachusetts Declaration of Rights Article XII.
- 2.B.03.17 Explain the protections and limitations of the Massachusetts Declaration of Rights Article XIII.
- 2.B.03.18 Explain the protections and limitations of the Massachusetts Declaration of Rights Article XIV.
- 2.B.03.19 Explain the protections and limitations of the Massachusetts Declaration of Rights Article XV.
- 2.B.03.20 Explain the protections and limitations of the Massachusetts Declaration of Rights Article XVI.
- 2.B.03.21 Explain the protections and limitations of the Massachusetts Declaration of Rights Article XVIII.
- 2.B.03.22 Explain the protections and limitations of the Massachusetts Declaration of Rights Article XXIV.
- 2.B.03.23 Explain the protections and limitations of the Massachusetts Declaration of Rights Article XXVI.

- 2.B.03 Performance Examples:
 Students will research the United States and Massachusetts Constitution and select an amendment:
- Use case analysis to explain applicable amendment of the United States Constitution.
 - Use case analysis to explain applicable amendment of the Massachusetts Constitution.
 - Apply moot court cases to the United States and Massachusetts Constitution.

- 2.B.04 Apply trial procedures.
 - 2.B.04.01 Describe the Federal Rules of Evidence.
 - 2.B.04.02 Describe the Massachusetts Rules of Evidence.
 - 2.B.04.03 Compare and contrast the Federal and Massachusetts Rules of Evidence.
 - 2.B.04.04 Apply the Federal Rules of Evidence in a trial setting.
 - 2.B.04.05 Apply the Massachusetts Rules of Evidence in a trial setting.
 - 2.B.04.06 Explain the role of youth court in the juvenile justice system.
 - 2.B.04.07 Examine and explain the three approaches to juvenile crime.
 - 2.B.04.08 Apply the principles of restorative justice to case disposition.
 - 2.B.04.09 Explain the Restorative Justice model.
 - 2.B.04.10 Develop and apply the relationship of case investigation and witness interviews.
 - 2.B.04.11 Apply principles of case investigation and witness interviews.
 - 2.B.04.12 Apply principles of case analysis.
 - 2.B.04.13 Explain and demonstrate the trial process.
 - 2.B.04.14 Explain and demonstrate an opening statement.
 - 2.B.04.15 Explain and demonstrate a closing statement.
 - 2.B.04.16 Explain and demonstrate direct and cross examination.
 - 2.B.04.17 Develop basic skills needed to question witnesses during a hearing.

2.B.04 Performance Examples:

- Students will research the Federal and the Massachusetts Rules of Evidence and identify evidentiary issues in selected case studies.
- Students will discuss testimonial evidence as it applies to hearsay and apply rules in a mock trial setting.
- Students will identify exceptions to the hearsay rule.
- Students will apply appropriate rules of opinion and expert testimony in a mock trial setting.
- Students will attend State and Federal Court sessions and discuss testimonial evidence.
- Students will participate in Youth Court proceedings as a lawyer or court room personnel.
- Prepare a brief report summarizing your role.
- Students will prepare and deliver opening and closing statements based on facts of a case.
- Students will use critical thinking skills to analyze and articulate facts in a courtroom.
- Students will conduct direct and cross examination of witnesses and clients in a court room setting.

2.B.05 Analyze elements of civil infractions and criminal law.

- 2.B.05.01 Describe the differences between city ordinances, civil infractions and a criminal law violation.
- 2.B.05.02 Explain the differences between felonies and misdemeanor crimes.
- 2.B.05.03 Apply elements of a crime to determine if a law has been violated.
- 2.B.05.04 Apply Mens Rea and Actus Reus to determine if elements of a crime have been committed.

2.B.05 Performance Examples:

- Students will analyze facts to determine what crimes have been committed.
- Students will identify and explain the Mens Rea and Actus Rea of selected statutes..

2.C Investigative and Police Procedures

2.C.01 Demonstrate knowledge of police procedures and write investigative reports.

- 2.C.01.01 Produce accurate field notes.
- 2.C.01.02 Identify the types of reports.
- 2.C.01.03 Define the uses and purposes of reports.
- 2.C.01.04 Define the qualities of a good report.
- 2.C.01.05 Identify the steps of the report writing process.
- 2.C.01.06 Define chronological order.
- 2.C.01.07 Identify the appropriate use of first versus third person reporting.
- 2.C.01.08 Explain the differences of probable cause and reasonable suspicion.
- 2.C.01.09 Explain how evidence is an important part of the judicial system.
- 2.C.01.10 Apply specific facts to determine whether probable cause or reasonable suspicion standards have been met.
- 2.C.01.11 Describe the standards and procedures of obtaining a warrant.

2.C.01 Performance Examples:

- Students will create a report using proper format to be used as work sample in the student's portfolio.
- Students will create a writing sample using active and passive voice.
- Students will apply for a mock search warrant which can be used as a work sample.

- 2.C.02 Explain and demonstrate procedures used in investigating and processing crime scenes.
- 2.C.02.01 Describe the role of a crime scene investigator.
 - 2.C.02.02 Demonstrate the appropriate protocol when processing a crime scene.
 - 2.C.02.03 Explain crime scene interpretation.
 - 2.C.02.04 Document information at a crime scene.
 - 2.C.02.05 Define crime scene perspective.
 - 2.C.02.06 Interpret information from a crime scene perspective.
 - 2.C.02.07 Define three-dimensional documentation in crime scene investigation.
 - 2.C.02.08 Apply three-dimensional documentation in a crime scene.
 - 2.C.02.09 List basic equipment needed for a crime scene investigation.
 - 2.C.02.10 Demonstrate the use of crime scene equipment.
 - 2.C.02.11 Define the three parts of crime scene response guidelines.
 - 2.C.02.12 Describe the personal responsibilities and duties of a crime scene responder.
 - 2.C.02.13 Explain the steps of protecting a crime scene.
 - 2.C.02.14 Demonstrate the organizational and procedural skills for search operations.
 - 2.C.02.15 Explain the documentation procedures of a crime scene.
 - 2.C.02.16 Explain the importance of preserving and destruction of crime scene evidence.
 - 2.C.02.17 Maintain the integrity of a crime scene.
 - 2.C.02.18 Demonstrate collection of evidence at a crime scene.
 - 2.C.02.19 Describe collection of footwear evidence.
 - 2.C.02.20 Lift latent footwear impressions.
 - 2.C.02.21 Define the dead body checklist.
 - 2.C.02.22 Describe the collection and processing of fingerprint evidence left at a crime scene.
 - 2.C.02.23 Explain DNA collecting techniques.
 - 2.C.02.24 Accurately tag and label evidence.
 - 2.C.02.25 Examine and document a crime scene according to current professional standards.
 - 2.C.02.26 Describe and apply collection standards.
 - 2.C.02.27 Identify the special considerations for sexual assault evidence.
 - 2.C.02.28 Identify the special considerations for collecting and preserving blood evidence.
 - 2.C.02.29 Develop strategies to assist the family of a victim.

2.C.02 Performance Examples:

- Students will participate in a crime scene scenario using accepted professional protocol.
- Students will use crime scene equipment to document evidence found at a crime scene.
- Students will tag and process evidence in accordance with safety rules and chain of custody requirements.
- Students will work as a team to evaluate a crime scene scenario.
- Students will diagram a crime scene scenario.
- Students will create a crime scene notebook to be used in the student's portfolio.

- 2.C.03 Identify and explain ethics and diversity issues as they pertain to the law and community policing.
- 2.C.03.01 Identify and describe ethical issues pertaining to the law.
 - 2.C.03.02 Identify and avoid conflict of interest issues.
 - 2.C.03.03 Identify shared identities through cultures, beliefs, values, arts and behaviors.
 - 2.C.03.04 Identify shared identities through language, communications, dress and appearance.
 - 2.C.03.05 Identify the roots of community policing.
 - 2.C.03.06 Explain the history of community policing.
 - 2.C.03.07 Identify the values of community policing.
 - 2.C.03.08 Describe the implications of community policing.

2.C.03 Performance Examples:

- Students will develop apply critical thinking skills to make ethical decisions.
- Students will use hypothetical cases to describe personal actions and moral decision making.
- Students will demonstrate the ability to make responsible decisions, define culture and recognize cultural impact on the community.
- Students will apply the SARA Model (scan, analyze, respond and assess) to various scenarios.

- 2.C.04 Perform interviewing and other communication techniques.
- 2.C.04.01 Conduct one-on-one interviews.
 - 2.C.04.02 Describe and apply the T funnel interview style.
 - 2.C.04.03 Conduct interviews using open and closed ended questions.
 - 2.C.04.04 Identify signs of non-verbal body communication.

2.C.04 Performance Examples:

- Students will develop interview witnesses and clients using the T funnel method.
- Students will use both open and closed questions to gather information in an investigation.
- Students will prepare notes while interviewing witnesses and clients.
- Students will demonstrate active listening skills.

- 2.C.05 Describe police field procedures.
- 2.C.05.01 Describe the process of a Motor Vehicle Stop.
 - 2.C.05.02 Describe and explain the “Plain View Doctrine.”
 - 2.C.05.03 Describe the theory of inventory search.
 - 2.C.05.04 Identify furtive gestures.
 - 2.C.05.05 Distinguish between probable cause and reasonable suspicion.

2.C.05 Performance Examples:

- Students will research motor vehicle loss to determine course of action in motor vehicle stop scenarios.
- Students will apply applicable law to case scenarios to determine course of action in motor vehicle stops.
- Students will use critical thinking skills to analyze safety/risk assessments during motor vehicle stop scenarios.

- 2.C.06 Use military time and phonetic alphabet.
- 2.C.06.01 Read and interpret the phonetic alphabet.
 - 2.C.06.02 Read and interpret military time.

2.C.06 Performance Examples:

- Students will use military time on logs and reports.
- Students will use the police scanner to decode the usage of phonetic communications.
- Students will read license plates using the phonetic alphabet.

- 2.C.07 Demonstrate private investigation techniques.
- 2.C.07.01 Describe the role of a private investigator.
 - 2.C.07.02 List the minimum requirements to obtain a Private Investigators license.
 - 2.C.07.03 Describe the working relationship between the private investigator and his/her client.
 - 2.C.07.04 Explain the best ways to gather information.
 - 2.C.07.05 Gather information by applying the public records law.
 - 2.C.07.06 Perform a mock interview with an acting witness.
 - 2.C.07.07 Explain the various types of investigations required by a client.
 - 2.C.07.08 Write an investigation report.
 - 2.C.07.09 Describe procedures used to release information documents with clients.
 - 2.C.07.10 Use a public records request to gather information needed for an investigation.
 - 2.C.07.11 Describe how public records are used in the court system.
 - 2.C.07.12 Describe how public records are found at the registry of deeds.
 - 2.C.07.13 Describe how public records are found at city and town halls.

2.C.07 Performance Examples:

- Students will participate in and summarize a discussion with a private investigator.
- Students will research minimum requirements of obtaining a private investigators license.
- Students will research and list sources where public records can be found.
- Students will draft releases and requests to obtain information both public and private.
- Students will visit the registry of deeds to research documents.

2.D Electronic Communications Issues

- 2.D.01 Explain the legal considerations of electronic communications.
- 2.D.01.01 Explain the importance of protecting personal information to avoid identity theft.
 - 2.D.01.02 Identify the characteristics of a cyber predator.
 - 2.D.01.03 Develop and list strategies to protect against cyber predators.
 - 2.D.01.04 Apply strategies to protect against cyber predators.
 - 2.D.01.05 Identify the characteristics of a cyber bully.
 - 2.D.01.06 Develop and list strategies to protect against Internet bullying.
 - 2.D.01.07 Apply strategies to protect against Internet bullying.

2.D.01 Performance Examples:

- Students will participate in peer to peer educational meetings to promote safe technology use.
- Students will write lesson plans, skits and public service announcements to promote safe technology use.
- Students will obtain Internet Safety Mentor certification.

Strand 3: Embedded Academics

Strand 3: Embedded Academics, a critical piece of a Vocational Technical Education Framework, are presented as Crosswalks between the Massachusetts Vocational Technical Education Frameworks and the Massachusetts Curriculum Frameworks. These Crosswalks are located in the Appendix of this Framework.

Academic Crosswalks

[Appendix A:](#) [English Language Arts](#)

[Appendix B:](#) [Mathematics](#)

[Appendix C:](#) [Science and Technology/Engineering](#)

Earth and Space Science

Life Science (Biology)

Physical Science (Chemistry and Physics)

Technology/Engineering

Strand 4: Employability and Career Readiness

4.A Career Exploration and Navigation

- 4.A.01 Develop a career plan and portfolio.
 - 4.A.01.01 Develop and revise career plan annually based on workplace awareness and skill attainment.
 - 4.A.01.02 Assess personal strengths and interest areas to determine potential careers, career pathways and career ladders.
 - 4.A.01.03 Examine potential career field(s)/discipline(s) and identify criteria to select, secure and keep employment in chosen field(s).
 - 4.A.01.04 Research and evaluate a variety of careers utilizing multiple sources of information and resources to determine potential career(s) and alternatives.
 - 4.A.01.05 Identify training and education requirements that lead to employment in chosen field(s) and demonstrate skills related to evaluating employment opportunities.
 - 4.A.01.06 Explore and evaluate postsecondary educational opportunities including degrees and certifications available, traditional and nontraditional postsecondary pathways, technical school and apprenticeships, cost of education, financing methods including scholarships and loans and the cost of loan repayment.
 - 4.A.01.07 Create a portfolio showcasing academic and career growth including a career plan, safety credential, resume and a competency profile demonstrating the acquisition of the knowledge and skills associated with at least two years of full-time study in the Chapter 74 program.

- 4.A.02 Demonstrate job search skills.
 - 4.A.02.01 Conduct a job search and complete written and electronic job applications, resumes, cover letters and related correspondence for a chosen career path.
 - 4.A.02.02 Explore and evaluate postsecondary job opportunities and career pathways specific to career technical areas.
 - 4.A.02.03 Identify role and use of social media and networking for staying current with career and employment trends as well as networking, job seeking and career development opportunities.
 - 4.A.02.04 Demonstrate ability to use social media and networking to develop useful occupational contacts, job seeking and career development opportunities.

- 4.A.03 Demonstrate all phases of the job interview process.
 - 4.A.03.01 Gather relevant information about potential employer(s) from multiple print and digital sources, assessing the credibility and accuracy of each source.
 - 4.A.03.02 Identify employment eligibility criteria, such as drug/alcohol free status, clean driving record, etc.

- 4.A.03.03 Practice effective interviewing skills: appearance, inquiry and dialogue with interviewer, positive attitude and evidence of work ethic and skills.
- 4.A.03.04 Explore and evaluate employment benefit packages including wages, vacation, health care, union dues, cafeteria plans, tuition reimbursement, retirement and 401K.

4. A Performance Examples:
- Conduct research to analyze and present on specific careers within a cluster.
 - Conduct web-based job search using sites such as Monster.com, CareerBuilder.com, Indeed.com, Snagajob.com, Simplyhired.com and others.
 - Create profile on social media/networking site such as LinkedIn and/or LinkedIn University for postsecondary research and employment opportunities.
 - Complete online job application.
 - Conduct and videotape practice interviews for instructor and student analysis.
 - Provide students with sample employment and benefit packages for evaluation.

4.B Communication in the Workplace

- 4.B.01 Demonstrate appropriate oral and written communication skills in the workplace.
 - 4.B.01.01 Communicate effectively using the language and vocabulary appropriate to a variety of audiences within the workplace including coworkers, supervisors and customers.
 - 4.B.01.02 Read technical and work-related documents and demonstrate understanding in oral discussion and written exercise.
 - 4.B.01.03 Demonstrate professional writing skills in work-related materials and communications (e.g., letters, memoranda, instructions and directions, reports, summaries, notes and/or outlines).
 - 4.B.01.04 Use a variety of writing/publishing/presentation applications to create and present information in the workplace.
 - 4.B.01.05 Identify, locate, evaluate and use print and electronic resources to resolve issues or problems in the workplace.
 - 4.B.01.06 Use a variety of financial and data analysis tools to analyze and interpret information in the workplace.
 - 4.B.01.07 Orally present technical and work-related information to a variety of audiences.
 - 4.B.01.08 Identify and demonstrate professional non-verbal communication.
- 4.B.02 Demonstrate active listening skills.
 - 4.B.02.01 Listen attentively and respectfully to others.
 - 4.B.02.02 Focus attentively, make eye contact or other affirming gestures, confirm understanding and follow directions.
 - 4.B.02.03 Show initiative in improving communication skills by asking follow-up questions of speaker in order to confirm understanding.

4. B Performance Examples:
- Read and analyze technical instructions to learn what makes them effective.
 - Read and analyze technical instructions to follow directions and/or solve a problem.
 - Examine a technical document and use it to write a set of instructions for another student to follow and evaluate.
 - Analyze websites for effective technical writing and design.
 - Create brochures and presentations using software and/or Web 2.0 tools to convey technical information.
 - Conduct research using the Internet, print documents, observations and interviews to create a technical guide.

4.C Work Ethic and Professionalism

- 4.C.01 Demonstrate attendance and punctuality.
- 4.C.01.01 Identify and practice professional time-management and attendance behaviors including punctuality, reliability, planning and flexibility.
- 4.C.02 Demonstrate proper workplace appearance.
- 4.C.02.01 Identify and practice professional appearance specific to the workplace.
- 4.C.02.02 Identify and practice personal hygiene appropriate for duties specific to the workplace.
- 4.C.02.03 Identify and wear required safety gear specific to the workplace.
- 4.C.03 Accepts direction and constructive criticism.
- 4.C.03.01 Demonstrate ability (both verbally and non-verbally) to accept direction and constructive criticism and to implement solutions to change behaviors.
- 4.C.03.02 Ask appropriate questions to clarify understanding of feedback.
- 4.C.03.03 Analyze own learning style and seek instructions in a preferred format that works best for their understanding (such as oral, written or visual instruction).
- 4.C.04 Demonstrate motivation and initiative.
- 4.C.04.01 Evaluate assigned tasks for time to completion and prioritization.
- 4.C.04.02 Demonstrate motivation through enthusiasm, engagement, accurate completion of tasks and activities.
- 4.C.04.03 Demonstrate initiative by requesting new assignments and challenges.
- 4.C.04.04 Explain proposed solutions to challenges observed in the workplace.
- 4.C.04.05 Demonstrate the ability to evaluate multiple solutions to problems and challenges using critical reasoning and workplace/industry knowledge and select the best solution to the problem.
- 4.C.04.06 Implement solution(s) to challenges and/or problem(s) observed in the workplace.
- 4.C.04.07 See projects through completion and check work for quality and accuracy.
- 4.C.05 Demonstrate awareness of workplace culture and policy.

- 4.C.05.01 Display ethical behavior in use of time, resources, computers and information.
- 4.C.05.02 Identify the mission of the organization and/or department.
- 4.C.05.03 Explain the benefits of a diverse workplace.
- 4.C.05.04 Demonstrate a respect for diversity and its benefit to the workplace.

- 4.C.06 Interact appropriately with coworkers.
 - 4.C.06.01 Work productively with individuals and in teams.
 - 4.C.06.02 Develop positive mentoring and collaborative relationships within work environment.
 - 4.C.06.03 Show respect and collegiality, both formally and informally.
 - 4.C.06.04 Explain and follow workplace policy on the use of cell phones and other forms of social media.
 - 4.C.06.05 Maintain focus on tasks and avoid negative topics or excessive personal conversations in the workplace.
 - 4.C.06.06 Negotiate solutions to interpersonal and workplace conflicts.

4. C Performance Examples:

- Complete a learning style analysis tool.
- Develop a rubric to assess work ethic and professionalism as detailed in the standards above.

Student Organizations

Business Professionals of America

www.bpa.org

Selected Websites

- 5 Ways to Ace a Job Interview: http://kidshealth.org/teen/school_jobs/jobs/tips_interview.html
- America’s Career Resource Network: <http://acrn.ovae.org/teachers/careerexpclassrm.htm>
- Career Cruiser – Florida Department of Education: <http://www.fldoe.org/workforce/pdf/cruiser.pdf>
- Career Development Guide and Glossary: <http://www.doe.mass.edu/connect/cde.html>
- Career One Stop: <http://www.careeronestop.org/>
- Career Plan: <http://www.doe.mass.edu/cd/plan/intro.html>
- Career Plan Model: http://www.doe.mass.edu/ccr/epp/samples/cpmodel_11x17.pdf
- Checklist: <http://www.doe.mass.edu/cd/plan/checklist.pdf>
- Career Tech: http://www.okcareertech.org/cac/Pages/resources_products/ethics_web_sites.htm
- Ethics Resource Center: <http://www.ethics.org/>
- Interaction in the Workplace: <http://hrweb.berkeley.edu/guides/managing-hr/interaction/communication>
- Individual Learning Plans: How-to Guide: “Promoting Quality Individualized Learning Plans: A How to Guide on the High School Years” <http://www.ncwd-youth.info/ilp/how-to-guide>

- ILP Fact Sheet: <http://www.ncwd-youth.info/fact-sheet/individualized-learning-plan>
- ILP Policy Brief: <http://www.ncwd-youth.info/ilp/produce-college-and-career-ready-high-school-graduates>
- ILP Resources Home Page: <http://www.ncwd-youth.info/ilp>
- Interview Skills Lesson Plans:
<http://www.amphi.com/media/1220281/interview%20skills%20lesson%20plan.doc>
- Labor and Workforce Development: <http://www.mass.gov/lwd/employment-services/preparing-for-your-job-search/>
- Maine Community College System – Center for Career Development:
http://www.ccd.me.edu/careerprep/CareerPrepCurriculum_LP-6.pdf
- Massachusetts Work-Based Learning: <http://skillspages.com/masswbl>
- North Dakota Association of Agriculture Educators:
http://www.ndaae.org/attachments/File/Preparing_students_for_a_Job_Interview.pptx
- NY CTE Learning Standards—Career Development and Occupational Studies (CDOS) Resource Guide with Core Curriculum: <http://www.p12.nysed.gov/cte/cdlearn/cdosresourceguide.html>
- Occupational Outlook Handbook: <http://www.bls.gov/ooh/>
- Purdue OWL Job Search Resources (for writing resumes, applications, and letters):
<https://owl.english.purdue.edu/engagement/34/>
- Soft Skills to Pay the Bills — Mastering Soft Skills for Workplace Success:
<http://www.dol.gov/odep/topics/youth/softskills/>
- US Department of Labor: <http://www.dol.gov/dol/audience/aud-unemployed.htm>
- Workplace Communication:
<http://www.regionalskillstraining.com/sites/default/files/content/WC%20Book%201.pdf>
- Your Plan For the Future: <http://www.yourplanforthefuture.org>

Strand 5: Management and Entrepreneurship Knowledge and Skills

5.A Starting a Business

- 5.A.01 Demonstrate an understanding of the practices required to start a business.
 - 5.A.01.01 Define entrepreneurship and be able to recognize and describe the characteristics of an entrepreneur.
 - 5.A.01.02 Compare and contrast types of business ownership (i.e., sole proprietorships, franchises, partnerships, corporations).
 - 5.A.01.03 Identify and explain the purpose and contents of a business plan.
 - 5.A.01.04 Demonstrate an understanding of the principles and concepts of a business's supply chain (i.e., suppliers, producers and consumers).

5. A Performance Examples:

- Develop a presentation pertaining to an entrepreneur and their business.
- Communicate with a business owner and discuss the pros and cons of starting and owning a business. Summarize the main points of the discussion.
- Choose a product or service and describe the process leading to distribution.
- Write a business plan for a business in your community.

5.B Managing a Business

- 5.B.01 Demonstrate an understanding of managing a business.
 - 5.B.01.01 Formulate short- and long-term business goals.
 - 5.B.01.02 Demonstrate effective verbal, written and visual communication skills.
 - 5.B.01.03 Utilize a decision-making process to make effective business decisions.
 - 5.B.01.04 Identify a business's chain of command and define its organizational structure.
 - 5.B.01.05 Identify and apply effective customer service skills and practices.
 - 5.B.01.06 Identify, interpret and develop written operating procedures and policies.
 - 5.B.01.07 Track inventory, productivity and labor cost.
 - 5.B.01.08 Demonstrate business meeting skills.
 - 5.B.01.09 Identify professional organizations and explore their benefits.

5. B Performance Examples:

- Working as a team, role-play situations that an entrepreneur might face in dealing with customers or employees.
- Contact a relevant professional organization and request information about its benefits, membership requirements and costs.
- Plan and conduct a business meeting.
- Identify companies that are known for customer service and list the practices that help differentiate themselves from all others in their industry.

5.C Marketing a Business

- 5.C.01 Demonstrate an understanding of marketing and promoting a business.
 - 5.C.01.01 Explain the role of business in the economy.
 - 5.C.01.02 Describe the relationship between business and community.
 - 5.C.01.03 Describe methods of market research and identifying target markets.

- 5.C.01.04 Describe and apply the concepts of a marketing mix (the 4Ps of marketing: product, price, place and promotion).
- 5.C.01.05 Compare and contrast the promotional tools and techniques used to sell products, services, images and ideas.
- 5.C.01.06 Describe the impact of supply and demand on a product or business.
- 5.C.01.07 Identify direct and indirect competition on a business.
- 5.C.01.08 Identify and use sales techniques to meet client needs and wants.
- 5.C.01.09 Discuss strategies to acquire and retain a customer base.

5. C Performance Examples:
- Research reliable sources to identify marketing and industry data related to a business.
 - Conduct market research by developing a survey and presenting the results.
 - Create a promotional campaign using a variety of media.
 - Write a marketing plan for a product.

5.D Financial Concepts and Applications in Business

- 5.D.01 Demonstrate an understanding of financial concepts and applications.
 - 5.D.01.01 Identify essential financial reports and understand their purpose (i.e., budget, balance sheet and income statement).
 - 5.D.01.02 Describe payroll practices (i.e., deductions – federal, FICA and state taxes and insurances).
 - 5.D.01.03 Identify the importance of maintaining accurate records.
 - 5.D.01.04 Apply practices related to pricing, purchasing and billing.
 - 5.D.01.05 Maintain and reconcile a checking account.
 - 5.D.01.06 Identify the options for funding a business.

5. D Performance Examples:
- Given an employee time card and rate of pay, calculate gross pay, taxes, deductions and net pay.
 - Develop a budget for a simulated business or project.
 - Analyze and discuss financial documents from a company.
 - Research various methods of funding a business.

5.E Legal/Ethical/Social Responsibilities

- 5.E.01 Demonstrate an understanding of legal, ethical and social responsibility for businesses.
 - 5.E.01.01 Identify state and federal laws and regulations related to managing a business.
 - 5.E.01.02 Describe and identify ethical business practices.
 - 5.E.01.03 Demonstrate an understanding of business contracts.
 - 5.E.01.04 Explain the role of diversity in the workplace.
 - 5.E.01.05 Explain the role of labor organizations.
 - 5.E.01.06 Identify practices that support clean energy technologies and encourage environmental sustainability.
 - 5.E.01.07 Demonstrate an understanding of how technology advancements impact business practices.

- 5.E Performance Example:
- Read and interpret a contract.
 - Complete an application for a license, permit or certificate.
 - Research federal, state and local regulations and laws required for a business.
 - Participate in and summarize a discussion with a member of a labor or civil rights organization.

Selected Websites

- CVTE Strand 1, 4, and 5 Resources: <https://sites.google.com/a/mccanntech.org/cvte-strands-1-4-and-5-resources/>
- Entrepreneur: <http://www.entrepreneur.com>
- Inc. Magazine: <http://www.inc.com/>
- Junior Achievement “Be Entrepreneurial Program”: <https://www.juniorachievement.org/web/ja-usa/home>
- Kahn Academy Interviews with Entrepreneurs: <https://www.khanacademy.org/economics-finance-domain/entrepreneurship2/interviews-entrepreneurs>
- Kauffman Founders School: <http://www.entrepreneurship.org/en/founders-school.aspx>
- National Federation of Independent Business: www.nfib.com
- National Foundation for Teaching Entrepreneurship (NFTE): www.nfte.com
- SBA Loans: <http://www.sba.gov>
- SkillsUSA Professional Development Program Competency List: <http://www.skillsusa.org/downloads/PDF/lessons/professional/PDPPreview.pdf>
- Small Business Administration: www.sba.gov

Glossary

Term	Definition
Balance sheet	A statement of the assets, liabilities and capital of a business at a particular point in time.
Budget	An estimate of income and expenditure for a set period of time.
Business Ownership	Types of business ownership refer to the legal structure of an organization. Legal structures include: Sole Proprietorship, Partnerships, Corporations and Limited Liability Companies.
Business Plan	A written document that describes in detail your business goals and how you are going to achieve them from a marketing, operational and financial point of view.

Term

Chain of Command and Organizational Structure

**Definition**

Refers to the management structure of an organization. It identifies lines of authority, lines of communication, and reporting relationships. Organizational structure determines how the roles, power and responsibilities are assigned and coordinated and how information flows between the different levels of management. (A visual representation of this structure is called an org chart).

FICA

Federal Insurance Contributions Act requires taxes deducted from pay for supporting Social Security.

Income Statement

A financial statement providing operating results for a specific time period showing a business's revenues, expenses and profit or loss.

Market Research

- Primary: Surveys, Focus Groups, Observation
- Secondary: Websites, Internet

Marketing Mix

A set of controlled variables that formulate the strategic position of a product or service in the marketplace. These variables are known as the 4 P's of marketing and include product, place, price and promotion.

Methods to Track Inventory, Productivity and Labor Cost

Refers to the processes a business uses to account for: 1) the inflows and outflows of inventory and materials related to inventory; 2) the efficiency of operations and 3) the cost of labor including salary and benefits.

Promotional Tools and Techniques

The six elements of a promotional mix are: advertising, visual merchandising, public relations, publicity, personal selling and sales promotion.

Supply Chain

The supply chain, or channel of distribution, describes how the product is handled and/or distributed from suppliers with materials, to the manufacturer, wholesaler or retailer and finally to the consumer.

Target Market

Those who are most likely to buy your product or service.

Strand 6: Technology Literacy Knowledge and Skills

6.A Technology Literacy Knowledge and Skills (Grades 9 through 12)

- 6.A.01 Demonstrate proficiency in the use of computers and applications, as well as an understanding of the concepts underlying hardware, software, and connectivity.
 - 6.A.01.01 Use online help and other support to learn about features of hardware and software, as well as to assess and resolve problems.
 - 6.A.01.02 Install and uninstall software; compress and expand files (if the district allows it).
 - 6.A.01.03 Explain effective backup and recovery strategies.
 - 6.A.01.04 Apply advanced formatting and page layout features when appropriate (e.g., columns, templates, and styles) to improve the appearance of documents and materials.
 - 6.A.01.05 Use editing features appropriately (e.g., track changes, insert comments).
 - 6.A.01.06 Identify the use of word processing and desktop publishing skills in various careers.
 - 6.A.01.07 Identify the use of database skills in various careers.
 - 6.A.01.08 Define and use functions of a spreadsheet application (e.g., sort, filter, find).
 - 6.A.01.09 Explain how various formatting options are used to convey information in charts or graphs.
 - 6.A.01.10 Identify the use of spreadsheet skills in various careers.
 - 6.A.01.11 Use search engines and online directories.
 - 6.A.01.12 Explain the differences among various search engines and how they rank results.
 - 6.A.01.13 Explain and demonstrate effective search strategies for locating and retrieving electronic information (e.g., using syntax and Boolean logic operators).
 - 6.A.01.14 Describe good practices for password protection and authentication.
- 6.A.02 Demonstrate the responsible use of technology and an understanding of ethics and safety issues in using electronic media at home, in school, and in society.
 - 6.A.02.01 Demonstrate compliance with the school's Acceptable Use Policy.
 - 6.A.02.02 Explain issues related to the responsible use of technology (e.g., privacy, security).
 - 6.A.02.03 Explain laws restricting the use of copyrighted materials.
 - 6.A.02.04 Identify examples of plagiarism, and discuss the possible consequences of plagiarizing the work of others.
- 6.A.03 Design and implement a personal learning plan that includes the use of technology to support lifelong learning goals.
 - 6.A.03.01 Evaluate the authenticity, accuracy, appropriateness, and bias of electronic resources, including Web sites.
 - 6.A.03.02 Analyze the values and points of view that are presented in media messages.
 - 6.A.03.03 Describe devices, applications, and operating system features that offer accessibility for people with disabilities.

- 6.A.03.04 Evaluate school and work environments in terms of ergonomic practices.
- 6.A.03.05 Describe and use safe and appropriate practices when participating in online communities (e.g., discussion groups, blogs, social networking sites).
- 6.A.03.06 Explain and use practices to protect one's personal safety online (e.g., not sharing personal information with strangers, being alert for online predators, reporting suspicious activities).
- 6.A.03.07 Explain ways individuals can protect their technology systems and information from unethical users.
- 6.A.04 Demonstrate the ability to use technology for research, critical thinking, problem solving, decision making, communication, collaboration, creativity, and innovation.
 - 6.A.04.01 Devise and demonstrate strategies for efficiently collecting and organizing information from electronic sources.
 - 6.A.04.02 Compare, evaluate, and select appropriate electronic resources to locate specific information.
 - 6.A.04.03 Select the most appropriate search engines and directories for specific research tasks.
 - 6.A.04.04 Use a variety of media to present information for specific purposes (e.g., reports, research papers, presentations, newsletters, Web sites, podcasts, blogs), citing sources.
 - 6.A.04.05 Demonstrate how the use of various techniques and effects (e.g., editing, music, color, rhetorical devices) can be used to convey meaning in media.
 - 6.A.04.06 Use online communication tools to collaborate with peers, community members, and field experts as appropriate (e.g., bulletin boards, discussion forums, listservs, Web conferencing).
 - 6.A.04.07 Plan and implement a collaborative project with students in other classrooms and schools using telecommunications tools (e.g., e-mail, discussion forums, groupware, interactive Web sites, video conferencing).

Appendices

The framework teams created an “Appendix” listing potential industry recognized credentials attainable by secondary students; lists of professional, student, and relevant government organizations; and useful resources and websites. **** It is important to note that although most Framework Teams provided information for the “Appendix”, not all teams did. Therefore, sub-headings within the “Appendix” without information have been deleted.***

Disclaimer: Reference in the Appendices Section to any specific commercial products, processes, or services, or the use of any trade, firm or corporation name is for the information and convenience of the public, and does not constitute endorsement or recommendation by the Massachusetts Department of Elementary and Secondary Education.

Embedded Academic Crosswalks

Embedded English Language Arts and Literacy

CVTE Learning Standard Number	Strand Coding Designation Grades ELAs Learning Standard Number	Text of English Language Arts Learning Standard
2.B.01	(WHST)8	Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the strengths and limitations of each source in terms of the task, purpose, and audience; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and overreliance on any one source and following a standard format for citation.
Performance Example: Student will research, prepare, and present a paper on the history of the Massachusetts Trial Court and the importance of the system in the administration and enforcement of the law in our state.		
2.C.01	Writing 9-12 #4	4. Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience. (Grade-specific expectations for writing types are defined in standards 1–3 above.)
Performance Example: Students will prepare a clear and coherent written investigative report demonstrating the use of appropriate police procedures, relevant data and accurate field notes.		
2.B.01 2.B.02 2.B.03 2.C.01 2.C.02 2.C.03	Writing 9-12 #1 a-e	Write arguments to support claims in an analysis of substantive topics or texts, using valid reasoning and relevant and sufficient evidence. a. Introduce precise, knowledgeable claim(s), establish the significance of the claim(s), distinguish the claim(s) from alternate or opposing claims, and create an organization that logically sequences claim(s), counterclaims, reasons, and evidence. b. Develop claim(s) and counterclaims fairly and thoroughly, supplying the most relevant evidence for each while pointing out the strengths and limitations of both in a manner that anticipates the audience’s knowledge level, concerns, values, and possible biases. c. Use words, phrases, and clauses as well as varied syntax to link the major sections of the text, create cohesion, and clarify the relationships between claim(s) and reasons, between reasons and evidence, and between claim(s) and counterclaims. d. Establish and maintain a formal style and objective tone while attending to the norms and conventions of the discipline in which they are writing. e. Provide a concluding statement or section that follows from and supports the argument presented.
Performance Example: Students will analyze a crime scenario to determine whether probable cause or reasonable suspicion standards have been met, and present their findings in well-organized, objective writing.		
2.B.02 2.B.03 2.C.02	Speaking 9-10 #3, 4, 6	3. Evaluate a speaker’s point of view, reasoning, and use of evidence and rhetoric, identifying any fallacious reasoning or exaggerated or distorted evidence. 4. Present information, findings, and supporting evidence clearly, concisely, and logically such that listeners can follow the line of reasoning and the organization, development, substance, and style are appropriate to purpose, audience, and task 6. Adapt speech to a variety of contexts and tasks, demonstrating

		command of formal English when indicated or appropriate.
Performance Example: Students will participate in a Moot Court and will present information, findings, and supporting evidence in a mock trial.		
2A – 2E	WHST 9-10 #2 a-b Writing Grades 11-12 #1 Speaking 9-10 #4	2. Write informative/explanatory texts, including the narration of historical events, scientific procedures/ experiments, or technical processes. a. Introduce a topic and organize ideas, concepts, and information to make important connections and distinctions; include formatting (e.g., headings), graphics (e.g., figures, tables), and multimedia when useful to aiding comprehension. b. Develop the topic with well-chosen, relevant, and sufficient facts, extended definitions, concrete details, quotations, or other information and examples appropriate to the audience’s knowledge of the topic. 1. Write routinely over extended time frames (time for research, reflection, and revision) and shorter time frames (a single sitting or a day or two) for a range of tasks, purposes, and audiences. 4. Present information, findings, and supporting evidence clearly, concisely, and logically such that listeners can follow the line of reasoning and the organization, development, substance, and style are appropriate to purpose, audience, and task
Performance Example: Students will create a crime scene notebook explaining the proper procedures in investigating and processing a crime scene. Some entries will be one time reflective experience based entries. Some entries will be over a longer duration such as components to a research study including background information, data collection, and analysis.		
2E	WHST 11-12 #6	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.
Performance Example: Students will work as part of a cooperative team to prepare one lesson plan and one public service announcement to promote safe technology use.		
2.D.01 2.C.07	RI Grades 11-12 #1	1. Cite strong and thorough textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text, including determining where the text leaves matters uncertain.
Performance Example: Students will select an article that relates to case investigation and witness interviews, and create an open response question that aligns to the article, including what it directly states and what is inferred and or left uncertain.		
2.B.04	W2 a-b	2. Write informative/explanatory texts to examine and convey complex ideas, concepts, and information clearly and accurately through the effective selection, organization, and analysis of content. a. Introduce a topic; organize complex ideas, concepts, and information to make important connections and distinctions; include formatting (e.g., headings), graphics (e.g., figures, tables), and multimedia when useful to aiding comprehension. b. Develop the topic with well-chosen, relevant, and sufficient facts, extended definitions, concrete details, quotations, or other information and examples appropriate to the

		audience’s knowledge of the topic.
Performance Examples: Using a selected case study, students will apply the Massachusetts Rules of Evidence and write an informative/explanatory essay that includes a well-developed topic using facts, definitions, and concrete details and quotations as examples for clarification.		

Embedded Mathematics

CVTE Learning Standard Number	Math Content Conceptual Category and Domain Code Learning Standard Number	Text of Mathematics Learning Standard
2A.01	6.RP1 N.Q.1	Understand the concept of a ratio & use ratio language to describe a ratio relationship between two quantities. Use units as a way to understand problems and to guide the solution of multi-step problems; choose and interpret units consistently in formulas; choose and interpret the scale and the origin in graphs and data displays.
Performance Example: Students will record, monitor and compare the weekly body fat-to-muscle ratio of a family member over a month and determine body fat-to-muscle gain or loss for the month and prepare a presentation that includes graphs and data displays.		
2.C.02	4.G.3 7.RP.1 4. MD (Measurement and Data)	Recognize a line of symmetry for a two dimensional figure as a line across the figure such that the figure can be folded along the line into matching parts. Identify line-symmetric figures and draw lines of symmetry. Compute unit rates associated with ratios of fractions, including ratios of lengths, areas, and other quantities measured in like or different units. Solve problems involving measurement and conversion of measurements from a larger unit to a smaller unit. Represent and interpret data. Geometric measurement: Understand concepts of angle and measure angles.
Performance Example: Students will use symmetry and proportion to identify and apply the principles of three-dimensional documentation in a crime scene investigation.		
2.C.02	G-CO.3 G-GPE.6 G-CO.9 4. MD (Measurement and Data)	Know precise definitions of angle, circle, perpendicular line, parallel line, and line segment, based on the undefined notions of point, line, distance along a line, and distance around a circular arc. Find the point on a directed line segment between two given points that partitions the segment in a given ratio. Prove theorems about lines and angles. <i>Theorems include: vertical angles are congruent; when a transversal crosses parallel lines, alternate interior angles are congruent and corresponding angles are congruent; points on a perpendicular bisector of a line segment are exactly those equidistant from the segment’s endpoints.</i> Solve problems involving measurement and conversion of measurements from a larger unit to a smaller unit. Represent and interpret data. Geometric measurement: Understand concepts of angle and measure angles.

Performance Example: Students will review a motor vehicle crash scenario, analyze skid marks and use precision measurements to calculate the direct distance from the point of striking impact to where the vehicle landed.		
2.C.01	7.SP S-IC.3, 4, 5, 6.	<p>Use random sampling to draw inferences about a population.</p> <ol style="list-style-type: none"> Understand that statistics can be used to gain information about a population by examining a sample of the population; generalizations about a population from a sample are valid only if the sample is representative of that population. Understand that random sampling tends to produce representative samples and support valid inferences. Use data from a random sample to draw inferences about a population with an unknown characteristic of interest. Generate multiple samples (or simulated samples) of the same size to gauge the variation in estimates or predictions. <p>Recognize the purposes of and differences among sample surveys, experiments, and observational studies; explain how randomization relates to each. *</p> <p>Use data from a sample survey to estimate a population mean or proportion; develop a margin of error through the use of simulation models for random sampling. *</p> <p>Use data from a randomized experiment to compare two treatments; use simulations to decide if differences between parameters are significant. *</p> <p>Evaluate reports based on data. *</p>
Performance Example: Students will work in a cooperative group to develop and implement a sample survey to find out where their classmates generally stand with respect to the death penalty; students will prepare a brief presentation to present their findings.		

Embedded Science and Technology/Engineering

Life Science (Biology)

CVTE Learning Standard Number	Subject Area, Topic Heading and Learning Standard Number	Text of Biology Learning Standard
2.C.02	Genetics	<ol style="list-style-type: none"> Describe the basic structure (double helix, sugar/phosphate backbone, linked by complementary nucleotide pairs) of DNA, and describe its function in genetic inheritance. Describe the basic process of DNA replication and how it relates to the transmission and conservation of the genetic code. Explain the basic processes of transcription and translation, and how they result in the expression of genes. Distinguish among the end products of replication, transcription, and translation.
Performance Example: Students will work in cooperative groupings and use presentation media, such as PowerPoint, to diagram the basis structure of DNA and how the process of DNA replication is applied in criminal investigations.		

2.C.02	8.SP	4. Understand that patterns of association can also be seen in bivariate categorical data by displaying frequencies and relative frequencies in a two-way table. Construct and interpret a two-way table summarizing data on two categorical variables collected from the same subjects. Use relative frequencies calculated for rows or columns to describe possible association between the two variables.
Performance Example: Students will design and conduct a scientific investigation demonstrating how ratios and proportions can be used to figure out someone's height based on their footprints.		

Physical Science (Physics)

CVTE Learning Standard Number	Subject Area, Topic Heading and Learning Standard Number	Text of Physics Learning Standard
2.C.02	Motion and Forces	1.2 Distinguish between displacement, distance, velocity, speed, and acceleration. Solve problems involving displacement, distance, velocity, speed, and constant acceleration. 1.3 Create and interpret graphs of 1-dimensional motion, such as position vs. time, distance vs. time, speed vs. time, velocity vs. time, and acceleration vs. time where acceleration is constant.
Performance Example: Students will participate in a speed detection demonstration and research the technology used in radar and lidar.		
2.C.02	Scientific Inquiry Skills (SIS)	SIS2. Design and conduct scientific investigations. <ul style="list-style-type: none"> • Employ appropriate methods for accurately and consistently <ul style="list-style-type: none"> ○ making observations ○ making and recording measurements at appropriate levels of precision ○ collecting data or evidence in an organized way
Performance Example: Students will work as a team to evaluate a crime scene and apply accepted professional protocol in documenting and preserving evidence.		
2.D.01	Scientific Inquiry Skills (SIS)	<ul style="list-style-type: none"> • Observe the world from a scientific perspective. • Pose questions and form hypotheses based on personal observations, scientific articles, experiments, and knowledge. • Read, interpret, and examine the credibility and validity of scientific claims in different sources of information, such as scientific articles, advertisements, or media stories.
Performance Example: Students will research a local case involving juvenile crime and prepare hypothetical outcomes of the case.		

History

CVTE Learning Standard Number	Subject Area, Topic Heading and Learning Standard Number	Text of History Learning Standard
2.B 2.C 2.D	USG.5.9	Together with other students, identify a significant public policy issue in the community, gather information about that issue, fairly evaluate the various points of view and competing interests, examine ways of participating in the decision making process about the issue, and draft a position paper on how the issue should be resolved.
Performance Example: Students will work as a team to identify a law that should be changed or a law that needs to be passed and prepare a position paper highlighting their collective view points.		
2.B 2.C 2.D	USG.5.10	Practice civic skills and dispositions by participating in activities such as simulated public hearings, mock trials, and debates.
Performance Example: Students will work attend committee hearings and legislative sessions to give testimony and assist in passing new legislation.		
2.B 2.C	USG.5.7	Analyze and evaluate decisions about rights of individuals in landmark cases of the United States Supreme Court such as <i>Whitney v. California</i> (1927), <i>Stromberg v. California</i> (1931), <i>Near v. Minnesota</i> (1931), <i>Brandenburg v. Ohio</i> (1969), <i>Texas v. Johnson</i> (1989), and <i>Reno v. American Civil Liberties Union</i> (1997).
Performance Example: Given a crime scene scenario of a landmark case, students will complete a thorough investigation of the facts and prepare a brief synopsis (200–350 words) detailing their findings to be used in a five minute persuasive oral presentation.		

DESE Statewide Articulation Agreements

No Statewide Articulation Agreements at this time.

Industry Recognized Credentials (Licenses and Certifications/Specialty Programs)

National Academies of Emergency Dispatch Certification (911 Dispatch)

American Heart Association CPR/AED, First Aid – Adult, Child, Infant

FEMA Leadership in Emergency Management Certification

OSHA

Potential Certifications

FEMA Leadership in Emergency Management Train the Trainer

ISAFE (Internet/Computer Safety Certification)

Iris Scan Certified

Youth Court Certified

ICS 100 Certified (Incident Command System)

NIMS 700 Certified (National Incident Management System)

E-911 Telecommunicator <http://www.mass.gov/eopss/crime-prev-personal-sfty/report-emergency/e911/>

Accredited Legal Professional (ALP) from NALS...the association for legal professionals