



# Re-Imagine Maury High School



An Educational  
Specifications Process

## Final Report

June 2018

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# 1.0 INTRODUCTION



# 1.1 Executive Summary

Norfolk Public Schools is committed to the continuous improvement of school facilities to support the educational mission of the Division. As part of that commitment, NPS commissioned a Request for Qualifications to preform a process of developing Educational Specifications for Maury High School in an effort to align future learning and teaching models to the facilities improvement action that will be determined in a future process.

The 'Re-Imagine' Maury High School Educational Specification process began in January 2018 and concluded in June 2018. The process included exploration of current and future educational programs, school tours across the Commonwealth of Virginia, tours of EVMS instructional space along with strategic meetings for future program alignment, 3 full-day planning lab workshops with a school/community committee, and three community meetings.

The goal of the Re-Imagine Maury High School process is to explore and vision the design of a facility from an educational perspective. Future learning and teaching models will have a significant impact on the future of Maury High School (and all schools in the Division). The educational framework will serve as the foundation for the future of Maury High School, and this Educational Specification outlines that framework.

## Planned Optimal Capacity

The Re-Imagined Maury High School will be designed for an "Optimal" or "Program" Capacity of **1,889 students**, assuming a Utilization Factor of 85%. A utilization factor is applied to account for the likely occurrence that not every class block will achieve the average number of students listed above (typically AP courses or other course offerings with limited enrollment) and not every room will be utilized during every block of every day within the master schedule. A typical high school organized around a 4 x 2 block schedule will have a utilization factor of between 75% and 87.5%.

This planned optimal capacity will accommodate the current live-in enrollment of 1,584 students in the Maury High School attendance boundary plus 265 students in the Medical and Health Specialties Program (a 50% increase) plus allow for 2% growth in attendance boundary enrollment.

**Estimate of Gross Building Area for Main Building New Construction is:** **225,145 net SF x 1.38 (grossing factor) = 306,560 SF**

It should be noted that a grossing factor for a project that includes renovations to the existing Maury High School building is likely to be higher as program requirements may have to be "fit" within the existing structure. The calculation of a renovation grossing factor will require an analysis of the life-safety code requirements of the existing building as well as conceptual design, and both of these tasks are beyond the scope of this educational specification process.

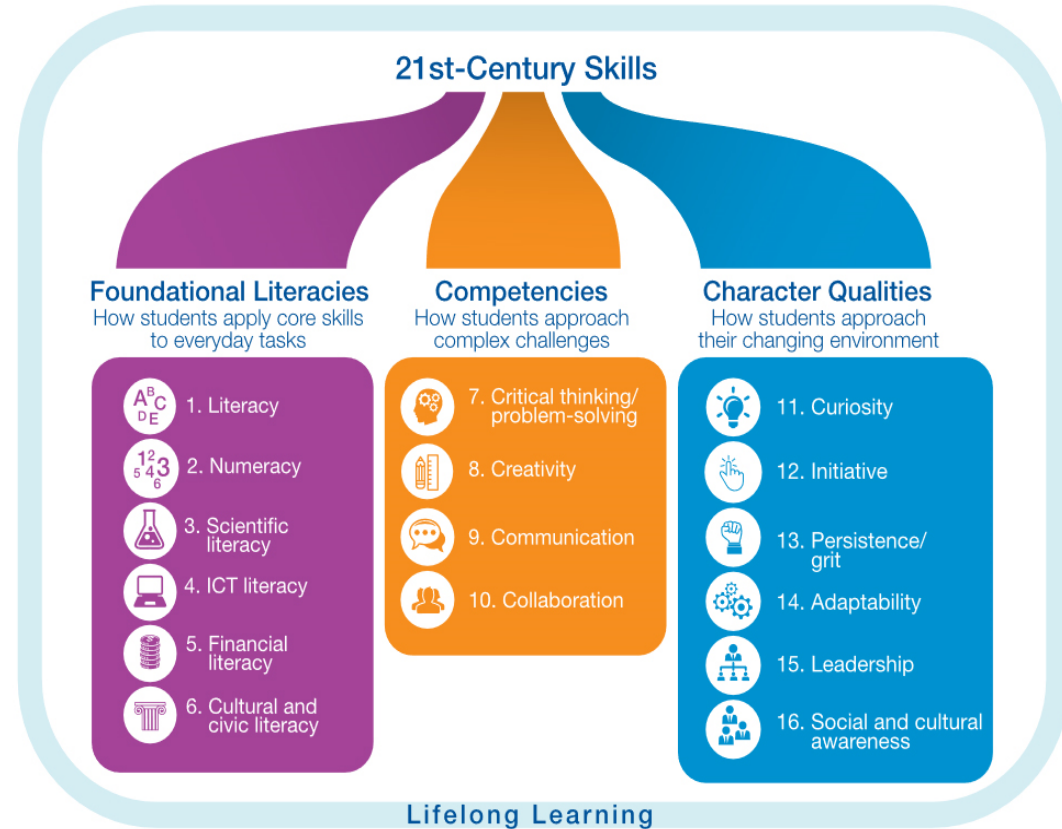
The estimated gross building area proposed to be provided per student is: **306,560 SF / 1,889 students = 162.2 SF per student**

This is slightly higher than the average SF per student provided in new high schools across the Commonwealth of Virginia over the 12 years, which is 161.3 SF per student.

# 1.2 Purpose

According to a World Economic Forum 2016 Report entitled “New Vision for Education: Fostering Social and Emotional Learning Through Technology”, the gap between the skills that our students are actually learning and the skills that they need to maximize their potential and successfully contribute to a global society is ever widening, as traditional schooling and traditional learning falls short of equipping our young people with the functional content literacies, process competencies, and character qualities that they need to thrive .

Ensuring successful learning outcomes begins with designing and providing high quality educational programs that provide equity of access and equity of educational opportunity for all students, while at the same time providing multiple pathways for student choice and achievement, either in higher education or in the workplace. Success is enhanced by providing best-in-class teachers who are passionate about their roles as teachers, mentors and coaches and who thrive on developing a relationship-based learning culture. Success is further enhanced by engaging caring parents and community stakeholders in the learning processes. And finally, the opportunity for success is further amplified by providing the types of indoor and outdoor learning environments that empower students to engage in student-centered, inquiry-based, and authentic applied learning experiences either individually or collaborating with their peers.



Source: World Economic Forum 2016

The purpose of the Educational Specification Process for a Re-Imagined Maury High School is to first create the vision for these types of desired learning experiences and their supportive learning environments, and then to describe them in such a way that this Education Specification Document will become the roadmap for both how future learning will occur, and also for how future learning environments should be created, though either modernization and/or new construction, to support these desired learning opportunities.

It is also hoped that this planning document may be a useful tool in steering both future educational programming and future facilities improvements throughout the other high schools in the City of Norfolk.

# 1.3 Educational Specifications Definition

An Educational Specification is a written communication from the owner or educator to design professionals, particularly the architect and engineers, describing the current and future educational activities that the school facility should accommodate and the characteristics, quantities and qualities of the spaces that should be planned.

## What the Process was:

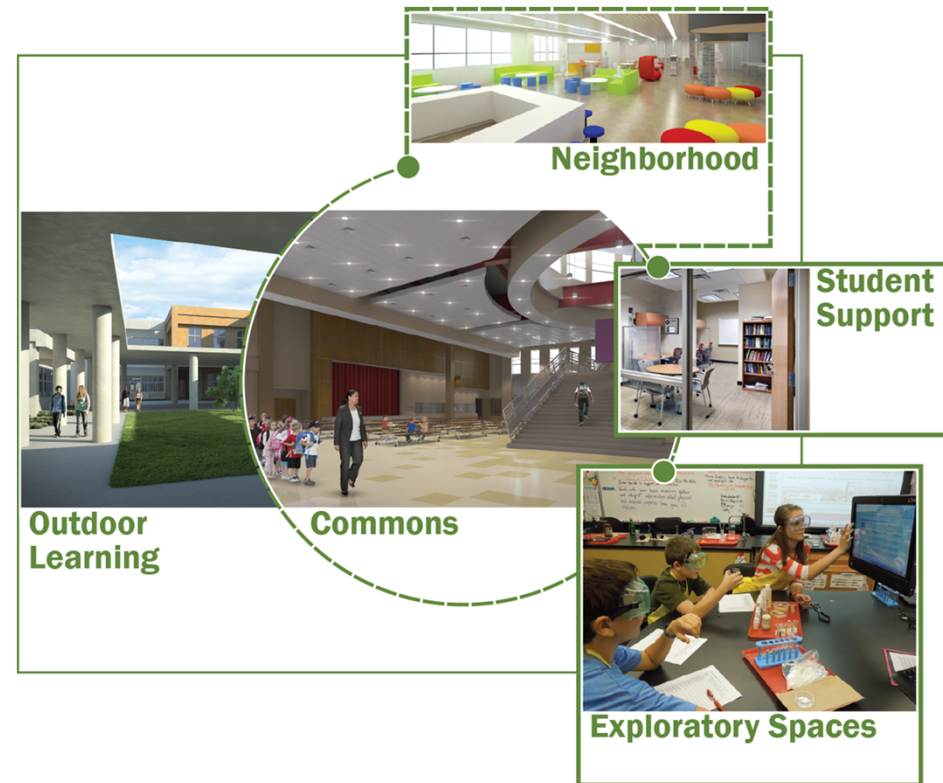


**PLANNING:** Development of Vision/Mission, Narrative of Program, Curriculum, and Function of the Facility, Draft of Space Requirements and Qualities, and Spatial Relationship Diagrams

## What the Process wasn't:



**DESIGNING:** Putting a Form around the Function, Schematic Designs, Assessment of Existing Building Conditions, Construction Documents



# 1.4 Approach & Process

## Data Collection & Analysis:

### NPS Division Staff & Maury HS Staff Interviews

The consulting team met with division level staff and staff from every department at Maury HS. The purpose of the interview sessions was to explore current course offerings and delivery methods, and to look forward to potential course offerings and future teaching and learning models.

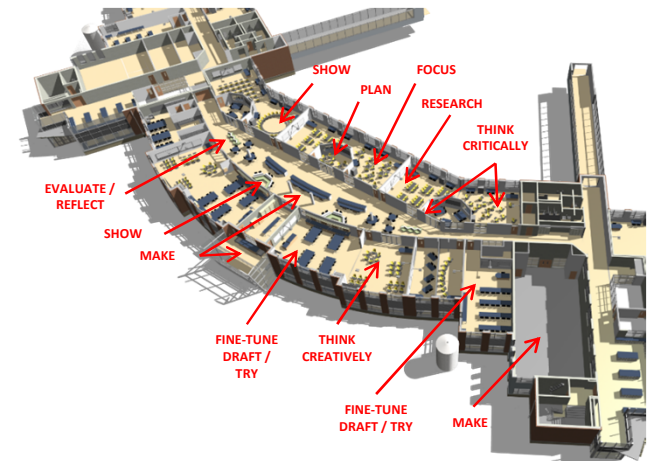
### Eastern Virginia Medical School Tours and Collaboration

On February 14, 2018, the consulting team and school / division personnel met with the staff and faculty at EVMS. The meeting consisted of a tour of the instructional facilities used by Maury HS students in the Medical and Health Specialties program.

The tour was followed by a meeting and group discussion about the current level of services this program offers to students from across the Division, and began discussion about future growth in both enrollment and program offerings. This meeting was an excellent starting point of the process for programming the educational specifications.

### School Tours to Observe Facility Responsiveness to Innovative Educational Programs

Several School tours were conducted at high schools across the Commonwealth to allow process participants to experience spaces in which innovative educational programs shaped the design. Tours included visits to Fluvanna High School, Monticello High School and Health & Medical Science Academy, both in the Charlottesville area, and Kellam High School in Virginia Beach. The purpose of the tours was not to explore architecture, but to visualize the use of spaces and how educational programs and delivery models influenced the space types and qualities, and also how the spaces were being use by students and teachers. Those that participated in the tours were asked to evaluate the likes and dislikes of each of the school environments and cultures in order to better inform the Maury High School Educational Specification process.



# 1.4 Approach & Process

## Educational Specifications Planning Labs:

Educational Specifications Planning Labs were conducted throughout the process to develop the educational foundation / framework for the Re-imagined Maury High School. Participants in the labs included students, teachers, school administration, division administration and community members. The labs were conducted over three separate full day sessions. The following are overviews of each lab, results from the lab can be located in the appendix of this document.

### Lab #1

**Presentations:** Defining an Educational Specification and Process; Educational Futures Presentation

#### Small Group Activities:

**Activity #1:** Developing Guiding Principals: C.L.A.S.S. Commodores Learn by Asking, Showing and Sharing

Group Discussions about how students Ask, Show and Share and the types of resources and spaces needed to do each of these activities. The goal of this exercise was to use the mission of the school to develop the guiding principals that would shape the process moving forward.

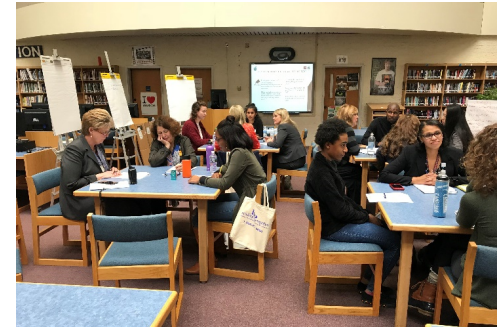
**Activity #2:** Design or Describe a learning project centered on a health topic

Groups were asked to focus on a health topic that could be cross curricular, last a week worth of instruction, and that explicitly incorporated strategies of Asking, Showing, Sharing

**Activity #3:** Describe the Student of 2035 and Define the Role of the Teacher in 2035

Groups were asked to describe a student and learning models of 2035 and then to define the teacher of the same year. The goal was to stretch forward, knowing teaching and learning changes over time and to help identify some of this change and plan space accordingly.

**Activity #4:** Brainstorm Guiding Principles for Educational Specifications; Brainstorm Challenges & Opportunities for Success



# 1.4 Approach & Process

## Educational Specifications Planning Labs

### Lab #2

**Presentations:** Recap of School Tours; Educational Program Learning Models

Small Group Activities:

**Activity #1:** Develop lists of Learning Environment “Likes” & “Dislikes” of Schools visited + Maury High School

Group Discussions and individual perspectives of each school toured. The goal was not to look at architecture or building materials but how space was used and programmed.

**Activity #2:** Describe Objective-Based Learning Environments to Asking, Showing, and Sharing

Groups were provided Learning Objective parameters such as Critical Thinking, Creating, Real World Context, and Problem Solving and were asked to identify the appropriate learning group size, the characteristics of the learning environment and the Furnishings and Equipment for these types of learning objective spaces. The goal to identify teaching and learning models that will work best in the future for Maury HS curriculum, programs, students and teachers.

**Activity #3:** Evaluate Educational Program Organizational Models

Groups were asked to identify and discuss Challenges and Opportunities of various common Educational Program Organizational Models.



MAURY HIGH SCHOOL :: EDUCATIONAL SPECIFICATIONS PROCESS DESIRED PROGRAM ORGANIZATIONAL MODELS			
	DEFINITION	CHALLENGES	OPPORTUNITIES
DEPARTMENTAL: Organized by Subject Matter			
GRADE LEVELS 9-12: Organized by Student Grade level			
GRADE LEVELS 9TH GRADE ACADEMY, 9th-12 10th Grade Self-Started, 10th-12th Grade Learning			
INTERDISCIPLINARY/ MULTIDISCIPLINARY: Both learning community contains all subject matter (C2D can vary)			
SCHOOL- within-a- SCHOOL / ACADEMY: Focus on Academy - service to the learning program currently			
THEMATIC ACADEMY: Entire program focuses on one theme aligned with program: Health, Business, Arts, STEM, etc.			
HYALTS - MODAL: This is a combination of many organizational structures			

MAURY HIGH SCHOOL :: EDUCATIONAL SPECIFICATIONS PROCESS PLANNING OBJECTIVE - BASED LEARNING ENVIRONMENTS						
	Learning Objective	Learning Activity	Assessment Type	Learning Group Size	Learning Environment Characteristics	Furnishings & Tools
Asking	Problem or Project Definition / Student Centric	Focus				
Asking	Process Definition / Student Centric	Plan				
Asking	Content Learning	Listen / Read / Research	MPC or FITB Testing / Expository Writing			
Asking	Relevance / Real-World Context	Experiential / Doing				
Asking	Critical Thinking	Synthesize / Analyze / Evaluate / Reason				
Asking	Creative Thinking	Conceptualize / Apply / Collaborate				
Showing	Problem Solving	Draft / Try				
Showing	Creation	Make / Refine				
Showing	Content & Process Mastery		Portfolio / Capstone			
Showing	Content & Process Mastery		Demonstration / Presentation			
Showing	Helping / Teaching	Mentoring				
Showing	Confidence / Leadership	Publishing				
Sharing	Empathy / Helping Predisposition	Community Service				
Sharing	Reciprocal Sharing / Internships / Apprenticeships	Partnerships				



# 1.4 Approach & Process

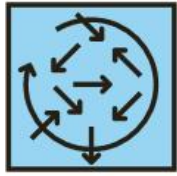
## Educational Specifications Planning Labs

### Lab #3

**Presentations:** Metaphors for Primordial Learning Environments



campfire



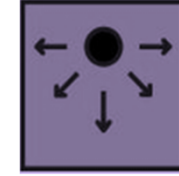
watering-hole



cave



life



mountain-top

Small Group Activities:

**Activity #1:** Develop Space Types using Metaphors for Learning Environments and Tools used in each of these environments

Groups were asked to complete an activity that applied educational space types to the type of primordial learning environment metaphor introduced in the presentation.



toolbox



genius bar



water



storage

**Activity #2:** Create / Design Learning Communities of 150, 300, and 450 student capacities

After creating Learning Space Prototypes using primordial metaphor learning spaces, each group was then asked to create a Learning Community environment with those spaces that would accommodate student groupings of 150, 300, and 450 size. The goal being to explore Learning Community organizational models, adjacencies of spaces, and how space types can be used to share purpose and utilize space efficiently.

**Activity #3:** Create / Design Organization Bubble Diagram for entire Re-Imagined Maury High School using lessons learned from previous Learning Community design activities.

# 1.4 Approach & Process

## Community Meetings

Three community meetings were conducted during this process in an effort to maintain transparency through the process. Each meeting was attended by approximately 30 to 50 community members. The meetings consisted of a presentation of information and followed up by both small group activity and a question / answer session.

### Community Meeting #1, March 1<sup>st</sup>, 2018

Purpose: Introduce process and defining goals of the educational specification process.

**Small Group Activity:** Groups were asked to provide a list of expectations for this process and then provide a list of anticipated challenges and/or obstacles the process might expect.

### Community Meeting #2, April 12<sup>th</sup>, 2018

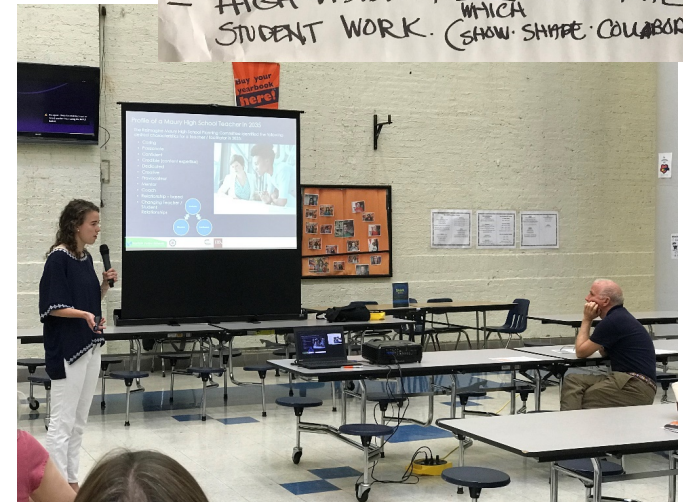
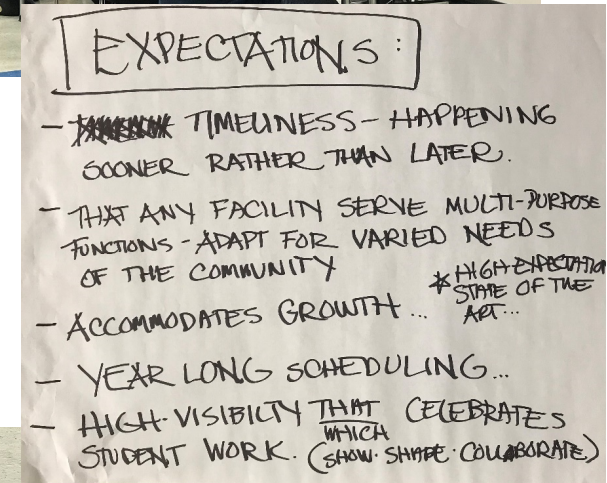
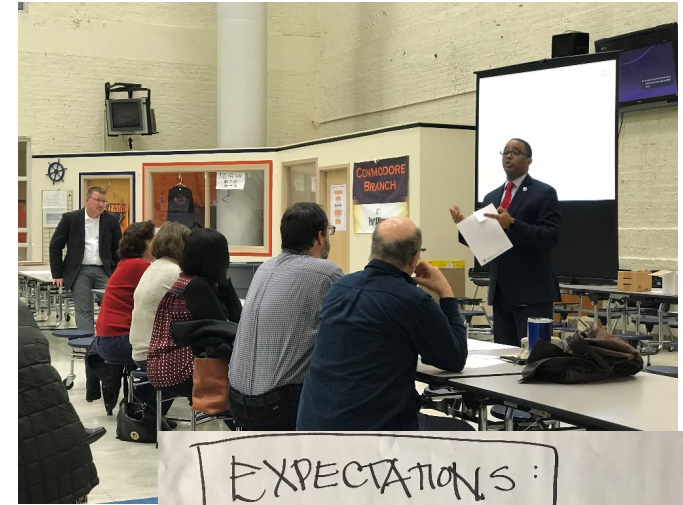
Purpose: Update community on the process, provide an overview of the school tours conducted between community meetings, and to create dialogue with community member with small group activity and discussion.

**Small Group Activity:** Individuals were asked to complete a S.W.O.P. (Strengths, Weaknesses, Obstacles, and Prospects) of their perspective of Maury High School.

### Community Meeting #3, May 3<sup>rd</sup>, 2018

Purpose: Concluding process presentation and present findings and up to date conclusions of the educational specifications process.

**Small Group Activity:** None - Community Q & A with the planning consultants and NPS staff.



# 1.5 Acknowledgements:

The consulting team of HBA Architecture & Cooperative Strategies would like to extend our sincere appreciation to all stakeholders who participated in the educational specifications process to Re-Imagine Maury High School.

## Norfolk Public Schools Division Staff

Dr. Melinda Boone  
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# 2.0 CONTEXT



# 2.1 Maury High School History

“Maury High School admitted students for the first time in the fall of 1910. As the oldest high school in the city of Norfolk, Maury is the alma mater to generations of Norfolkiens, as well as alumni all over the world.

Built in 1910, Maury High School represented a state of the art high school hailed as “one of the finest buildings in the entire South,” according to the Virginian-Pilot in April 1910. The price tag for this beautiful building was \$250,000.00. Norfolk High School, the city’s first comprehensive high school, opened its doors in 1895. A modest facility, it served city students until Maury High School opened.

Through the years, the building expanded on its east and west sides in the early 1930s. A gymnasium and swimming pool were added in 1977, and a rear section and new cafeteria and media center were added in 1986.

While the building is an historic landmark, we are most proud of our distinguished alumni and a long tradition of academic excellence. Maury’s alumni includes The Honorable G. William Whitehurst, member of the U.S. House of Representatives, and The Honorable John Charles Thomas, the first African-American appointed to the Virginia State Supreme Court.

Maury High School houses the Medical and Health Specialties program in association with Eastern Virginia Medical School. The relationship between Maury and EVMS, which dates back to 1986, allows Maury High School students to take courses at EVMS. The Advanced Placement (AP) course offerings for college credit are second to none, and Maury leads Norfolk Public Schools in participation and achievement in AP programs.”

The picture to the right shows both the original 1911 building (shaded yellow) and also how the facility has expanded over 100 + years.

Source: Maury High School Web Page: <https://www.npsk12.com/domain/421>



## 2.2 Maury High School Community & Geography

Norfolk's historic Ghent Neighborhood is a vibrant community filled to the brim with character, culture and delicious cuisine. The neighborhood's main thoroughfare, Colley Ave., and adjacent 21<sup>st</sup> and 22<sup>nd</sup> Streets are lines with eclectic eateries, unique shops, art galleries, and antique stores.

The Ghent division was developed beginning in 1890, with most construction occurring between 1892 and 1907. Richard Drummer, a 19th-century Norfolk resident is credited with naming the neighborhood "Ghent." On 24 December 1814, the *Treaty of Ghent* was signed, ending the War of 1812. It is said that, because one of his ships had the distinction of bringing the signed treaty to America, Drummond renamed his "Pleasant Point" house "Ghent" to commemorate the event. The street "Drummond Place" in Ghent also bears his name. Located blocks west of Norfolk's present commercial core, Ghent originally covered approximately 220 acres. Although most of Ghent was laid along a standard grid plan, the siting of the south section of the suburb by Smith Creek (now called "The Hague"), and a "Y"-shaped inlet off the Elizabeth River, suggested a different planning approach. Marchlands at this area were filled and the shoreline given a semicircular shape. The resulting street, Mowbray Arch, soon became the favored location for the stately houses of Norfolk's middle and upper-middle class residents. This area is contained by Smith's Creek and Olney Road, a four-lane traffic artery connecting the two arms of the creek and providing east-west access to downtown Norfolk.

The area went into steep decline in the years following World War II (especially eastern Ghent, today's Ghent Square neighborhood). It more recently has been the focus of a very concentrated and successful gentrification effort that continues to this day. As a result, the area is one of the most economically diverse in Norfolk with large turn-of-the century apartment buildings, next to rows of cozy bungalows, side by side with newly developed condominiums. During the first few years of the 21st century, many former apartment buildings were redeveloped into condominium units at a rapid pace. Much of what was eastern Ghent was torn down and rebuilt (including roads) as today's Ghent Square neighborhood. Consequently, few of the original buildings remain with the notable exceptions of **Maury High School** and the Van Wyck branch of the Norfolk Public Library.

Source: Wikipedia



## 2.3 Current Enrollment & Attendance Boundary

Maury High School's 2017-2018 Enrollment is 1,659 students include those student in the Medical & Health Specialties Program (Sept. 2017 count). This enrollment represents students from the entire NPS School Division and also has students that live within its boundary and attend other NPS high schools. The number of high school students that live in the Maury High attendance boundary is 1,584 students. This number is projected to slightly decrease in the next five years.

Maury HS can be truly considered a Division-wide school due to the fact that 265 students that live outside of Maury's attendance boundary attend Maury HS. Conversely, there are nearly 235 Maury boundary students that attend other high schools in the Division. The map on the right shows the number of students that either transfer to Maury HS (yellow) or transfer from the Maury boundary to another school (black)

### Medical & Health Specialties Program:

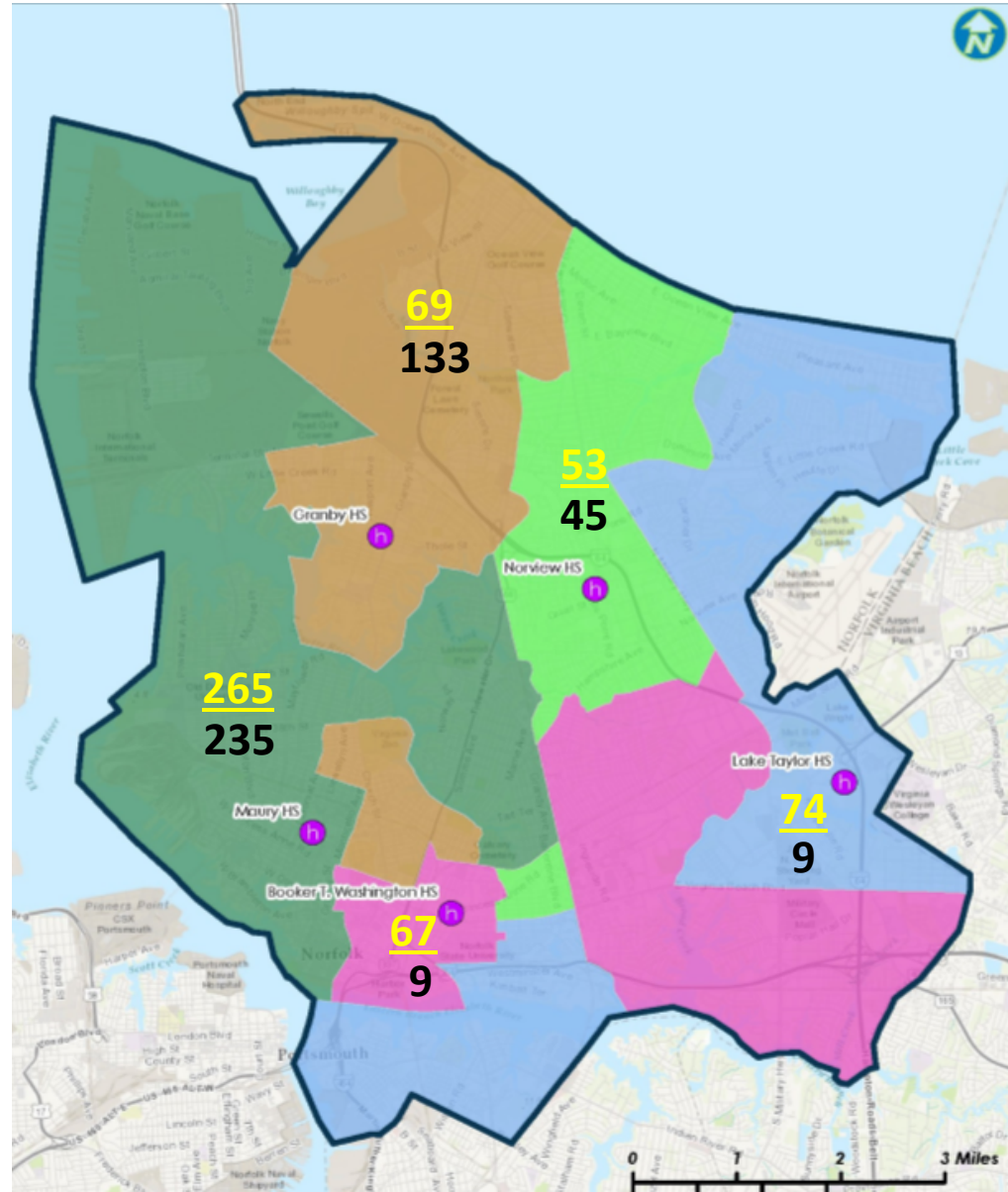
At the start of the 2017-2018 school year, there were 177 students enrolled in the program.

There are 50 freshmen, 50 sophomores, 46 juniors, and 30 seniors currently in the program.

During the 2017 application process, 237 students applied for entry into the program, 101 were offered as seat, and 50 students accepted.

### Participation in NPS's Technical Center Program:

93 Maury High School students attend Norfolk's Technical Center on a partial day basis and are enrolled in 19 different course offerings.



**Transfer to Maury HS**

**Transfer from Maury HS**

## 2.4 Current Educational Program Offerings

Maury High School is one of Norfolk's five comprehensive high schools, and offers a robust core curricular program offering that allows students to explore many academic pathways. This includes over 1,600 enrollments in six Career & Technical Education strands provided at the school.



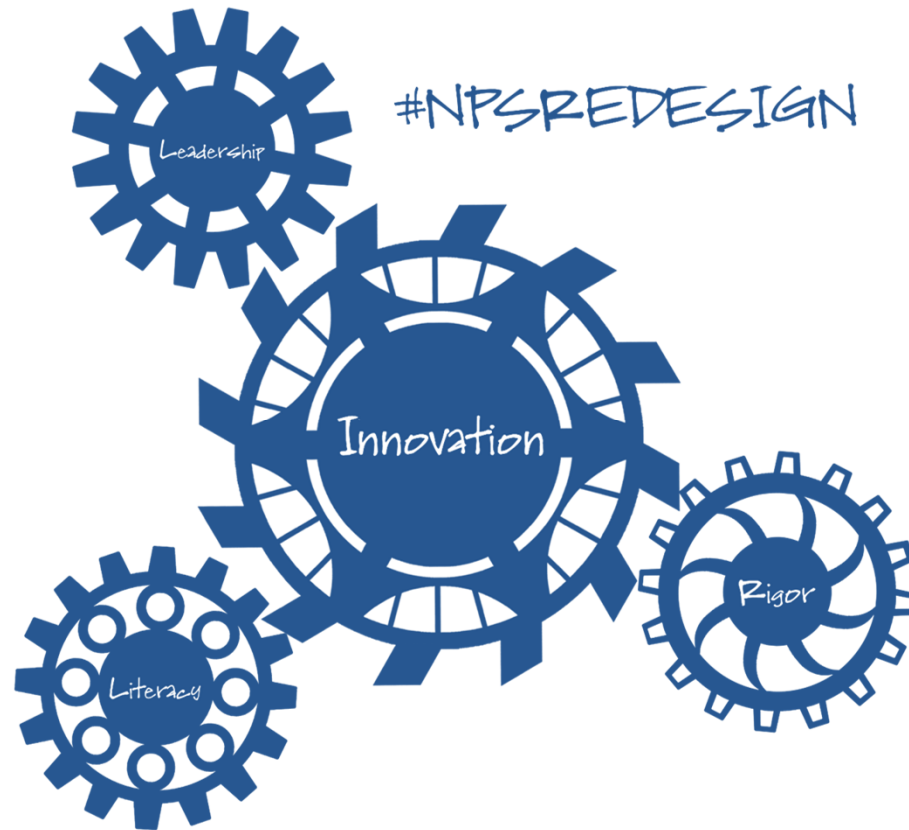
Maury High School also serves as the Division's high school for the Medical and Health Specialties program. The goal of this program is to provide challenging high school science courses that emphasize medical applications. This program is offered with a partnership with Eastern Virginia Medical School, that provides not only instructional space on the medical campus, but the staffing and resources that teach the rigorous curriculum offered in this specialty.

Courses offered within the program include:

- Anatomy Physiology
- Bioethics
- Forensic Science
- Sports Medicine
- Emergency Medical Responder

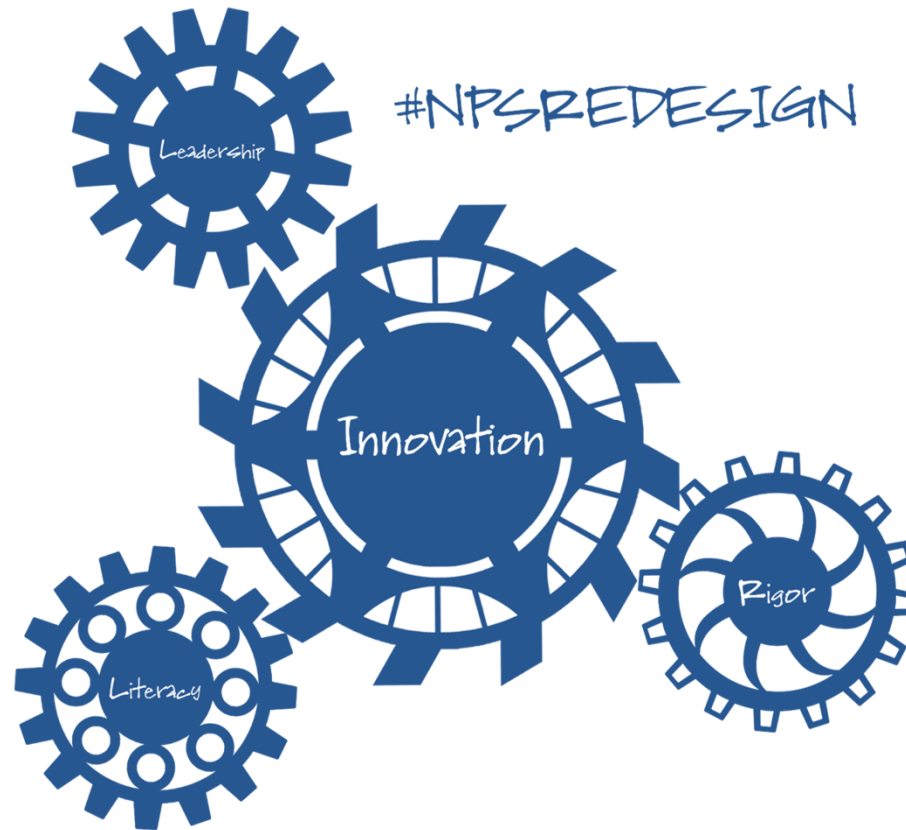


# 3.0 VISION



The Educational Vision of Norfolk Public Schools, Maury High School's Mission Statement and C.L.A.S.S. Motto, the Desired Learner Profiles, Input from the Community, and the Educational Program Exemplars contained in this section provided the foundation for the development of the Educational Specifications for a Re-Imagined Maury High School

## 3.1 Norfolk Public Schools' Theory of Action



Norfolk Public Schools students will be able to develop their individual potential, maximize skills for lifelong learning, and successfully contribute to a global society. All personnel will intentionally facilitate an environment that supports exemplary and innovative teaching and learning opportunities in every school, in every classroom, every day, for every student – no exception.

## 3.2 Maury High School Mission Statement

*“Maury High School is committed to a school-wide focus of effective questioning strategies, cooperative learning, and modeling that will encourage and promote student engagement during the teaching and learning process.”*



## 3.3 Maury High School Students have C.L.A.S.S

### Commodores Learn by Asking, Showing, and Sharing

#### Asking

- student - centered
- inquiry - based
- real life / authentic
- critical thinking
- reasoning
- problem solving
- dialogic conversations
- Iterative learning
- trying / making
- no one right answer
- confidence building

#### Showing

- creating
- presenting
- demonstrating
- modeling
- content mastery
- concept mastery
- mentoring
- teaching
- leading

#### Sharing

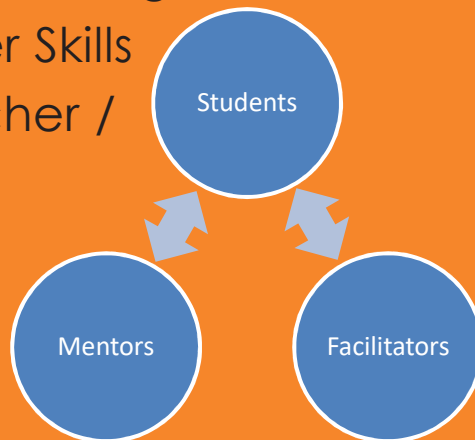
- brainstorming
- collaborating
- demonstrating
- publishing
- speaking
- social media
- as a resource
- helping
- mentoring
- teaching
- leading
- community service

## 3.4 Profiles of Learners

### *A Day in the life a Maury High School Student in 2035*

The Re-Imagine Maury High School Planning Committee developed the following vision for the typical student experience in 2035:

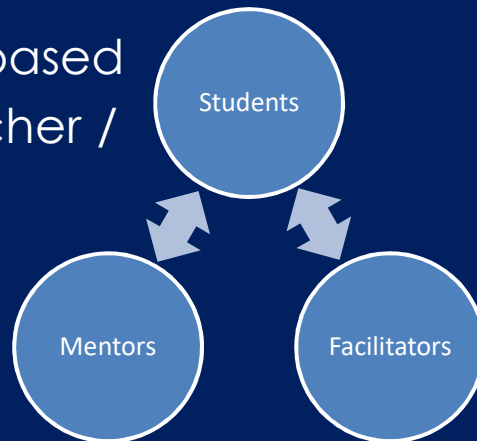
- Self-directed Learning
- Learning How to Learn
- Learning Anytime-Anywhere
- Learning Resiliency
- Learning Social & Emotional Skills
- Learning Communication Skills
- Learning Collaboration Skills & Teamwork
- Dual Enrollment w/ Higher Ed.
- Learning Career Skills
- Changing Teacher / Student Relationships



## 3.4 Profiles of Learners

The Re-Imagine Maury High School Planning Committee identified the following desired characteristics for a teacher / facilitator in 2035:

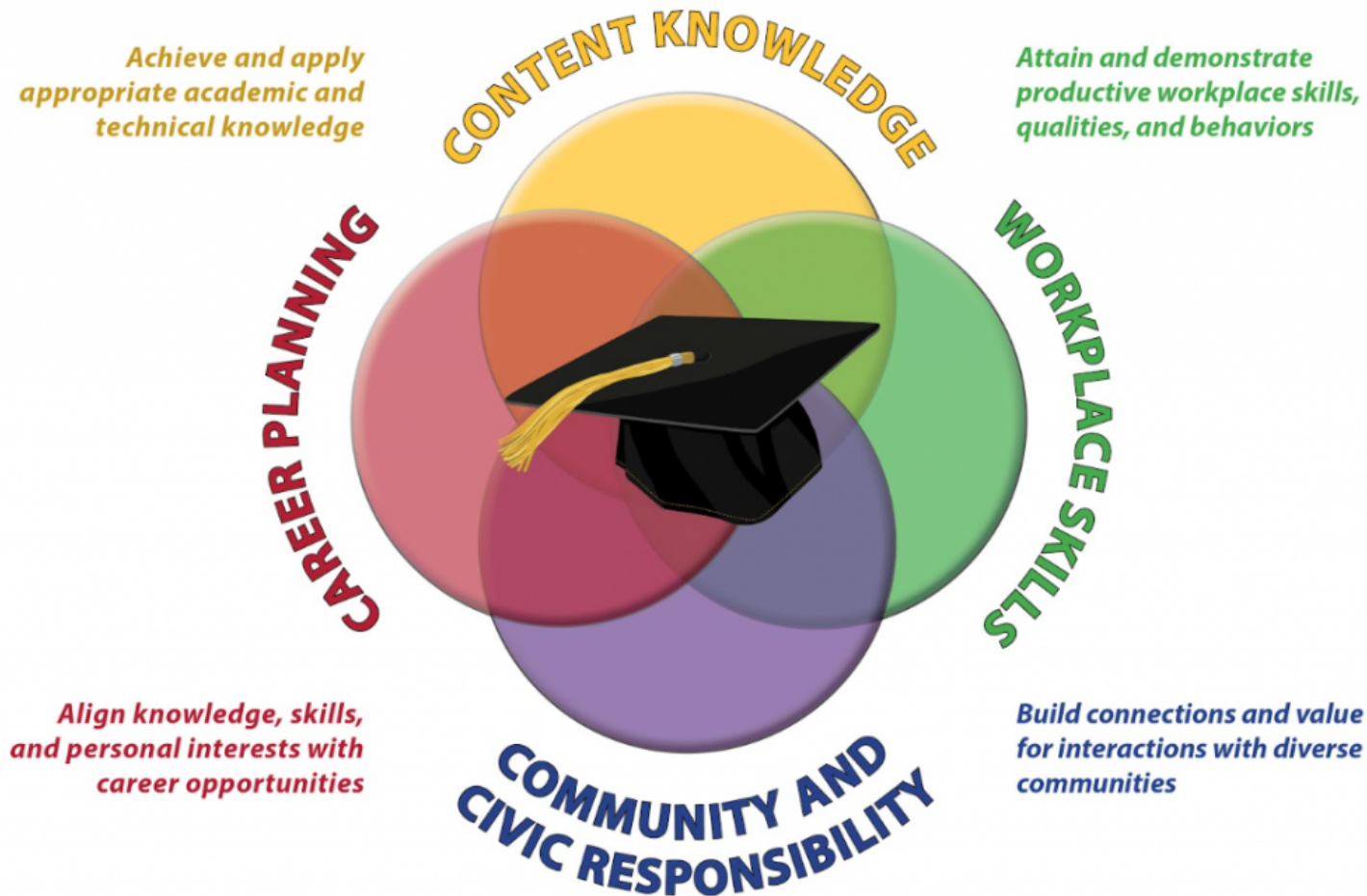
- Caring
- Passionate
- Confident
- Credible [content expertise]
- Dedicated
- Creative
- Provocateur
- Mentor
- Coach
- Relationship – based
- Changing Teacher / Student Relationships



## 3.4 Profiles of Learners

The Virginia Department of Education has developed this profile for a successful high school graduate:

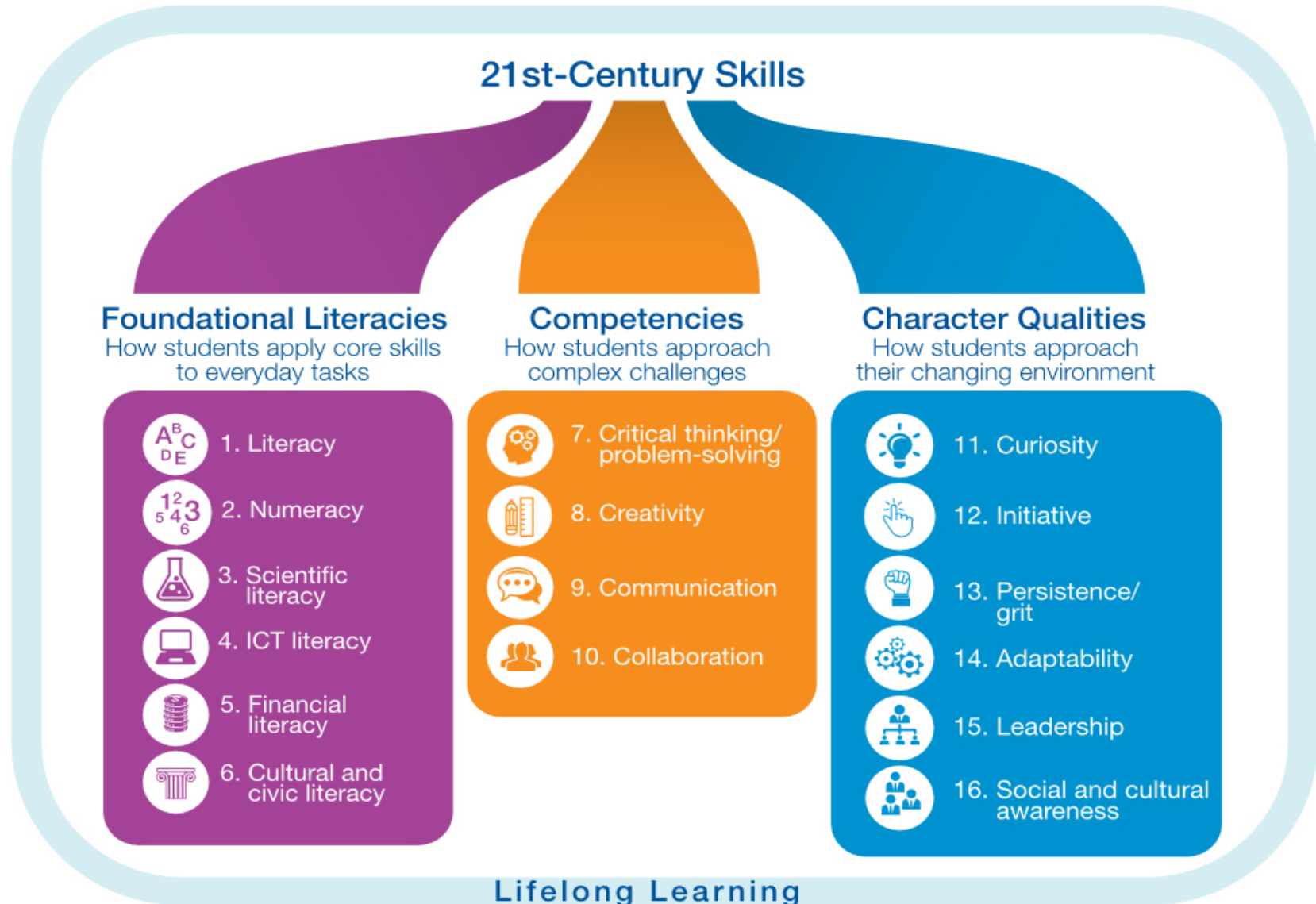
**In Virginia, the Life Ready Individual Will  
During His or Her K-12 Experience:**



# 3.4 Profiles of Learners

## What are the 21<sup>st</sup>-century skills that every student needs?

Source: World Economic Forum, 2016



# 3.5 Community Meeting No. 2 :: SWOP Results

April 12, 2018

## STRENGTHS:

- Tradition (9)
- H&MS Academy partnership with EVMS (4)
- Strong Academics (2)
- Great leadership (7)
- Community (5)
- Students/academics (4)
- Diversity (3)
- Location (3)
- Neighborhood school (2)
- Strong architectural presence (2)

## WEAKNESSES:

- Poor facilities conditions (11)
- Old facilities (9)
- Lack of adequate space for ed. programs (7)
- Lack of ed. technology (7)
- Safety issues (4)
- Overcrowding (3)
- Narrow stairways (3)
- Parking (3)
- Lack of ability to adapt (2)
- Site large enough? (2)
- Athletic facilities (2)

## OBSTACLES:

- [Selected] Community attachment to historic monumental façade (4)
- Funding (8)
- Leadership in Norfolk an obstacle to innovation (2)
- Safe and security (2)
- Spread of misinformation (2)

## PROSPECTS:

- Chance for more students to attend from all over Norfolk (7) [grow Medical & Health Specialties Program]
- Better [modern] Learning Environments (3)
- Maintain historical building for its history (2)
- Install green technologies to make our school more sustainable (2)
- Design a safer school (2)
- State money available for school construction? (2)

# 3.6 Exemplar Educational Programs via School Tours

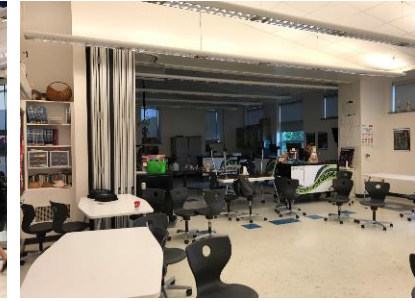
## Monticello High School + Health & Medical Sciences Academy Albemarle County, VA 1996

### Likes:

- Culture - ownership, partnership, belonging, interaction with learning space, appreciation of learning.
- Culture - higher expectations that typical HS
- Openness - connectivity to different areas (types of learning space/environment), comfortable, whiteboard walls, bright
- Learning Community layout
- Feeling of secure - in and out of building
- Easy transition - wide and inviting - good sightlines
- Flexibility of space - "amoeba like"
- Evolving/changing program
- Building design isn't driving program
- Seemed brand new - was 20 years old
- Adaptation of medical program
- Valuing the learning
- Didn't feel like a HS instead college feel: learn, socialize, eat, study
- Curriculum - biology and 9th grade
- Health and PE
- Partnerships with local doctors

### Dislikes:

- Design didn't relate to immediate site context
- Demographics not comparable to Maury



# 3.6 Exemplar Educational Programs via School Tours

## Fluvanna High School, Fluvanna County, VA 2011

### Likes:

- Culture – kids want to be in school
- Safety and security - 300 security cameras
- 8 -12, 1,600, 300,000 SF > High SF per student
- Adaptable space
- Flexible space
- Lockers bays also learning space
- Café/gym/audit - flow (sunken)
- Dances, concessions, culture (kids want to be there)
- NPS visitors dined with students
- Commons - spoke > wheel organization
- Bus safety - traffic flow
- Dismissal - busses assigned parking spaces
- Exit through giant outdoor courtyard
- Commercial kitchen - connected
- Music - soundproof practice
- Drama - equipment/acoustics
- SPED classrooms - added RR with showers
- Vocational Classrooms -horticulture/agriculture
- Exemplary arts spaces and programs
- Tiered lecture rooms

### Dislikes:

- Dark hallways - not many windows
- Huge footprint - too spread out, 6 minutes to transition
- Lack of break out areas - efficient but doesn't have flexibility to break out
- Departmental organization
- Lockers unusable (time and access)
- Not timeless design (dated finishes)
- Adult collaboration areas but no student collaboration areas



# 3.6 Exemplar Educational Programs via School Tours

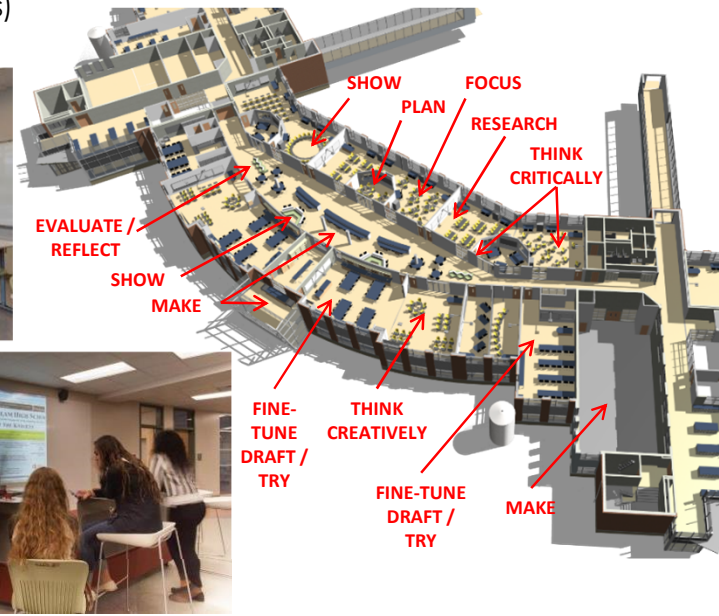
## Kellam High School, Virginia Beach, VA 2014

### Likes:

- Small Learning Communities - cool!
- Split into interdisciplinary - collaboration - connects - interactive - movement
- Circulation space wide enough to move
- Student - centered design
- Student involvement in planning and design
- Inviting
- Culture - openness to innovate and try new things
- Culture - trust and verify
- Flow from center - big community space (Commons)
- Flexibility of space - even in circulation space
- Freedom to explore space use
- Glass walls to view students into classrooms
- Outside - can access quickly
- Community use - Auditorium/Café/Gym
- Peer tutoring/cozy/spend whole day (Schola balcony)
- Security guard - Math break from class with students
- Diversity - Math throughout learning community
- Arts - catered - cared about
- Catered to each department
- Intro to culinary - 7 areas for kitchens - connected to commercial through shared spaces - washing machine
- Full weight room
- Teachers not assigned to classrooms
- Dedicated teacher workrooms
- Therapy dogs for students
- Young Adults - work (career), college
- Storage cabinets act as window barriers during lockdown
- Top of the line athletics
- Soil (hiking) - use environment
- BIOFIT - co-teaching classroom and Gym
- One lunch - friends can always be together
- Can eat anywhere in the school; no class skipping
- Teachers - get break during one lunch

### Dislikes:

- Lack of (demographic) diversity
- Vertical construction not used - large footprint
- Drapes instead of book bases over windows for lockdowns
- Lockers are a waste of space - airport type
- Security is a concern (sight lines)



Educational Specifications Process facilitated by HBA Architecture & Cooperative Strategies



# 4.0 DESIGN PRINCIPLES



# 4.1 Design Principles for Learning

The Planning Team facilitated the development of “Design Principles for Learning” as a summary of the values and beliefs about the desired quality of learning that we have heard from the Re-Imagine Maury High School Planning Committee and from the Community. These design principles have guided our planning effort for the development of the Maury High School Educational Specifications, and they should become the criteria by which the success of future planning, design and program implementation will be assessed.

Each Design Principle for Learning completes the following statement:

*Exemplary Learning at Maury High School is...*

- Student - Centered
- Accessible to All
- Inquiry – Based
- Interdisciplinary
- Collaborative
- Mentored
- Authentic / Experiential
- Whole Life / Life – Long
- Community Oriented

# 4.1 Design Principles for Learning

*Exemplary Learning at Maury High School is...*

STUDENT-CENTERED



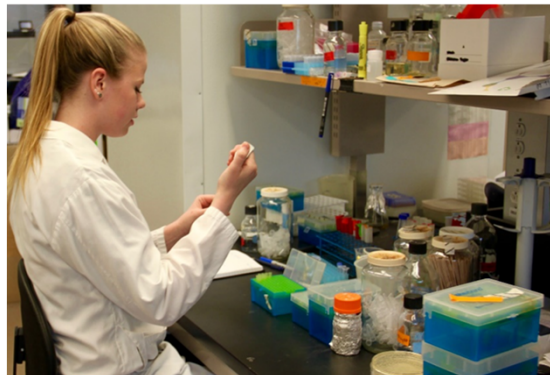
We believe that exemplary learning is, as much as possible, designed by the learner and led by the learner.

ACCESSIBLE to ALL



Every learner should have equitable access to all opportunities of educational programming. Systems designed for exemplary learning remove barriers to accessing specialty programs, unique resources, mentors and professionals within and beyond the immediate school community. Our culture of accessible learning opportunities will inspire each learner to pursue their evolving interests, their passions, and their personal development.

INQUIRY - BASED



Inquiry-based learning starts by posing questions, problems or scenarios – rather than simply presenting established facts or portraying a smooth path to knowledge. Inquirers, assisted by a facilitator, identify and research issues and questions to develop their knowledge or solutions.

# 4.1 Design Principles for Learning

*Exemplary Learning at Maury High School is...*

INTERDISCIPLINARY



We believe that exemplary learning occurs when learners are immersed in authentic contexts that allow them to create meaning by making connections across traditional subject/discipline boundaries.

COLLABORATIVE



People engaged in collaborative learning capitalize on one another's diverse resources and skills to achieve greater outcomes than are typically attainable by individual efforts. Collaborative learners engage in a common task where each individual depends on and is accountable to each other.

RELATIONAL



We believe that exemplary learning happens when students are connected and supported by adults and peers (teachers, community experts, leaders) who serve as mentors, facilitators and coaches in academic pursuits and character development.

# 4.1 Design Principles for Learning

## *Exemplary Learning at Maury High School is...*

AUTHENTIC / EXPERIENTIAL



We believe the real world is the most relevant context in which to learn. Exemplary learning happens when learners apply passion, knowledge and skills to challenges that impact their immediate and broader communities. Authentic contexts provide the learner with a greater sense of meaning and purpose to their learning.

WHOLE - LIFE / LIFE - LONG



We believe that the high school experience must prepare students to be successful in life as learners, as workers, and as citizens in their communities. Therefore, learning programs and assessments are designed to develop life-long competencies in our students, including the skills to be collaborative, creative, logical, analytical, effectual, and entrepreneurial. Exemplary learning happens when we prepare our students by empowering them to develop the social and emotional strengths necessary to question, inquire, persevere, find success and become leaders.

COMMUNITY - ORIENTED



We believe that learning is a social process enriched and expanded through interactions in our communities. Exemplary learning happens in communities within and outside of schools.

# 4.1 Design Principles for Learning

## *Exemplary Learning at Maury High School is...*

### STUDENT-CENTERED

We believe that exemplary learning is, as much as possible, designed by the learner and led by the learner.

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## 4.2 Design Principles for Learning Environments

The Planning Team facilitated the development of “Design Principles for Learning Environments” as a summary of the desired quality of learning environments that we have heard from the Re-Imagine Maury High School Planning Committee and from the Community. These design principles have guided our planning effort for the development of the Maury High School Educational Specifications, and they should become the criteria by which the success of future planning, design and construction of the built learning environments will be assessed.

Each Design Principle for Learning Environments completes the following statement:

*Our Re-Imagined Maury High School will...*

- Build on Tradition
- Be Timeless / Focus on the Future
- Provide Learning Communities
- Be Adaptable & Flexible
- Facilitate Anytime / Anywhere - Learning
- Be Safe & Secure
- Be Sustainable
- Provide Space for Community
- Respect Community Context

# 4.2 Design Principles for Learning Environments

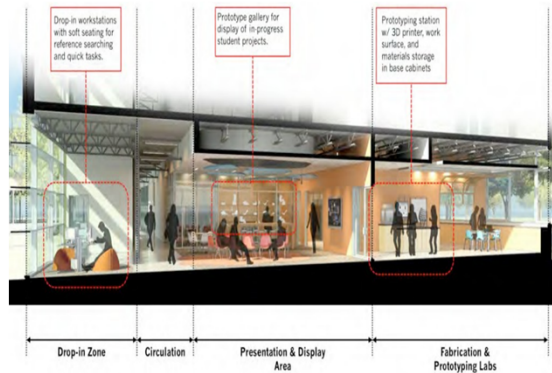
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**BUILD on TRADITION**



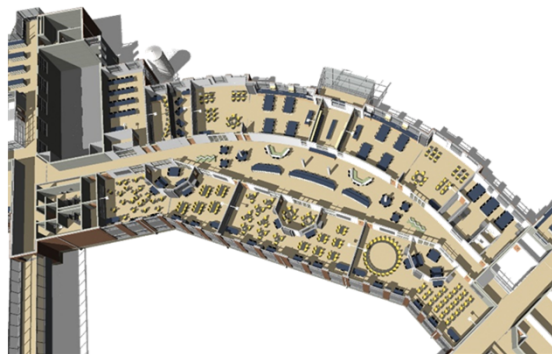
Sustain and build on Maury High School traditions such as the community's pride of place, and the multi-generational legacy of student and alumni success stories.

**BE TIMELESS / FOCUS on the FUTURE**



Provide modern learning environments that build on timeless and proven methodologies for how we learn, while at the same time setting a new standard for what secondary learning environments will feel like and look like in Norfolk.

**PROVIDE LEARNING COMMUNITIES**



When students are grouped in smaller Learning Communities, they form stronger and more meaningful relationships with their teachers and peers and have a greater sense of belonging. Learning Communities are comprised of a variety of spaces such as Teacher Planning Rooms, Learning Studios, Small Group Rooms, Project Labs, Makerspaces, and other informal learning spaces. These spaces are united by a central Learning Commons, together forming a flexible environment in which teacher - facilitators can work with students independently, in small groups, or in larger groups throughout the day.

# 4.2 Design Principles for Learning Environments

Our Re-Imagined Maury High School will...

**BE ADAPTABLE & FLEXIBLE**



Provide learning environments that allow users to think “what if” instead of “you shall”. Provide infrastructure that is resilient and that can evolve and adapt over time with ever changing learning outcomes.

**FACILITATE ANYTIME / ANYWHERE - LEARNING**



Provide a variety of learning space types, sizes and locations that promote learning anytime and anywhere. Leverage partnerships with higher education, businesses and community organizations to provide authentic “out-of-the-school-building” learning experiences.

**BE SAFE & SECURE**



Create a physical environment that provides safety/security strategies such as natural surveillance, natural access control, small community and territoriality, while imparting a social/emotional sense of well-being and ownership . Supplement this with active security systems that maximize event detection and minimize response times

# 4.2 Design Principles for Learning Environments

Our Re-Imagined Maury High School will...

**BE SUSTAINABLE**



Incorporate sustainable design themes and strategies into the planning and design of the school facility that will become embedded in the curriculum and that will encourage students to become engaged as life-long learners and sustainability conscious citizens.

**PROVIDE SPACE for COMMUNITY**



Provide spaces that support shared use by the Community for assembly, recreation, adult learning, and services.

**RESPECT COMMUNITY CONTEXT**



Reinforce and engage the urban scale and mixed-use diversity of surrounding neighborhoods while creating a facility that maintains Maury High School's standing as the iconic center of the community.

## 4.2 Design Principles for Learning Environments

Our Re-Imagined Maury High School will...

### BUILD on TRADITION

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## 5.0 PLANNING OBJECTIVE-BASED LEARNING ENVIRONMENTS

Building on both the Design Principals for Learning and the Design Principles for Learning Environments, the Planning Team facilitated a series of workshops with the Re-Imagine Maury High School Planning Committee designed to imagine and develop space typologies for learning environments that support and nurture the desired learning objectives. We used Dr. David D. Thornburg's landmark thesis on "*Metaphors for Primordial Learning Environments*" (<http://tcpd.org/thornburg/Handouts/Campfires.pdf>) as a launching point for this work.



# 5.1 Metaphors for Primordial Learning Environments

Source: David D. Thornburg, Ph.D., 2007



campfire



watering-hole



cave



life

learning from: experts / storytellers

peers

oneself

real world

a place characterized by communication flowing from one to many, where everyone can focus on the person(s) talking or presenting

a place for exchanging communication, typically placed in a location you would naturally move to or through; where people gather in groups of varies sizes and times, and where you might bump into someone

a place for individual study, quiet reflection, to explore questions, make connections and experience creative flow; a place where communication flows within oneself, requiring a physical frame that promotes seclusion

a place that encourages immersive student-centered hands-on real-world learning experiences where students can apply what they have learned and create meaning

# 5.1 Metaphors for Primordial Learning Environments

The Planning Team recommended the addition of a 5<sup>th</sup> learning environment metaphor based on Maury High School's Motto:

Maury High School Students have C.L.A.S.S.

Commodores Learn by Asking,  
Showing and Sharing



mountain-  
top  
showing &  
sharing

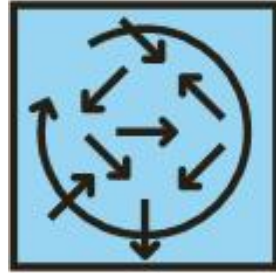
a place where  
one person or a  
small group  
communicates  
towards the rest of  
the world, showing  
what she, he or  
they can do with  
what has been  
learned

# 5.1 Metaphors for Primordial Learning Environments

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campfire



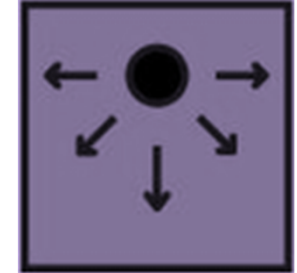
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life



mountain-top  
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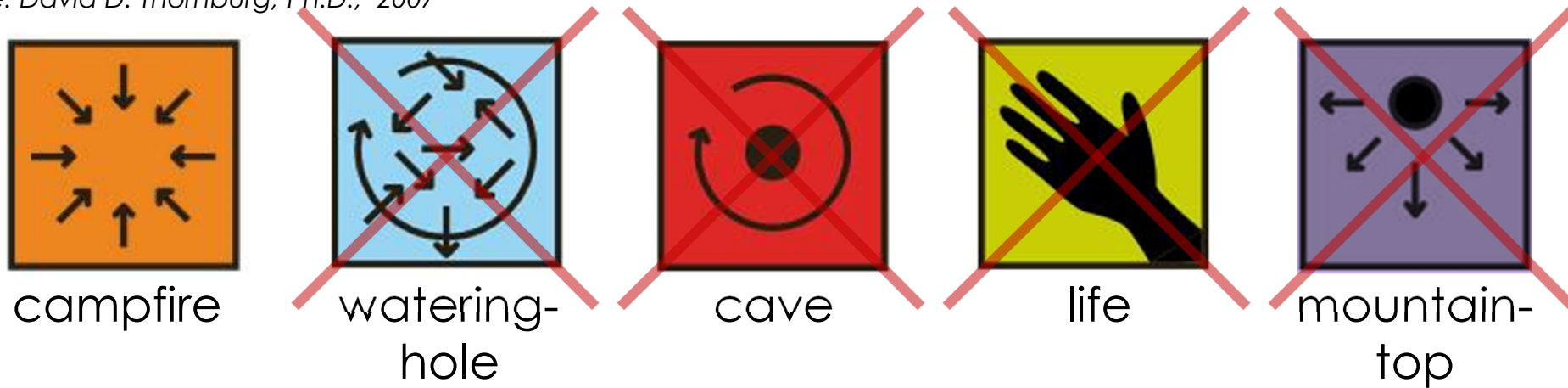
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a place that encourages immersive student-centered hands-on real-world learning experiences where students can apply what they have learned and create meaning

a place where one person or a small group communicates towards the rest of the world, showing what she, he or they can do with what has been learned

# 5.1 Metaphors for Primordial Learning Environments

Source: David D. Thornburg, Ph.D., 2007



If these are the time-tested essential ingredients of meaningful life-long learning, why did all but teacher-directed “campfire” type learning disappear from the learning landscape until very recently?

In 1892, the **Committee of Ten**, a working group of American educators, “designed” the standardization and organizational structure of American public school curriculum in response to the imperative to provide “equitable” and “universal” education to the masses. Twelve years of education were recommended, with eight years of elementary education followed by four years of high school. The committee was explicitly asked to address tracking, or course differentiation, based upon post-secondary pursuit. The committee responded unanimously that “...every subject which is taught in a secondary school should be taught in the same way and to the same extent to every pupil so long as he pursues it, no matter what the probable destination of the pupil may be, or at what point his education is to cease.” In addition to promoting equality in instruction, they stated that “...by unifying courses of study, school instruction and the training of new teachers could be greatly simplified...”

*So, in the name of learning effectiveness and operational economy, high school learning became primarily teacher-directed with students being the empty receptors of content, and the other essential ingredients of learning were pushed to the side.*

*The Reimage Maury High School Vision is to restore and integrate all of the essential ingredients of meaningful life-long learning, and to create spaces where “campfire”, “watering hole”, “cave”, “life” and “mountain-top” learning environments can flourish! In this way, the learning culture and the learning environments of Maury High School will become timeless”.*

# 5.1 Metaphors for Primordial Learning Environments

Source: David D. Thornburg, Ph.D., 2007



campfire

learning from: experts / storytellers

a place characterized by communication flowing from one to many, where everyone can focus on the person(s) talking or presenting



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watering-hole

peers

learning from: a place for exchanging communication, typically placed in a location you would naturally move to or through; where people gather in groups of varies sizes and times, and where you might bump into someone



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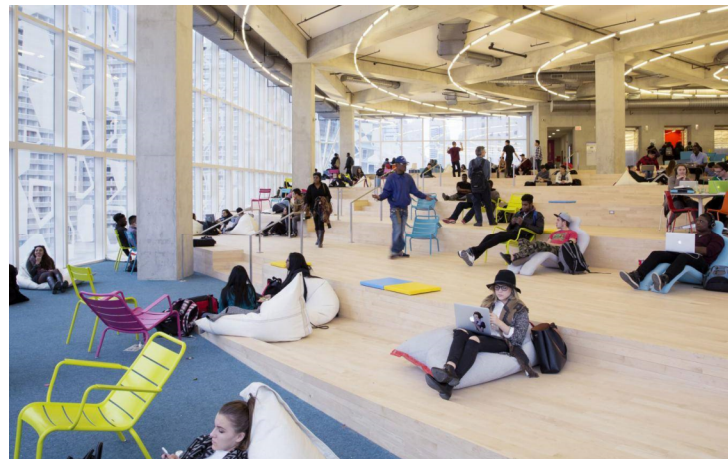
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cave

learning  
from: oneself

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# 5.1 Metaphors for Primordial Learning Environments

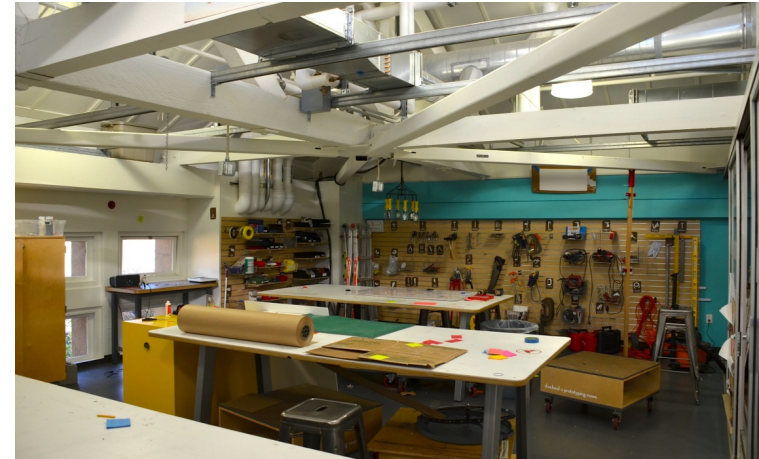
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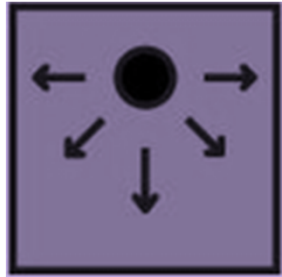
life

learning  
from: real world

a place that  
encourages  
immersive  
student-centered  
hands-on real-  
world learning  
experiences  
where students  
can apply what  
they have  
learned and  
create meaning



# 5.1 Metaphors for Primordial Learning Environments



mountain-top  
showing & sharing

learning  
from:

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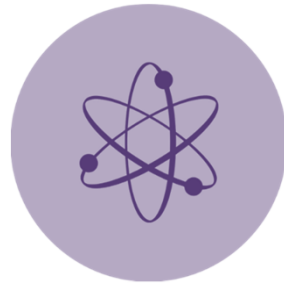


## 5.2 Metaphors for Learning Resources



toolbox

a condensed organized unit containing teaching and learning supplies and/or raw materials for making; can be fixed or mobile



genius bar

a technology rich help-station where students can plug in, print, and peer tutor; typically placed in a location you would naturally move to or through



water

provide access to cold and hot water and drainage to support learning processes and clean-up in types and quantities appropriate to the context



student storage

provide a variety of student storage types, sizes and locations that facilitate just-in-time storage solutions versus storage-as-a-hub solution; integrate with work-surface space and charging stations

The Planning Team also recommended that these Metaphors for Learning Resources also be considered as essential ingredients for modern learning environments:

## 5.2 Metaphors for Learning Resources

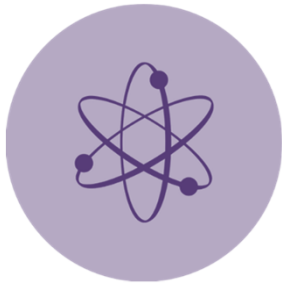


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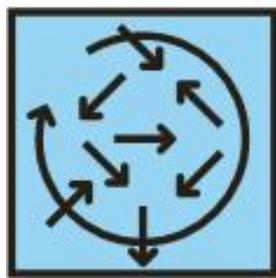
## 5.3 Planning Objective-Based Learning Environments

At the beginning of Planning Lab #3, the Re-Imagine Maury High School Planning Committee was tasked with matching up Learning Environment Metaphors and Learning Resource Metaphors with the desired Learning Objectives and Learning Outcomes that they had previously developed over the course of Planning Labs #1 and #2. The enlightening results of this exercise follow:

### Metaphors for Primordial Learning Environments:



campfire



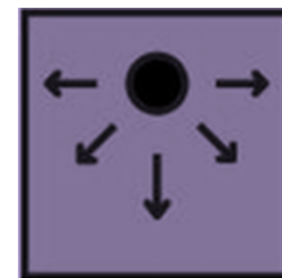
watering-hole



cave



life



mountain-top

### Metaphors for Learning Resources:



toolbox



genius bar



water





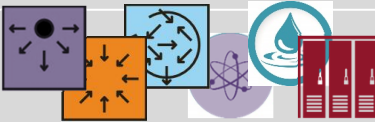






student storage

# 5.3 Planning Objective-Based Learning Environments

			Student-Centered Accessible to All Inquiry-Based Interdisciplinary Collaborative Mentored Authentic / Experiential Whole-Life / Life-Long Community-Oriented	<<< Exemplary Learning is...				
			Learning Objective	Learning Activity	Assessment Type	Learning Group Size	Learning Environment Characteristics	Learning Environment Metaphor
Asking		Sharing	Problem or Project Definition [Student-designed]	focus brainstorm design define success	rubric peer assess self assess	one small medium	adaptable flexible ubiquitous tech natural light	
Asking		Sharing	Process Definition [Student-designed]	plan design	rubric peer assess self assess	one small medium	adaptable flexible ubiquitous tech natural light	
Asking	Showing		Content Mastery	listen read research	pre-assessment standardized testing expository writing	one small medium large	adaptable flexible ubiquitous tech natural light virtual	
Asking	Showing		Critical Thinking	synthesize analyze evaluate reason	rubric Socratic method DBQ peer assess self assess	one small medium	adaptable flexible ubiquitous tech natural light virtual	
Asking	Showing	Sharing	Creative Thinking	conceptualize apply	rubric FRQ peer assess self assess	one small medium	adaptable flexible ubiquitous tech natural light virtual	
Asking	Showing	Sharing	Problem Solving	draft try iterate solve	rubric alternative assess peer assess self assess	one small medium	adaptable flexible ubiquitous tech natural light water	

# 5.3 Planning Objective-Based Learning Environments

			Student-Centered Accessible to All Inquiry-Based Interdisciplinary Collaborative Mentored Authentic / Experiential Whole-Life / Life-Long Community-Oriented	<<< Exemplary Learning is...			  	
			Learning Objective	Learning Activity	Assessment Type	Learning Group Size	Learning Environment Characteristics	Learning Environment Metaphor
Asking	Showing	Sharing	Creation	make refine iterate	rubric alternative assess peer assess self assess	one small medium	adaptable flexible ubiquitous tech natural light water	
	Showing	Sharing	Content & Process Mastery	show share engage	formative assess portfolio demonstration presentation	one small medium large	adaptable flexible ubiquitous tech water	
	Showing	Sharing	Helping Mindset Teaching	peer tutoring mentoring coaching	measure improvement / survey	small medium	adaptable flexible ubiquitous tech	
	Showing	Sharing	Confidence Leadership	publishing leadership public speaking	rubric peer assess self assess	small medium large	adaptable flexible community real world virtual	
	Showing	Sharing	Community & Civic Responsibility	service-based projects community service	time of service cmty. feedback replicability scalability	one small medium	community real world	
	Showing	Sharing	Workplace Skills	work-based learning	rubric employer evaluation certification	one small	specialized real world flexible ubiquitous tech	

## 6.0 PLANNING for LEARNING COMMUNITIES

Building on the connections previously developed between the metaphors of environments and the desired Learning Objectives, the Planning Team developed space prototypes for the various types of Learning Environments that could comprise the Learning Communities of the Re-Imagined Maury High School using non-traditional space typology names. The purpose of using non-traditional space names was to free the stakeholders of the Planning Committee from being confined to thinking in terms of traditional classroom settings and the environments that they are accustomed to.

The Planning Team then facilitated a design charrette with the Planning Committee to develop prototype Learning Communities to support groupings of 140, 210, 280, 420, and 560 students respectively. Our syntheses of these Learning Community Prototype design ideas is included at the end of this section.

# 6.1 Planning for Learning Communities



campfire



watering-hole



cave



life



mountain-top

showing & sharing

learning from:

experts / storytellers

peers

oneself

real world

examples

classroom  
lecture room

**learning studio**

Theater

**learning lab**

schola

conference  
breakout

**collab**

café / coffee  
project room  
small group area

**sticky space**

3<sup>rd</sup> space

study carrel  
quiet space

**pod**

project lab  
STE(A)M lab  
CTE lab  
maker-space  
multi-discipline lab

**learning lab**

**experiential lab**

wet lab  
sandbox  
holodeck  
workplace  
community

present space  
pitch platform  
shark tank

**gallery**

display

**share space**

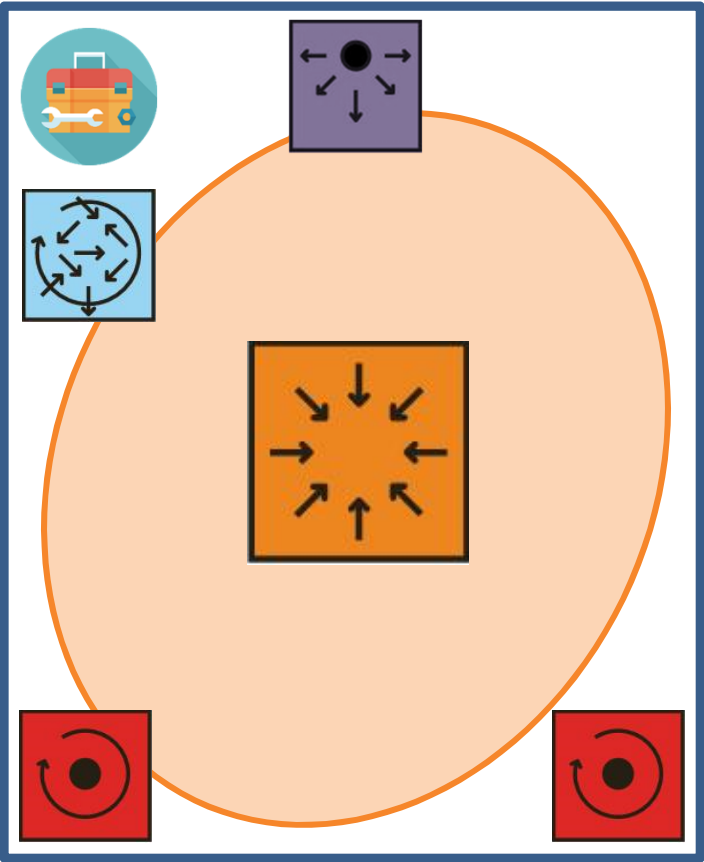
# 6.1 Planning for Learning Communities

## Learning Studio

# of people **20-30**

Core Learning

FUNCTION	core learning
ACTIVITY LEVELS	low to moderate
FLEXIBILITY	high
FURNISHINGS	movable tables movable chairs soft seating movable storage
TECHNOLOGY	white boards WiFi display w/casting
LEARNING RESOURCES	toolbox [mobile]



# 6.1 Planning for Learning Communities

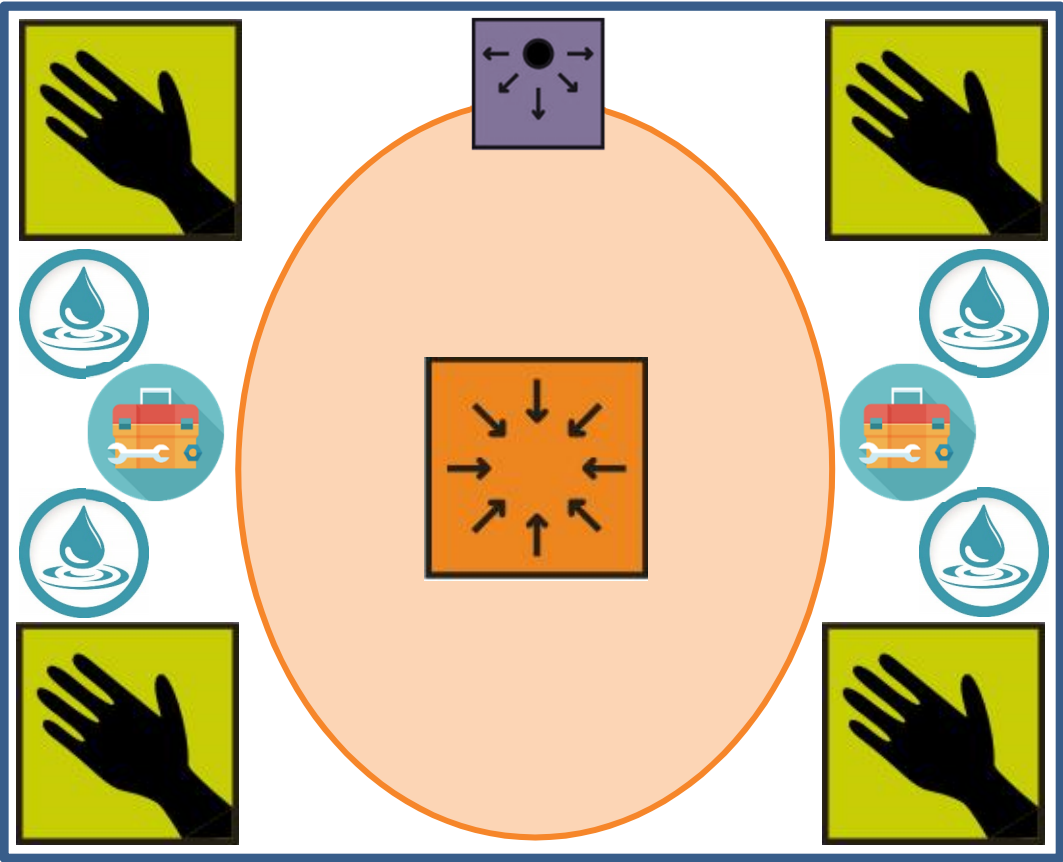
## Learning Lab

# of people **20-24**

Core Learning

Experiential Learning

FUNCTION	core learning experiential
ACTIVITY LEVELS	passive to moderate
FLEXIBILITY	medium
FURNISHINGS	movable tables movable chairs movable storage fixed storage
TECHNOLOGY	white boards WiFi display w/casting
LEARNING RESOURCES	toolbox [fixed] water



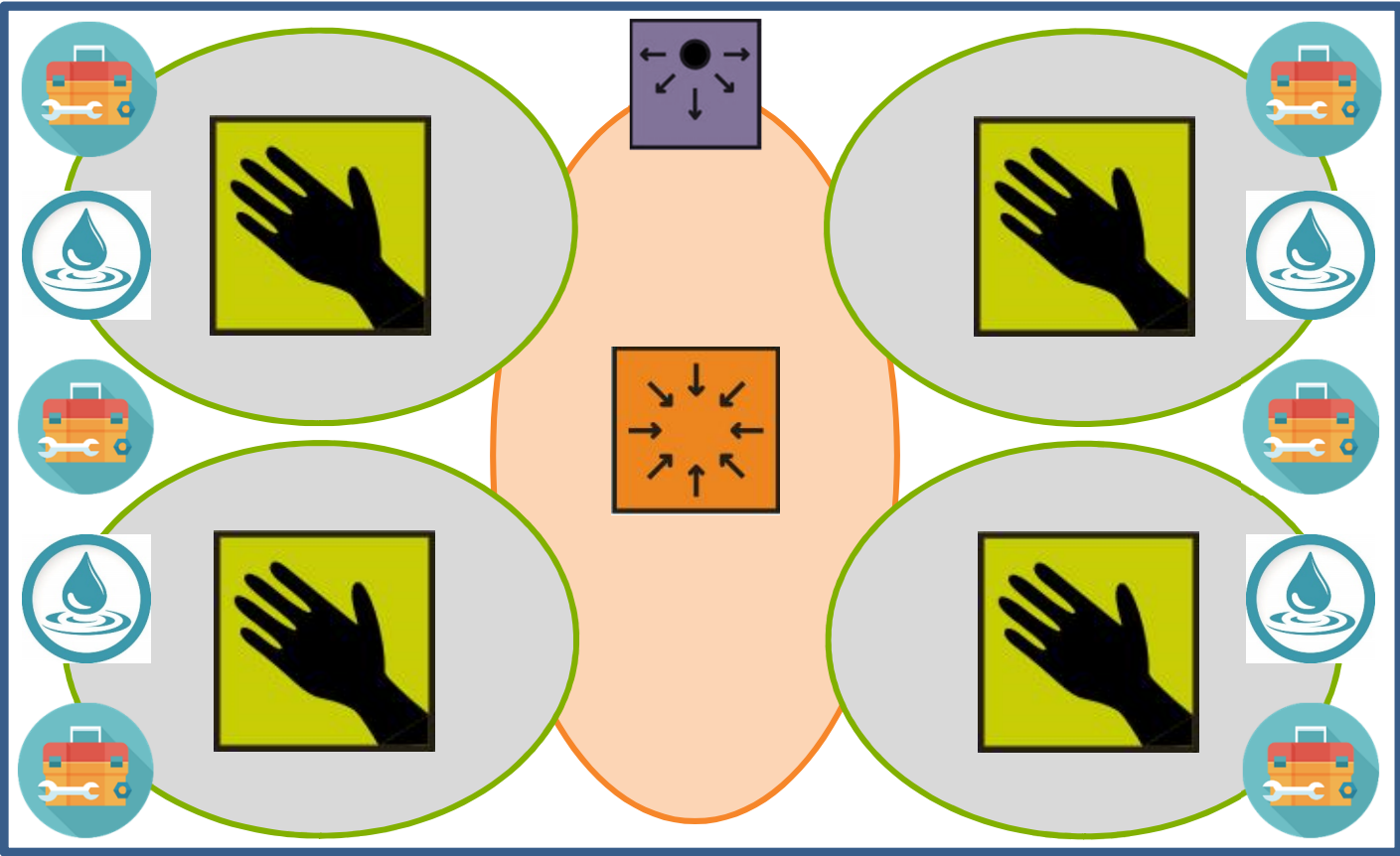
# 6.1 Planning for Learning Communities

## Experiential Lab

Experiential Learning

# of people **20-24**

FUNCTION	exploratory experiential
ACTIVITY LEVELS	moderate to high
FLEXIBILITY	medium
FURNISHINGS	movable tables fixed tables movable chairs movable storage fixed storage
TECHNOLOGY	white boards WiFi display w/casting
LEARNING RESOURCES	toolbox [fixed] toolbox [mobile] water

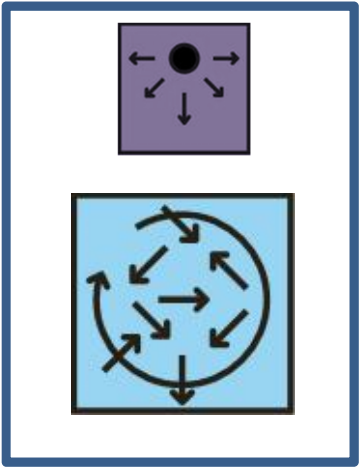


# 6.1 Planning for Learning Communities

## Collab

# of people **6-8**

FUNCTION	collaboration group project demonstration
ACTIVITY LEVELS	low to moderate
FLEXIBILITY	medium
FURNISHINGS	movable tables movable chairs movable storage
TECHNOLOGY	white boards WiFi display w/casting
LEARNING RESOURCES	toolbox [mobile]

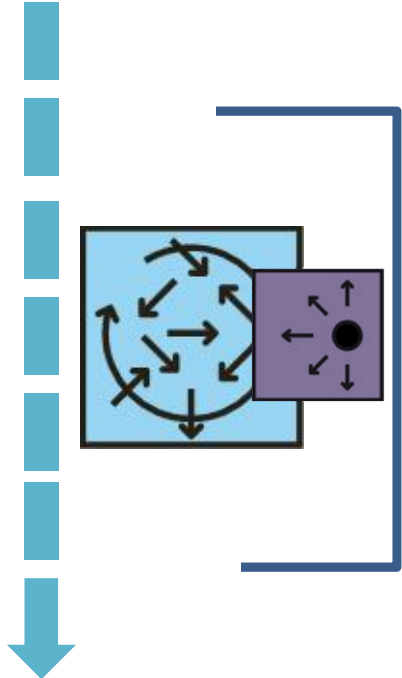


## Sticky Space

# of people **6-12**

FUNCTION	collaboration group project demonstration
ACTIVITY LEVELS	moderate
FLEXIBILITY	medium
FURNISHINGS	movable tables movable chairs fixed storage
TECHNOLOGY	white boards WiFi display w/casting
LEARNING RESOURCES	toolbox [mobile]

## Collaboration

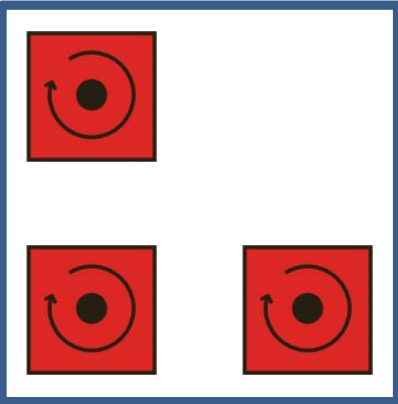
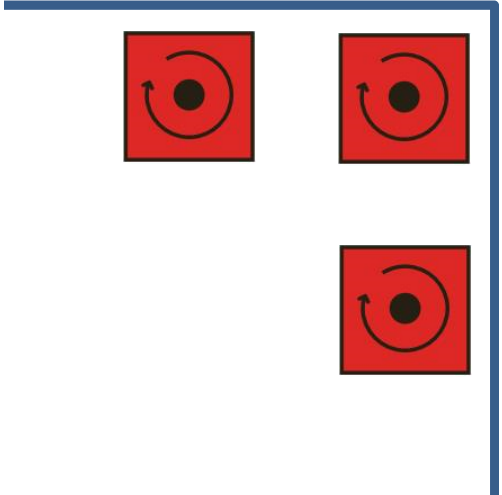



# 6.1 Planning for Learning Communities

## Pod

Individual Learning / Reflection / Collaboration

# of people **1-3**

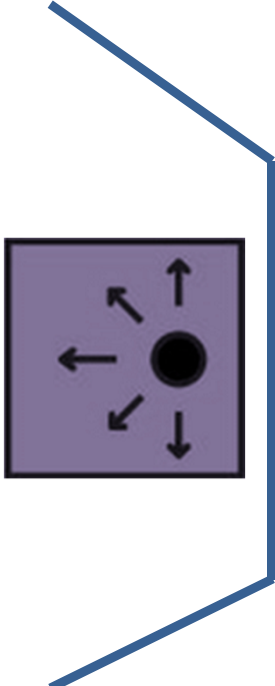
FUNCTION	individual study small group collaboration		
ACTIVITY LEVELS	low		
FLEXIBILITY	medium		
FURNISHINGS	soft seating		
TECHNOLOGY	WiFi display w/casting		
LEARNING RESOURCES			

# 6.1 Planning for Learning Communities

## Share Space

# of people **4-30**

FUNCTION	demonstration presentation
ACTIVITY LEVELS	low to moderate
FLEXIBILITY	medium
FURNISHINGS	movable tables movable chairs movable storage
TECHNOLOGY	white boards WiFi display w/casting
LEARNING RESOURCES	

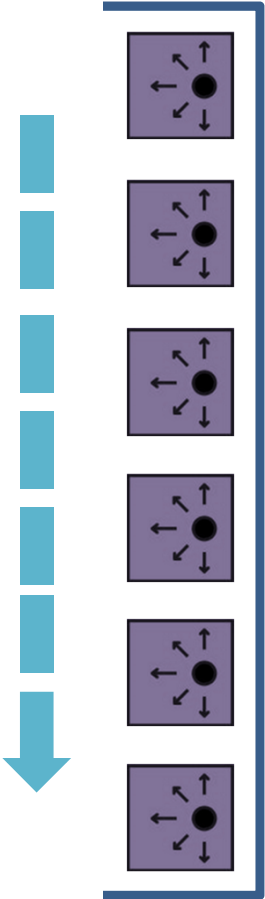


## Gallery

Showing / Sharing

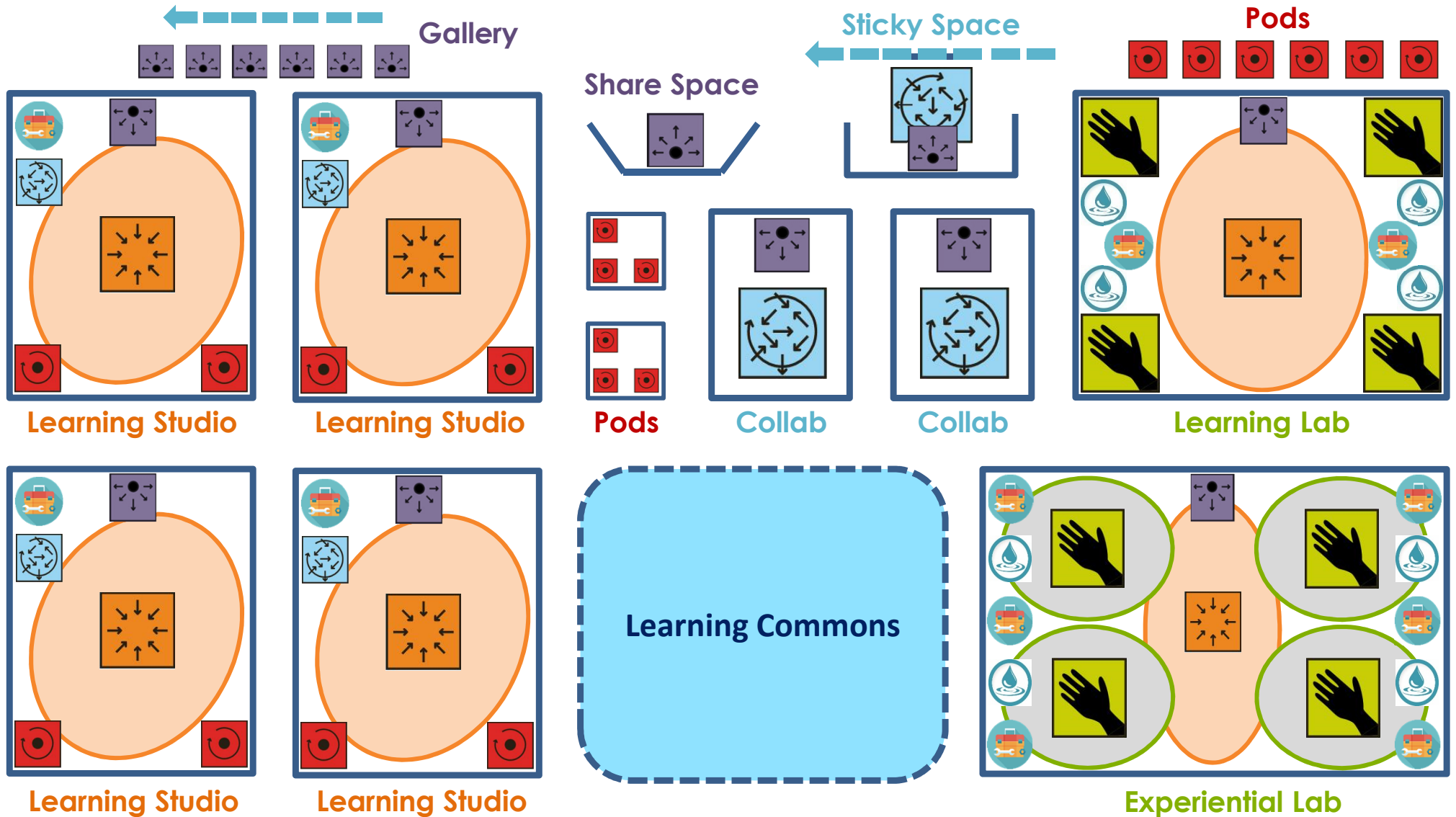
# of people **unlimited**

FUNCTION	display
ACTIVITY LEVELS	moderate
FLEXIBILITY	medium
FURNISHINGS	display systems movable chairs
TECHNOLOGY	
LEARNING RESOURCES	



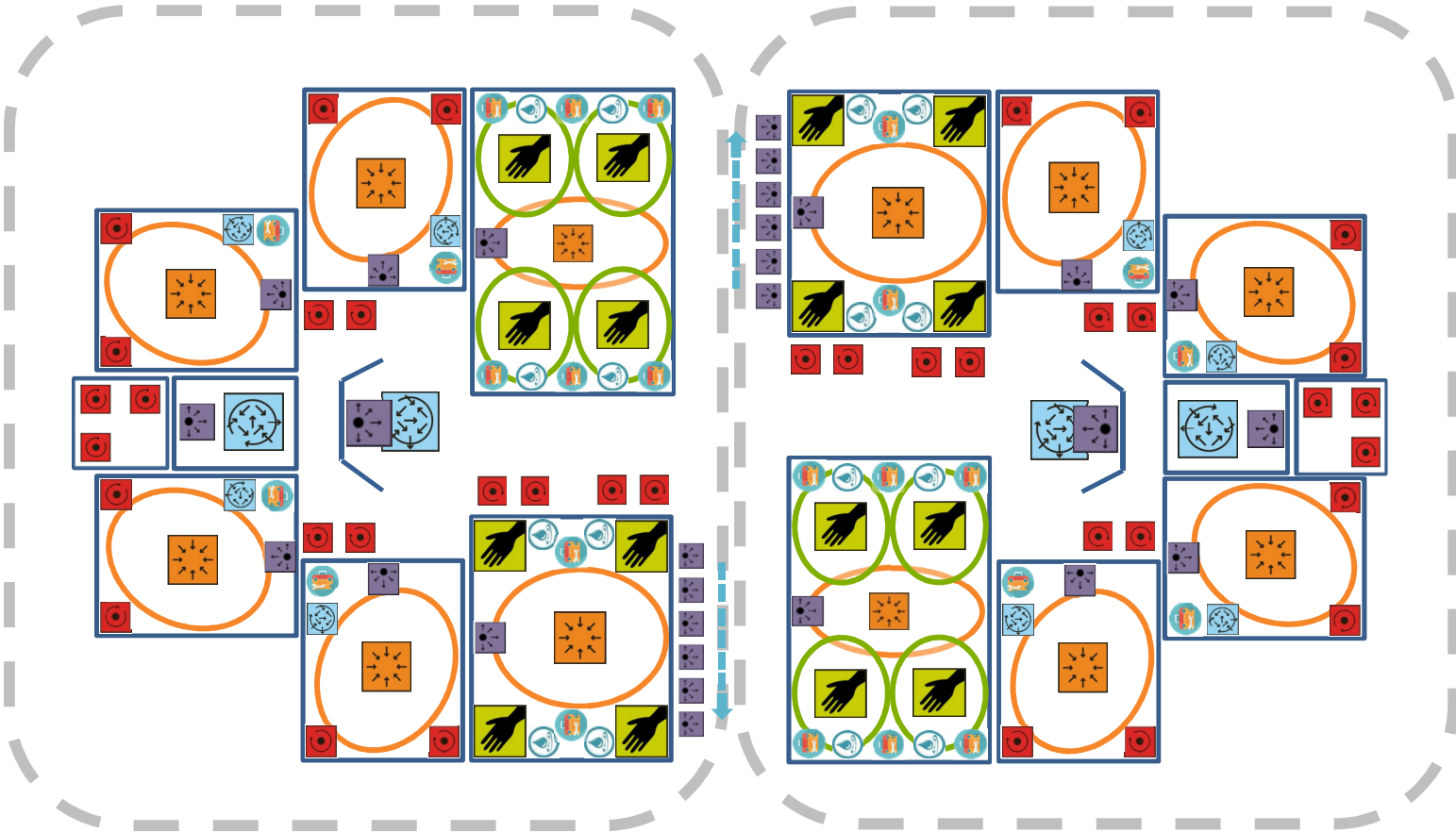
# 6.1 Planning for Learning Communities

One 140 Student Learning Community =



# 6.2 Learning Community Prototypes

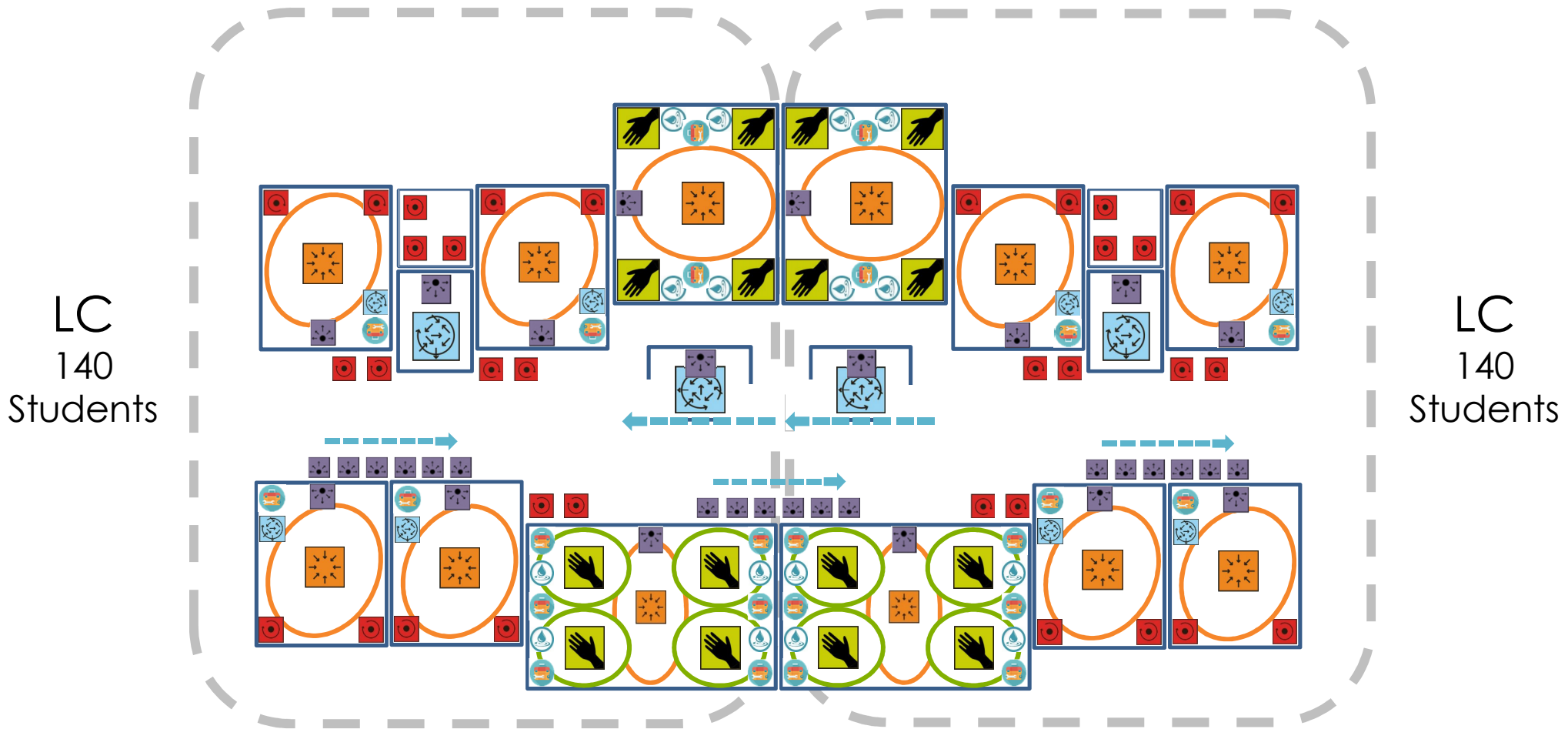
LC  
140  
Students



LC  
140  
Students

LC 140 x 2 = 280 Students

# 6.2 Learning Community Prototypes



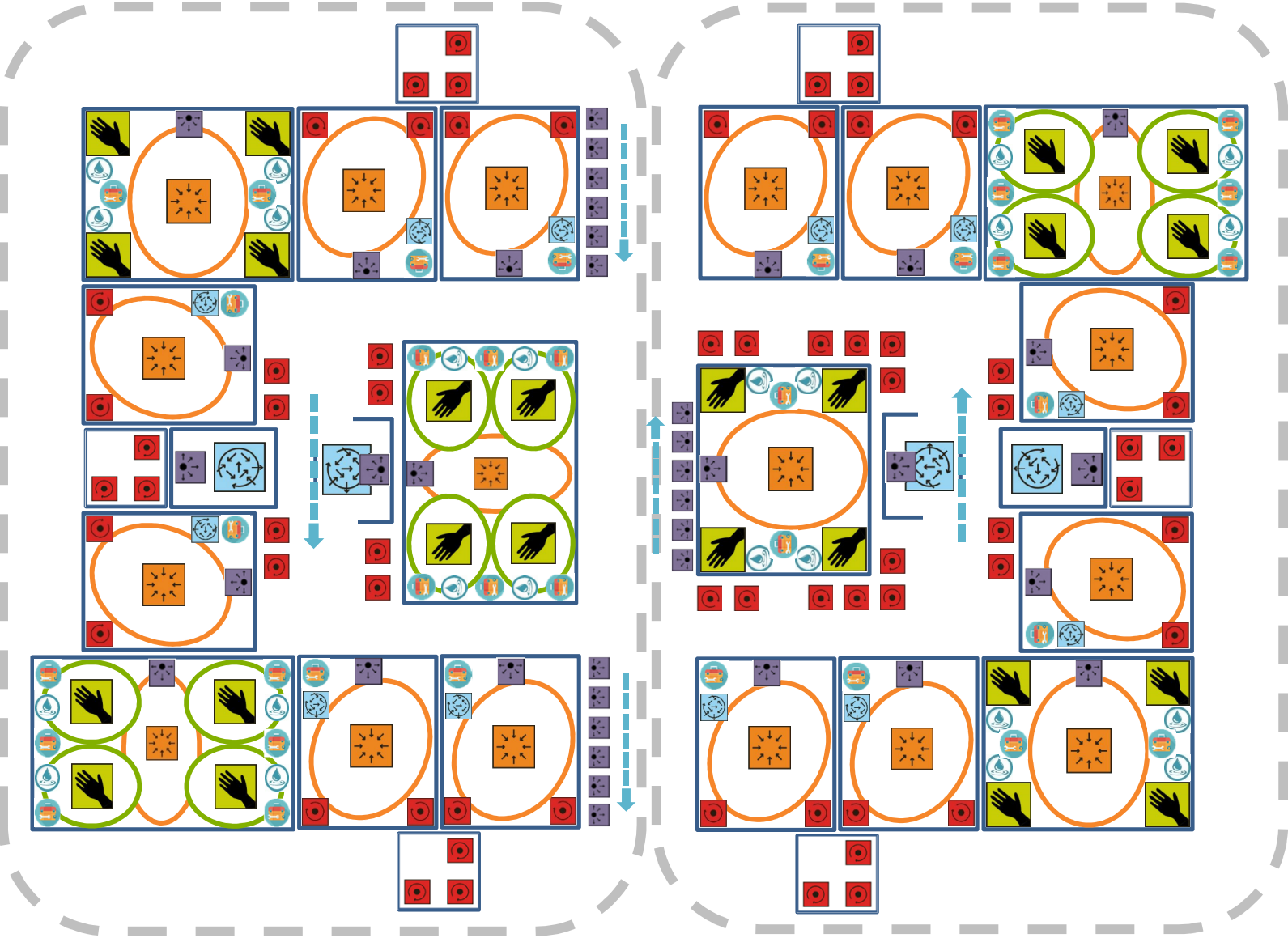
LC  
140  
Students

LC  
140  
Students

LC 140 x 2 = 280 Students

# 6.2 Learning Community Prototypes

LC  
210  
Students



LC  
210  
Students

LC 210 x 2 = 420 Students

# 6.2 Learning Community Prototypes

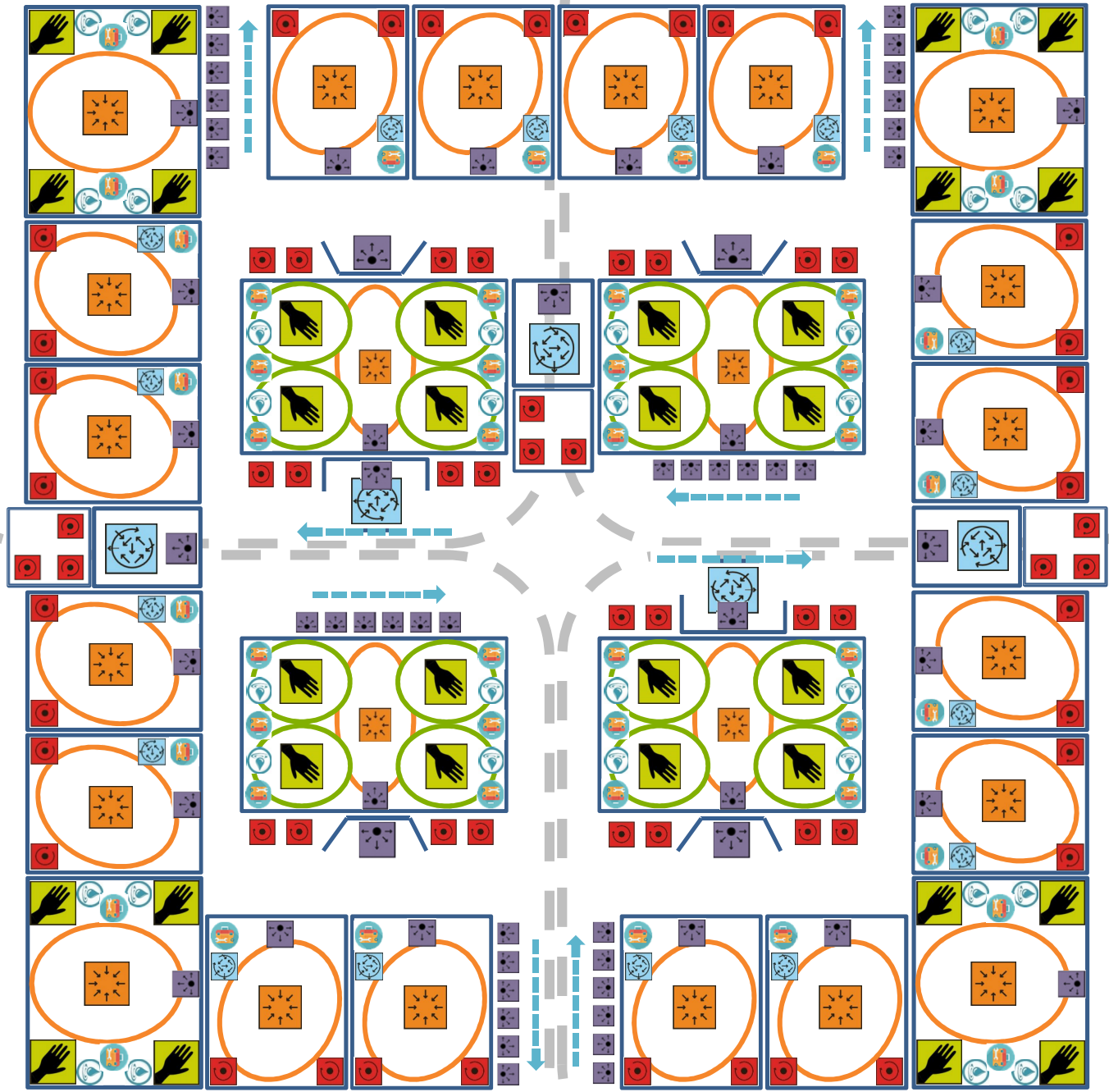
LC  
140  
Students

LC 140 x 4 =  
560 Students

LC  
140  
Students

LC  
140  
Students

LC  
140  
Students



# 7.0 EDUCATIONAL FACILITIES PLANNING



# 7.1 Building & Site Design Parameters

## 7.2.1 General Overview

New or Renovated Facilities for the Re-Imagined Maury High School should incorporate all of the Design Principles for Learning Environments listed and described in the previous Section 4.2

Planning and design guidance regarding what type of Learning Environments should be incorporated into Learning Communities and throughout the school facility is included in the forthcoming Sections 9.1 and 9.2.

Planning and design guidance regarding how Learning Communities should be developed and organized is included in the forthcoming Section 9.3.

Planning and design guidance regarding how the overall high school building should be organized is included in the forthcoming Section 9.14

## 7.2.2 Adaptability, Flexibility and Variety

In the context of planning and designing schools for a future in which learners are preparing to be life-long learners while acquiring both content knowledge and skills for jobs that may not yet exist, the only constants are “**change**” and “**the unknown**”. In order to create learning environments that will stand the test of time and have the capacity to meet future needs, while at the same time minimizing public expenditures necessary to respond to changes in pedagogy and technology, new school facilities must be designed to be adaptable, flexible, and have a variety of both programs and space types and sizes. All three of these concepts must be incorporated into the planning and design of the Re-Imagined Maury High School

**Adaptability:** structure and infrastructure allows for change over a period of years or decades

Examples: non-load bearing walls, daylighting strategies, adaptive and expandable infrastructure for power and technology

**Flexibility:** allows for building users to make changes to space configuration themselves over the course of each day

Examples: multi-use spaces, movable walls, mobile furniture, robust WiFi; flexible use of time

**Variety:** allows for instant and spontaneous change of learning activities by the learners

Examples: access to variety of types and sizes of learning zones and spaces that support various learning modes

# 7.1 Building & Site Design Parameters

## 7.2.3 Building & Site Systems and Materials Selections for Life-Cycle Value

When working with public sector dollars, there is always a difficult balancing-act between “lowest first cost” and “lowest long-term cost” decision points, although it is generally understood that the selection of lowest first cost systems, components, or materials does not always translate into the lowest life-cycle cost of these same assemblies, and in fact may increase the Owner's maintenance and operations costs over time. The Architect should incorporate Life-Cycle Value Analysis into their discussions with Norfolk Public Schools regarding best choice selections for building systems, components, and materials and make recommendations based on the Owner's tolerance for reducing long-term maintenance and operations cost by selecting higher first-cost, but more durable, assemblies.

## 7.2.4 Sustainable Design Goals

Norfolk Public Schools has not established LEED Certification goals for this project at this time; however, it is generally agreed that the following Sustainable Design Strategies should be incorporated into the planning and design of the Re-Imagined Maury High School:

### Sustainable Sites:

- Roof Rainwater Harvesting for Irrigation of Play Fields
- Stormwater Quantity and Quality Control
- On-Site Retention and Infiltration of Rainwater
- Reduce Heat Island Effect for Non-Roof Areas
- Cool Roof to Minimize Solar Heat Gain
- Site Light Pollution Reduction
- Bicycle Storage
- Site Master Planned for Future Expansion

### Water Efficiency:

- Water-Use Reduction with Low-Flow Fixtures
- Water Efficient Landscaping

### Energy and Atmosphere:

- High Efficiency HVAC Systems
- HVAC System Commissioning
- Optimal Energy Performance (Energy Star Target of 75)
- Enhanced Refrigerant Management

### Material and Resources:

- Storage and Collection of Recyclables
- Construction Waste Management
- Recycled Content Materials Used
- Regional Materials Used
- Bamboo Wood Floor in Gym
- Certified Wood Used

### Indoor Environmental Quality:

- Outdoor Air Delivery Monitoring
- IAQ Management Plan – During Construction and Pre-Occupancy
- Low VOC-Emitting Materials Used
- Indoor Chemical and Pollutant Source Control
- Lighting Control Systems
- Thermal Comfort Design
- Daylight and Views Provided

### Site and Building Sustainable Design as a Teaching Tool:

- Show-off and tell the story of Site and Building Sustainable Design Solutions
- Embed Sustainable Design Strategies into the curriculum through project-based learning experiences to encourage students to become engaged as lifelong-learners and sustainability-conscious citizens.

# 7.1 Building & Site Design Parameters

## 7.2.5 Safety & Security

The primary goal is to design and construct an inviting, non-institutional school environment, while simultaneously providing a safe environment for the students, staff and community who use the facilities. Building and Site Safety and Security should be addressed with both “active” and “passive” strategies. Active security relies on electronic security systems along with a human monitoring and reporting component; Passive security is based on program design, building configuration, school culture and community participation.

The planning and design of a new or renovated school facility should focus on passive security strategies first, and then apply active security systems as an overlay. Active approaches typically address the symptoms of security problems as opposed to passive approaches that often address the causes of security problems. The two overarching strategies of passive security – high visibility and appropriate channeling of traffic – can also be key characteristics of the welcoming and comfortable atmosphere desired in a school environment.

**Passive Security Strategies that should be incorporated into the design are outlined below:**

### Site Design Strategies:

- Visitors should be welcomed to the site and directed to the main entrance by clear symbols such as building scale, lighting, symbolism and graphic signage.
- Vehicular circulation should be designed to eliminate cross traffic between various types of traffic and also between vehicular traffic and pedestrians. Circulation pathways should culminate in drop-off/pick-up zones in close proximity to their appropriate building entrances.
- Provide adequate site lighting while minimizing light pollution.
- Design landscaping to minimize sight obstructions and hiding places.

### Building Design Strategies:

- The main entrance and other secondary entrances should be visible and easily accessible. Entry points should be able to be locked quickly and easily.
- Only primary entrance/exit doors should have door entry hardware on the outside; ancillary exits should not be able to be opened from the outside. All exterior doors should have (active) security system door contacts.
- Administrators should be able to see all approaching visitors and control their entry.
- Organize the school into small Learning Communities that facilitate and encourage teachers and students getting to know each other and developing relationships.
- Develop spatial relationships with natural transitions from one to another.
- Provide an appropriate level of transparency between learning spaces and circulation spaces to promote territoriality and space ownership.
- Locate administrative and teacher planning areas with good visual contact of activity and circulation areas.
- Avoid blind-spots and corners.
- Locate student restrooms in close proximity to classrooms and teacher planning areas.

# 7.1 Building & Site Design Parameters

- Locate spaces likely to have significant community or after-hours use to allow good access from parking areas and arrange spaces so that they can be closed-off from other parts of the school building and/or campus.
- Avoid roof access from the exterior of the building. Provide locks and (active) security system door contacts at roof hatches.
- Use durable wall surface materials that are easy to clean and to remove graffiti from.
- Limit the size of window panes (use multiple smaller windows rather than one large window) and provide security screens where appropriate.

The principles and strategies of CPTED, Crime Prevention through Environmental Design, may provide additional guidance for incorporating passive security strategies. Passive strategies such as natural access control and natural surveillance can lead to a reduction in the fear and incidence of crime and also decrease the opportunity for crime.

**Active Security Systems that should be considered for incorporation into the design are outlined below:**

- Video Surveillance and Recording Systems – An IP (Internet Protocol) CCTV video surveillance system that is monitored from the administrative (and/or a security personnel) work area is recommended for quickly identifying problems and providing a video record of suspicious activities. Cameras should be located at the main entry point, (used in conjunction with an intercom entry system) all exterior entry/exit doors, main corridors, and large assembly spaces (cafeteria, gymnasium, etc.). Video can be displayed on a large LCD display monitor in a central location in the administrative area for fast recognition by administrators of a developing incident. Video recording can be stored for any length of time, however 30 days is the industry standard.
- Intrusion Detection Systems – An Intrusion Detection Security system is recommended for the monitoring of exterior doors, movement within main corridors and high value areas, and for strategically placed duress buttons. The majority of the components within this system will be for after-school-hours protection of the building and its contents, however the exterior doors (which should stay closed during school hours), could report to the main office when they are opened during the day, allowing administrative staff to view the video surveillance monitor to ascertain the reason for the opened door. In addition, panic duress buttons may also be monitored by this system to allow quick recognition of any developing incidents. Typical monitoring components include door contacts, motion sensors, and glass breakage sensors. This type of system is usually linked to the local law enforcement agency.
- Door Access Control Systems – A Door Access Control System is recommended for all entrance doors. Typical access control technologies include card access, RFID badges and keypads.
- Security Vestibule – Provide a Security Vestibule at the Main Entrance with CCTV Camera and Intercom and with doors that are always locked from the outside. This system will require a “visitor” to request access to the building by showing identification and stating purpose of visit. The access control monitoring person can then choose to unlock the entrance door electronically if access is approved, or they can deny access.

# 7.1 Building & Site Design Parameters

## 7.2.6 Shared Facility Use with the Community

A high school should be both the iconic and cultural center of its community. It is well understood that the success of the Re-Imagined Maury High School and its students will be directly proportional to the levels of involvement of both parents and the community in the educational, cultural and social aspects of its programs. This is truer today than it ever has been with the increased focus on life-long learning and community and business partnerships to support service- and work-based learning opportunities.

Moreover, a new or modernized comprehensive high school facility represents a significant investment in public dollars, and every effort should be made to maximize the utilization of the facilities by all stakeholders.

The following planning and design strategies should be incorporated into the Re-Imagined Maury High School in order to maximize the potential for shared community use and increased utilization of the facilities:

- Locate spaces likely to have significant community or after-hours use, such as Auditorium, Gym, Dining/ Commons, Library/ Media Center, etc., near entrances and lobby spaces to allow for good access from parking areas and arrange these spaces so that they can be closed-off from other parts of the school building and/or campus.
- Develop a strategy through building organization and space scheduling that facilitates extended-day use of learning spaces by students and/or after-hours use of learning spaces for adult education.
- Provide spaces for parent and community member volunteers.
- Provide spaces to facilitate the embedding of business partnerships and work-based learning into the learning experiences.
- Design building systems for extending day use, with multiple zone and separate control capabilities.
- Consider time management strategies and community partnerships that stretch the utilization of the building facilities up to 7 day a week, +/- 365 days a year.
- Site team sport fields, general purpose fields and tennis courts should be designed to accommodate youth and adult community recreation groups and built to standards that support these uses where feasible. Water access and an externally entered storage and/or maintenance areas should be considered.

# 7.2 Site Planning Requirements

## GENERAL SITE DESIGN:

- Site design shall reinforce and engage the urban scale and mixed-use diversity of the surrounding neighborhoods with appropriate scale, textures, connections, and buffers
- Site design shall create a variety of outdoor learning environments that are integrated with the building's internal program areas
- Site design shall include a complete landscape package including large shade trees, screening mid-size trees, hardy low shrubs, low maintenance ground cover and playfield turf
- Storm water shall be detained and infiltrated into the water table on site to avoid burdening downstream structures and water quality

## VEHICULAR & PEDESTRIAN CIRCULATION:

- Minimum of 600 Off-Street Parking Spaces (380 Student / 200 Faculty / 20 Visitors)
- 25 Bus Parking Spaces (includes double-striping for additional ~100 Event Car Parking Spaces)
- Dedicated Drop-off / Pick-up Lane with ample stacking
- Appropriate separation of different traffic types
- Dedicated Service Area for Kitchen and Building Services
- Fire Lane surrounding building
- Wide, well-lit sidewalks that tie the site to surrounding communities and accommodate the walk- and bike-to-school population
- Bicycle Storage Racks

## TEAM SPORTS & RECREATION:

- Practice Football / Soccer Field with Synthetic Turf - Lighted
- Competition Baseball Field - Lighted
- Competition Softball Field - Lighted
- Baseball & Softball Concessions / Restrooms / Press Box / Covered Dugouts
- Running Track with Synthetic Surface+ Field Events - Lighted
- 8 Tennis Courts – Lighted
- Outbuilding Storage Facilities for Team Sports and Marching Band



# 8.0 SPACE REQUIREMENTS



# 8.1 Quantitative Parameters

The following parameters affect the types, sizes and quantities of spaces to be included in the Re-Imagined Maury High School.

## 8.1.1 High School Typology

Maury High School will continue to operate as a comprehensive high school with a defined attendance boundary, along with a Medical and Health Specialties Program that serves students division-wide and operates as a school-within-a school.

## 8.1.2 The Medical and Health Studies Program

The Medical and Health Specialties Program at Maury High School is a unique program offering opportunities to highly motivated high school students seriously considering a career in the dramatically expanding fields of medicine and healthcare. Classes are offered on the campuses of Maury High School and Eastern Virginia Medical School and other community sites as program needs dictate.

The goals of the Medical & Health Specialties Program are to provide a program of challenging high school science courses that emphasize medical applications. Through this coursework, students will have opportunities to work with specialized equipment and resources, identify and pursue research through collaboration with practicing professionals, have experiences relevant to science, mathematical, medical and health science careers and develop a personal sense of responsibility to the community through active participation in community service.

The goal of Norfolk Public Schools is to increase the capacity of this program by at least 50% to accommodate current demand and to serve more students division-wide.

## 8.1.3 Planned Average Class Sizes

The learning spaces of the Re-Imagined Maury High School have been planned for the following average class sizes:

Language Arts	= 24 students
Foreign Language	= 24 students
Math	= 24 students
Social Studies	= 24 students
Science	= 24 students
Visual Arts	= 24 students
Career & Technical Education	= 20 students
Music & Performing Arts	= 30 students
Health & Physical Education	= 30 students
Special Needs – Self Contained	= 8 students

These average class sizes are generally consistent with the average class sizes recommended in the *Virginia High School Capacity Worksheet* in Appendix H of the *Guidelines for School Facilities in Virginia's Public Schools*, published in June of 2010.

# 8.1 Quantitative Parameters

## 8.1.4 Planned Optimal Capacity

The Re-Imagined Maury High School will be designed for an “Optimal” or “Program” Capacity of **1,889 students**, assuming a Utilization Factor of 85%. A utilization factor is applied to account for the likely occurrence that not every class block will achieve the average number of students listed above (typically AP courses or other course offerings with limited enrollment) and not every room will be utilized during every block of every day within the master schedule. A typical high school organized around a 4 x 2 block schedule will have a utilization factor of between 75% and 87.5%.

This planned optimal capacity will accommodate the current live-in enrollment of 1,584 students in the Maury High School attendance boundary plus 265 students in the Medical and Health Specialties Program (a 50% increase) plus allow for 2% growth in attendance boundary enrollment.

## 8.1.5 Net Area Summary

The net area of a building is a total of the area of usable spaces. Net area typically does not include wall thicknesses, circulation space, mechanical spaces, and public restrooms, etc.

A summary of net areas is shown below and a detailed listing of spaces with area requirements is included in Sections 8.2 and 8.3.

Program Components	Net Area (SF)
Learning Communities (12 total)	90,000 (includes 10 C&TE Experiential Labs + 2 NJROTC Labs)
Support Communities (6 total)	17,100
Special Needs – Self Contained	3,590
Culinary Arts (C&TE)	5,100
Visual Arts	5,650
Music/ Performing Arts	24,850
Gym/ Physical Education	45,750
Library/ Media Center	5,050
Welcome Center/ Administration	6,405
Commons/ Dining/ Food Service	15,300
Custodial/ Building Services	3,350
<b>Net Area Totals</b>	<b>225,145 SF</b>

# 8.1 Quantitative Parameters

## 8.1.6 Gross Area Summary

The total gross area of a building equals the net usable area plus space for hallways, stairways, elevators, walls, mechanical spaces, building services, toilet rooms, etc. The actual gross building area is determined as the building design progresses to a level of detail that includes a schematic building layout on the site, and accounts for the spatial implications resulting from the selection and placement of mechanical systems, life-safety code requirements for occupant exiting, selection and engineering of building materials and structural systems, and requirements for toilet fixture counts and the like.

Typically for the purposes of budgeting and conceptual design, to estimate the gross area of a building prior to the determination of these items, a “grossing factor” is used to realistically estimate the gross square footage of a new building. The total net usable building area is increased by this factor resulting in the overall total gross area estimate for the building.

For the purposes of preliminary planning and conceptual design for a replacement school, the grossing factor used for this educational specification is 1.38.

**Estimate of Gross Building Area for Main Building New Construction is:  $225,145 \text{ net SF} \times 1.38 = 306,560 \text{ SF}$**

In addition to this, an area of 2,780 SF is estimated to be required for “Outbuildings” as described in Section 8.2.

A replication or enhancement of the existing Natatorium (swimming pool) program area is not included in the above calculations. If it is the desire of the School Board and the City of Norfolk to replicate this program area within a new or modernized facility, a minimum of 12,500 SF should be added to the estimate of the gross building area.

It should be noted that a grossing factor for a project that includes renovations to the existing Maury High School building is likely to be higher as program requirements may have to be “fit” within the existing structure. The calculation of a renovation grossing factor will require an analysis of the life-safety code requirements of the existing building as well as conceptual design, and both of these tasks are beyond the scope of this educational specification process.

## 8.1.7 Area per Student

The estimated gross building area proposed to be provided per student is:

**$306,560 \text{ SF} / 1,889 \text{ students} = 162.2 \text{ SF per student}$**

This is slightly higher than the average SF per student provided in new high schools across the Commonwealth of Virginia over the 12 years, which is 161.3 SF per student.

# 8.2 Building Area, Teaching Space & Capacity Summary

Space Type		Recommended		Learning Community Model [12 Learning Communities ]		
<b>Main School Building</b>		<b># TS</b>	<b>Total SF</b>	# students in school	Total SF	SF/student
1.0	Learning Communities [12] [Core Teaching Spaces]	60	90,000	1,889	306,560	162.31
2.0	Support Communities [6]		17,100	<b>Potential Types of Learning Communities</b>		
3.0	Special Needs	2	3,590	A. Inter-Disciplinary		
4.0	Career & Technical Education [SF In Learning Communities]	12	5,100	B. Traditional Departmental		
4.0	NJROTC [SF In Learning Communities]	2	0	C. Thematic School within a School		
5.0	Visual Arts	4	5,650	D. Career / Tech Focused School within a School		
6.0	Music / Performing Arts	4	24,850	E. Combination of Approaches		
7.0	Gym / Physical Education	9	45,750			
8.0	Library / Media Center / Learning Commons		5,050	<b>CAPACITY CALCULATIONS</b>		
9.0	Welcome Center/Administration		6,405		Students per TS	Proposed # TS
10.0	Commons / Dining / Food Services		15,300		Blocks Available [TS x 8]	Current # of Blocks
11.0	Custodial / Building Services		3,350	Language Arts, Math, Soc. Studies	24	48
	<b>Net Subtotal Programmed Areas</b>		<b>222,145</b>	Science	24	12
	Grossing Factor [Walls, Circulation, Building Systems, etc.]	38%	84,415	Visual Arts	24	4
	<b>Main School Building Total</b>	<b>93</b>	<b>306,560</b>	Career & Tech Ed + NJROTC	20	14
				Music & PA	30	4
				Gym / PE	30	9
	<b>Outbuildings</b>		<b>Total</b>	Special Needs	8	2
	Baseball Restroom / Concessions / Pressbox Facilities	1	1,200	<b>MAXIMUM CAPACITY</b>		93
	Baseball Dugouts	2	480	Utilization Factor		
	Softball Dugouts	2	400	<b>OPTIMAL CAPACITY</b>		
	Lawn Maintenance Storage	1	400			
	Band Storage	1	300	<b>Core Teaching Spaces [TS]</b>	<b>60</b>	(Includes Foreign Language)
	<b>Outbuildings Total</b>		<b>2,780</b>	<b>Special Needs</b>		<b>2</b>
				<b>Electives:</b>		
				Visual Arts		4
	<b>Natorium Building Option</b> [SF Replicates Existing Facilities]		<b>Total</b>	C & TE + NJROTC		14
	Natorium [Pool Enclosure] 25 meter x 6 lanes	1	6,600	Music & Performing Arts		4
	Spectator Seating [equal to existing]	1	1,050	Physical Education		9
	Lobby	1	800	<b>Total Electives</b>		<b>31</b>
	Locker Rooms / Restrooms	1	3,300	<b>Total Teaching Spaces</b>		<b>93</b>
	Pool Equipment	1	750	% Core		66%
	<b>Natorium Building Total</b>		<b>12,500</b>	% Elective		34%

# 8.3 Space Allocation Summary

1.0 Learning Communities x 12		Recommended 1889 Student Program				Remarks
		Quantity	TS	SF	Total	
1.01	Learning Studio	4	4	750	3,000	see Learning Studio Prototype in Section 9.2
1.02	Learning Lab [Science, M&HSP]	1	1	1,125	1,125	see Learning Lab Prototype in Section 9.2
1.03	Experiential Lab [TS counted in C&TE]	1	0	1,500	1,500	see Experiential Lab Prototype in Section 9.2
1.04	Lab Storage	2		200	400	
1.05	Collab [Breakout]	2		250	500	see Collab Prototype in Section 9.2
1.06	Pod	2		75	150	see Pod Prototype in Section 9.2
1.07	Learning Commons [Flex Space]	1		825	825	see Learning Commons Prototypes in Section 9.3
1.08	Toolbox [included in Learning Commons]	1		0	0	see Toolbox Prototype in Section 9.2
1.09	Genius Bar [included in Learning Commons]	1		0	0	see Genius Bar Prototype in Section 9.2
1.10	Pod [included in Learning Commons]	6		0	0	see Pod Prototype in Section 9.2
1.11	Student Storage [included in Learning Commons]	1		0	0	
<b>Net Space Subtotal</b>			<b>5</b>		<b>7,500</b>	
<b>Number of Learning Communities</b>				<b>x</b>	<b>12</b>	
<b>Learning Communities Net Area Subtotal</b>			<b>60</b>		<b>90,000</b>	

2.0 Support Communities x 6		Recommended 1889 Student Program				Remarks
		Quantity	TS	SF	Total	
2.01	Flex Resource Room [Remediation, Special Needs]	2		375	750	
2.02	Conference Room	1		250	250	
2.03	Admin Office [Decentralized]	1		150	150	
2.04	Teacher Planning Space	1		750	750	
2.05	Instructional Material Storage	1		150	150	
2.06	Work/ Copy	1		300	300	
2.07	Staff Restrooms	2		50	100	
2.08	Student Restroom [Male / Female]	2		200	400	
<b>Net Space Subtotal</b>					<b>2,850</b>	
<b>Number of Support Community Connectors</b>				<b>x</b>	<b>6</b>	
<b>Support Communities Net Area Subtotal</b>					<b>17,100</b>	

# 8.3 Space Allocation Summary

3.0 Special Needs Community		Recommended 1889 Student Program				Remarks
		Quantity	TS	SF	Total	
3.01	Self-contained SE Classroom	2	2	750	1,500	
3.02	Restroom/Shower	1		100	100	
3.03	Multi-Use Special Needs Room	2		375	750	
3.04	Conference Room	1		200	200	
3.05	Storage	1		300	300	
3.06	Teacher Prep/Offices	1		500	500	
3.07	Additional Offices	2		120	240	
<b>Special Needs Net Area Subtotal</b>			<b>2</b>		<b>3,590</b>	

4.0 Career & Technical Education		Recommended 1889 Student Program				Remarks
		Quantity	TS	SF	Total	
4.01	Culinary Arts Lab - Large	1	1	1,800	1,800	
4.02	Foods Demonstration Lab	1	1	1,200	1,200	
4.03	Experiential Labs [See Learning Communities]	12	12	0	0	
4.04	- M&HSP Multidisciplinary Labs					
4.05	- Sports Medicine					
4.06	- Tech. Education [Engin'g, Tech Drawings, PLTW]					
4.07	- Business, Marketing & IT					
4.08	- Communications & Imaging					
4.09	- Entrepreneurship					
4.10	- NJROTC					
4.11	- Future Program Expansion					
4.12	T&CE Office Spaces	6		350	2,100	
<b>Career &amp; Technical Education Net Area Subtotal</b>			<b>14</b>		<b>5,100</b>	

# 8.3 Space Allocation Summary

5.0 Visual Arts		Recommended 1889 Student Program				Remarks
		Quantity	TS	SF	Total	
5.01	Art Lab	2	2	1,125	2,250	
5.02	Ceramics Lab	1	1	1,200	1,200	
5.03	Kiln Room	1		200	200	
5.04	Storage	4		100	400	
5.05	Digital Art Lab	1	1	1,000	1,000	
5.06	Darkroom	1		400	400	
5.07	Office	1		200	200	
<b>Visual Arts Net Area Sub-Total</b>			<b>4</b>		<b>5,650</b>	

6.0 Music / Performing Arts		Recommended 1889 Student Program				Remarks
		Quantity	TS	SF	Total	
6.01	Choral Room	1	1	1,800	1,800	
6.02	Storage [Robes, Music]	1		500	500	
6.03	Band Room	1	1	2,500	2,500	
6.04	Band Storage [Instruments, Music]	1		800	800	
6.05	Band Storage [Uniforms]	1		300	300	
6.06	Orchestra Room	1	1	2,000	2,000	
6.07	Orchestra Storage [Instruments, Music]	1		400	400	
6.08	Music Tech / Keyboarding Lab	1	1	600	600	
6.09	Small Practice Room	4		50	200	
6.10	Large Practice Room	1		100	100	
6.11	Auditorium Seating [900 seats]	1		9,000	9,000	
6.12	Control Booth	1		200	200	
6.13	Auditorium Stage	1		3,000	3,000	[current Auditorium seating is 568 + 110 (balcony) = 678]
6.14	Orchestra Pit [not recessed in floor]	1		800	800	
6.15	Scene Shop	1		1,000	1,000	
6.16	Make Up/Dressing	2		300	600	
6.17	Storage [Costumes, Props]	1		500	500	
6.18	Restrooms	2		50	100	
6.19	Offices	3		150	450	
<b>Music/ Performing Arts Net Area Subtotal</b>			<b>4</b>		<b>24,850</b>	

# 8.3 Space Allocation Summary

7.0 Gymnasium / Physical Education		Recommended 1889 Student Program				Remarks
		Quantity	TS	SF	Total	
7.01	Gymnasium - 3 full-size Basketball Courts	1	3	19,500	19,500	Increase to 3 Basketball Courts requested on 5/8/18 Included in SF [current Gym seating capacity is +/- 1,000]
7.02	Telescoping Bleachers Seating [2000 seats]					
7.03	Auxiliary Gym	1	1	4,500	4,500	
7.04	PE Storage	Multiple		Varied	500	
7.05	Team Sports Storage	Multiple		Varied	1,000	
7.06	PE Locker Rooms	2		1,000	2,000	
7.07	PE Showers/ Restrooms	2		500	1,000	
7.08	PE Office / Conference	2		400	800	
7.09	PE Staff Toilets / Showers	2		100	200	
7.10	Team Locker Rooms	2		1,800	3,600	
7.11	Team Showers / Restrooms	2		600	1,200	
7.12	Coaches Office / Conference	2		300	600	
7.13	Coaches Toilet / Shower	2		100	200	
7.14	Officials Locker Room/ Shower/ Toilet	1		200	200	
7.15	Fitness Area	1	1	2,000	2,000	
7.16	Wrestling Room	1	0.5	2,000	2,000	
7.17	Weight Room	1	0.5	2,000	2,000	
7.18	Training / Rehabilitation / Cardio Lab	1		1,000	1,000	
7.19	Laundry	1		200	200	
7.20	Health Classroom	3	3	900	2,700	
7.21	Concessions	1		300	300	
7.22	Athletic Director's Office	1		150	150	
7.23	Athletic Director's Storage	1		100	100	
<b>Physical Education Net Area Subtotal (Indoor)</b>			<b>9</b>		<b>45,750</b>	

# 8.3 Space Allocation Summary

8.0 Library / Media Center		Recommended 1889 Student Program				Remarks
		Quantity	TS	SF	Total	
8.01	Reading Room / Circulation	1		2,000	2,000	
8.02	Large Collabs	2		500	1,000	
8.03	Help Desk / Genius Bar	2		250	500	
8.04	Media Specialist Office	1		250	250	
8.05	Workroom / Storage	2		200	400	
8.06	MDF/ Telecommunications Room	1		300	300	
8.07	IDF Hub Rooms, distributed thru Bldg	10		60	600	
<b>Library / Media Center Net Area Subtotal</b>					<b>5,050</b>	

# 8.3 Space Allocation Summary

9.0 Welcome Center / Administration		Recommended 1889 Student Program				Remarks
	Administration	Quantity	TS	SF	Total	
9.01	Welcome / Reception	1		600	600	
9.02	Secretarial Area	4		100	400	
9.03	Principal's Office / Rest Room	1		225	225	
9.04	Assistant Principal's Office	4		125	500	
9.05	Conference Room	1		400	400	
9.06	Mail/Copy Room	1		300	300	
9.07	Storage	1		150	150	
9.08	Kitchenette	1		150	150	
9.09	Staff Restrooms	2		50	100	
9.10	Resource Officer (Police)	1		100	100	
9.11	School Security Office (4)	1		150	150	
9.12	Bookkeeper	1		120	120	
9.13	Data Technician	1		100	100	
9.14	Access Office	1		120	120	
9.15	Health Clinic	1		800	800	
	<b>Guidance</b>					
9.20	Career Center	1		700	700	
9.21	Counselors' Offices	7		120	840	
9.22	Secretarial Area	1		100	100	
9.23	Student Record Storage	1		200	200	
9.24	Conference Room	1		250	250	
9.25	Staff Restrooms	2		50	100	
	<b>Decentralized [See Support Communities]</b>					
9.30	School Improvement Specialist	1		0	0	SF in Support Communities
9.31	Offices for Itinerant and Others	5		0	0	SF in Support Communities
	<b>Welcome Center / Administration Net Area Subtotal</b>				<b>6,405</b>	

# 8.3 Space Allocation Summary

10.0 Commons / Dining / Food Service		Recommended 1889 Student Program				Remarks
		Quantity	TS	SF	Total	
10.01	Kitchen	1		3,500	3,500	Smaller Kitchen size assumes NPS centralized food preparation and cooking and delivery to site
10.02	Preparation/Warming Areas					
10.03	Dry Food Storage					
10.04	Cooler/Freezer					
10.05	Ware Washing					
10.06	Kitchen Manager Office					
10.07	Restroom					
10.08	Lockers					
10.09	Serving Area [minimum 4 serving lines]	4		300	1,200	
10.10	Commons / Dining [Seating for 600]	1		8,000	8,000	
10.11	Table & Chair Storage	1		300	300	
10.12	Staff Dining w/Vending	1		600	600	
10.13	School Store	1		700	700	
10.14	Club Areas	2		500	1,000	
<b>Cafeteria / Food Service Net Area Subtotal</b>					<b>15,300</b>	

11.0 Custodial / Building Services		Recommended 1889 Student Program				Remarks
		Quantity	TS	SF	Total	
11.01	Receiving/Storage	1		1,000	1,000	
11.02	Maintenance/Repair Area	1		600	600	
11.03	Office/Planning/Meeting Area/Break Room	1		300	300	
11.04	Locker Room/Toilets	2		200	400	
11.05	Electrical Switchgear Room	1		800	800	
11.06	Water/ Sprinkler Riser Room	1		250	250	
11.07	Mechanical Rooms [in grossing factor]			0	0	
<b>Custodial / Building Services Net Area Subtotal</b>					<b>3,350</b>	

# 8.4 Space Attributes Summary

**Key**

●	High
◐	Moderate
◑	Low
□	None

1.0 Learning Communities x 12		Qty.	Function	Floor Finish	Wall Finish	Ceiling Finish	Comfort & Health	Utilities
1.01	Learning Studio	4	Activity Level Adaptability Flexibility Movable Wall - One Side Transparency Access Control	Epoxy Terrazzo Ceramic Tile Quarry Tile Monolithic Epoxy Quartz Resilient Sheet Resilient Tile Carpet Tile Hardwood Strip Resilient - Athletic Colored Concrete	Concrete Masonry - Paint Abuse Resistant Drywall - Paint Ceramic Tile - Full Height Ceramic Tile - Wainscot	High NRC Acoustical Panel Acoustical Panel - Washable Hard Surface - Moisture Resistant Exposed Structure - Paint Exposed Structure - Unpainted	Natural Daylight Lighting - Direct Lighting - Indirect Lighting Control Natural Ventilation Sound Isolation Sound Absorption	Water - Hot Water - Cold General Exhaust Systems Specialized Exhaust Systems
1.02	Learning Lab [Science, M&HSP]	1						
1.03	Experiential Lab [TS counted in C&TE]	1						
1.04	Lab Storage	2						
1.05	Collab [Breakout]	2						
1.06	Pod	2						
1.07	Learning Commons [Flex Space]	1						
1.08	Toolbox [included in Learning Commons]	1						
1.09	Genius Bar [included in Learning Commons]	1						
1.10	Pod [included in Learning Commons]	6						
1.11	Student Storage [included in Learning Commons]	1						

2.0 Support Communities x 6		Qty.	Function	Floor Finish	Wall Finish	Ceiling Finish	Comfort & Health	Utilities
2.01	Flex Resource Room [Remediation, Special Needs]	2						
2.02	Conference Room	1						
2.03	Admin Office [Decentralized]	1						
2.04	Teacher Planning Space	1						
2.05	Instructional Material Storage	1						
2.06	Work/ Copy	1						
2.07	Staff Restrooms	2						
2.08	Student Restroom [Male / Female]	2						

# 8.4 Space Attributes Summary

**Key**

●	High
◐	Moderate
◑	Low
□	None

3.0 Special Needs Community		Qty.	Function	Floor Finish	Wall Finish	Ceiling Finish	Comfort & Health	Utilities
3.01	Self-contained SE Classroom	2	Activity Level Adaptability Flexibility Movable Wall - One Side Transparency Access Control	Epoxy Terrazzo Ceramic Tile Quarry Tile Monolithic Epoxy Quartz Resilient Sheet Resilient Tile Carpet Tile Hardwood Strip Resilient - Athletic Colored Concrete	Concrete Masonry - Paint Abuse Resistant Drywall - Paint Ceramic Tile - Full Height Ceramic Tile - Wainscot	High NRC Acoustical Panel Acoustical Panel - Washable Hard Surface - Moisture Resistant Exposed Structure - Paint Exposed Structure - Unpainted	Natural Daylight Lighting - Direct Lighting - Indirect Lighting Control Natural Ventilation Sound Isolation Sound Absorption	Water - Hot Water - Cold General Exhaust Systems Specialized Exhaust Systems
3.02	Restroom/Shower	1						
3.03	Multi-Use Special Needs Room	2						
3.04	Conference Room	1						
3.05	Storage	1						
3.06	Teacher Prep/Offices	1						
3.07	Additional Offices	2						

4.0 Career & Technical Education		Qty.	Function	Floor Finish	Wall Finish	Ceiling Finish	Comfort & Health	Utilities
4.01	Culinary Arts Lab - Large	1						
4.02	Foods Demonstration Lab	1						
4.03	Experiential Labs [See Learning Communities]	12						
4.04	- M&HSP Multidisciplinary Labs							
4.05	- Sports Medicine							
4.06	- Tech. Education [Engin'g, Tech Drawings, PLTW]							
4.07	- Business, Marketing & IT							
4.08	- Communications & Imaging							
4.09	- Entrepreneurship							
4.10	- NJROTC							
4.11	- Future Program Expansion							
4.12	T&CE Office Spaces	6						

# 8.4 Space Attributes Summary

**Key**

●	High
◐	Moderate
○	Low
□	None

5.0 Visual Arts		Qty.	Function	Floor Finish	Wall Finish	Ceiling Finish	Comfort & Health	Utilities
5.01	Art Lab	2	Activity Level Adaptability Flexibility Movable Wall - One Side Transparency Access Control	Epoxy Terrazzo Ceramic Tile Quarry Tile Monolithic Epoxy Quartz Resilient Sheet Resilient Tile Carpet Tile Hardwood Strip Resilient - Athletic Colored Concrete	Concrete Masonry - Paint Abuse Resistant Drywall - Paint Ceramic Tile - Full Height Ceramic Tile - Wainscot	High NRC Acoustical Panel Acoustical Panel - Washable Hard Surface - Moisture Resistant Exposed Structure - Paint Exposed Structure - Unpainted	Natural Daylight Lighting - Direct Lighting - Indirect Lighting Control Natural Ventilation Sound Isolation Sound Absorption	Water - Hot Water - Cold General Exhaust Systems Specialized Exhaust Systems
5.01	Art Lab	2	●●		●●		●●	●●
5.02	Ceramics Lab	1	●●		●●		●●	●●
5.03	Kiln Room	1	○		●●		●●	●●
5.04	Storage	4	○		●●		●●	●●
5.05	Digital Art Lab	1	●●		●●		●●	●●
5.06	Darkroom	1	○		●●		●●	●●
5.07	Office	1	○		●●	●	○	●●

6.0 Music / Performing Arts		Qty.	Function	Floor Finish	Wall Finish	Ceiling Finish	Comfort & Health	Utilities
6.01	Choral Room	1	●●	●●	●●	●●	○	
6.02	Storage [Robes, Music]	1	○	●●	●●	●●	●●	
6.03	Band Room	1	●●	●●	●●	●●	○	●●
6.04	Band Storage [Instruments, Music]	1	○	●●	●●	●●	●●	●●
6.05	Band Storage [Uniforms]	1	○	●●	●●	●●	●●	●●
6.06	Orchestra Room	1	●●	●●	●●	●●	○	●●
6.07	Orchestra Storage [Instruments, Music]	1	○	●●	●●	●●	●●	●●
6.08	Music Tech / Keyboarding Lab	1	●●	●●	●●	●●	○	●●
6.09	Small Practice Room	4	○	●●	●●	●●	●●	●●
6.10	Large Practice Room	1	●●	●●	●●	●●	●●	●●
6.11	Auditorium Seating [900 seats]	1	○	○	●●	●●	●●	●●
6.12	Control Booth	1	●●	○	●●	●●	●●	●●
6.13	Auditorium Stage	1	●●	○	●●	●●	●●	●●
6.14	Orchestra Pit [not recessed in floor]	1	○	○	●●	●●	●●	●●
6.15	Scene Shop	1	○	○	●●	●●	●●	○
6.16	Make Up/Dressing	2	○	○	●●	●●	●●	○
6.17	Storage [Costumes, Props]	1	○	○	●●	●●	●●	○
6.18	Restrooms	2	○	●	○	●●	●●	●●
6.19	Offices	3	○	○	●●	●●	○	○

# 8.4 Space Attributes Summary

**Key**

●	High
◐	Moderate
◑	Low
□	None

## 7.0 Gymnasium / Physical Education

Qty.

		Activity Level	Adaptability	Flexibility	Movable Wall - One Side	Transparency	Access Control	Epoxy Terrazzo	Ceramic Tile	Quarry Tile	Monolithic Epoxy Quartz	Resilient Sheet	Resilient Tile	Carpet Tile	Hardwood Strip	Resilient - Athletic	Colored Concrete	Concrete Masonry - Paint	Abuse Resistant Drywall - Paint	Ceramic Tile - Full Height	Ceramic Tile - Wainscot	High NRC Acoustical Panel	Acoustical Panel - Washable	Hard Surface - Moisture Resistant	Exposed Structure - Paint	Exposed Structure - Unpainted	Natural Daylight	Lighting - Direct	Lighting - Indirect	Lighting Control	Natural Ventilation	Sound Isolation	Sound Absorption	Water - Hot	Water - Cold	General Exhaust Systems	Specialized Exhaust Systems
		Function						Floor Finish						Wall Finish				Ceiling Finish				Comfort & Health				Utilities											
7.01	Gymnasium - 3 full-size Basketball Courts	1	●	●	◐	◑	◐								●			●	●						●		◐	●	●	●	●	●					
7.02	Telescoping Bleachers Seating [2000 seats]		◐	◐			◐								●			●	●						●		◐	●	●	●	●	●					
7.03	Auxiliary Gym	1	●	◐	◐	◑	◐								●			●	●						●		◐	●	●	●	●	●					
7.04	PE Storage	M					●										●	●	●						●		◐	●	●	●	●	●					
7.05	Team Sports Storage	M					●										●	●	●						●		◐	●	●	●	●	●					
7.06	PE Locker Rooms	2	●				◐		●		●							●	●		◐	◐			●		◐	●	●	●	●	●		●	●	●	●
7.07	PE Showers/ Restrooms	2	●				◐		●		●							●	●		◐	◐			●		◐	●	●	●	●	●		●	●	●	●
7.08	PE Office / Conference	2	◐				◐		●		●							●	●		◐	◐			●		◐	●	●	●	●	●		●	●	●	●
7.09	PE Staff Toilets / Showers	2	◐				◐		●		●							●	●		◐	◐			●		◐	●	●	●	●	●		●	●	●	●
7.10	Team Locker Rooms	2	●				◐		●		●							●	●		◐	◐			●		◐	●	●	●	●	●		●	●	●	●
7.11	Team Showers / Restrooms	2	●				◐		●		●							●	●		◐	◐			●		◐	●	●	●	●	●		●	●	●	●
7.12	Coaches Office / Conference	2	◐				◐		●		●							●	●		◐	◐			●		◐	●	●	●	●	●		●	●	●	●
7.13	Coaches Toilet / Shower	2	◐				◐		●		●							●	●		◐	◐			●		◐	●	●	●	●	●		●	●	●	●
7.14	Officials Locker Room/ Shower/ Toilet	1	◐				◐		●		●							●	●		◐	◐			●		◐	●	●	●	●	●		●	●	●	●
7.15	Fitness Area	1	●		◐		◐											●	●		◐	◐			●		◐	●	●	●	●	●		●	●	●	●
7.16	Wrestling Room	1	●		◐		◐					●						●	●		◐	◐			●		◐	●	●	●	●	●		●	●	●	●
7.17	Weight Room	1	●			◐	◐											●	●		◐	◐			●		◐	●	●	●	●	●		●	●	●	●
7.18	Training / Rehabilitation / Cardio Lab	1	●				◐				●							●	●		◐	◐			●		◐	●	●	●	●	●		●	●	●	●
7.19	Laundry	1	◐				◐				●							●	●		◐	◐			●		◐	●	●	●	●	●		●	●	●	●
7.20	Health Classroom	3	◐		◐		◐				●							●	●		◐	◐			●		◐	●	●	●	●	●		●	●	●	●
7.21	Concessions	1	◐		◐		◐				●							●	●		◐	◐			●		◐	●	●	●	●	●		●	●	●	●
7.22	Athletic Director's Office	1	◐		◐		◐				●							●	●		◐	◐			●		◐	●	●	●	●	●		●	●	●	●
7.23	Athletic Director's Storage	1					◐				●							●	●		◐	◐			●		◐	●	●	●	●	●		●	●	●	●



# 8.4 Space Attributes Summary

**Key**

●	High
◐	Moderate
○	Low
□	None

9.0 Welcome Center / Administration		Qty.	Function						Floor Finish						Wall Finish				Ceiling Finish				Comfort & Health				Utilities												
			Activity Level	Adaptability	Flexibility	Movable Wall - One Side	Transparency	Access Control	Epoxy Terrazzo	Ceramic Tile	Quarry Tile	Monolithic Epoxy Quartz	Resilient Sheet	Resilient Tile	Carpet Tile	Hardwood Strip	Resilient - Athletic	Colored Concrete	Concrete Masonry - Paint	Abuse Resistant Drywall - Paint	Ceramic Tile - Full Height	Ceramic Tile - Wainscot	High NRC Acoustical Panel	Acoustical Panel - Washable	Hard Surface - Moisture Resistant	Exposed Structure - Paint	Exposed Structure - Unpainted	Natural Daylight	Lighting - Direct	Lighting - Indirect	Lighting Control	Natural Ventilation	Sound Isolation	Sound Absorption	Water - Hot	Water - Cold	General Exhaust Systems	Specialized Exhaust Systems	
<b>Administration</b>																																							
9.01	Welcome / Reception	1	●	●	○	○	●	○							●				●				●							●	●								
9.02	Secretarial Area	4	○	○	○	○	○	○							●				●				●							●	●								
9.03	Principal's Office / Rest Room	1	○	○	○	○	○	○							●				●				●							●	●					●	●		
9.04	Assistant Principal's Office	4	○	○	○	○	○	○							●				●				●							●	●								
9.05	Conference Room	1	●	○	○	○	○	○							●				●				●							●	●								
9.06	Mail/Copy Room	1	○	○	○	○	○	○					●						●				●							●	●								
9.07	Storage	1	○	○	○	○	○	○					●						●				●							●	●								
9.08	Kitchenette	1	○	○	○	○	○	○					●						●				●							●	●								
9.09	Staff Restrooms	2	○	○	○	○	○	○	●						●				○				○							○	○					○	○		
9.10	Resource Officer (Police)	1	○	○	○	○	○	○							●				●				●							●	●								
9.11	School Security Office (4)	1	○	○	○	○	○	○							●				●				●							●	●								
9.12	Bookkeeper	1	○	○	○	○	○	○							●				●				●							●	●								
9.13	Data Technician	1	○	○	○	○	○	○							●				●				●							●	●								
9.14	Access Office	1	○	○	○	○	○	○							●				●				●							●	●								
9.15	Health Clinic	1	○	○	○	○	○	○					●						●				●							●	●								
9.16	Vault	1	○	○	○	○	○	○							●				●				●							●	●								
<b>Guidance</b>																																							
9.20	Career Center	1	○	○	○	○	○	○							●				●				●							●	●								
9.21	Counselors' Offices	7	○	○	○	○	○	○							●				●				●							●	●								
9.22	Secretarial Area	1	○	○	○	○	○	○							●				●				●							●	●								
9.23	Student Record Storage	1	○	○	○	○	○	○							●				●				●							●	●								
9.24	Conference Room	1	○	○	○	○	○	○							●				●				●							●	●								
9.25	Staff Restrooms	2	○	○	○	○	○	○	●						●				○				○							○	○								
<b>Decentralized [See Support Communities]</b>																																							
9.30	School Improvement Specialist	1	○	○	○	○	○	○							●				●				●							●	●								
9.31	Offices for Itinerant and Others	5	○	○	○	○	○	○							●				●				●							●	●								

# 8.4 Space Attributes Summary

**Key**

●	High
◐	Moderate
○	Low
□	None

10.0 Commons / Dining / Food Service		Qty.	Function	Floor Finish	Wall Finish	Ceiling Finish	Comfort & Health	Utilities
10.01	Kitchen	1	Activity Level	Epoxy Terrazzo	Concrete Masonry - Paint	High NRC Acoustical Panel	Natural Daylight	Water - Hot
10.02	Preparation/Warming Areas		Adaptability	Ceramic Tile	Abuse Resistant Drywall - Paint	Acoustical Panel - Washable	Lighting - Direct	Water - Cold
10.03	Dry Food Storage		Flexibility	Quarry Tile	Ceramic Tile - Full Height	Hard Surface - Moisture Resistant	Lighting - Indirect	General Exhaust Systems
10.04	Cooler/Freezer		Movable Wall - One Side	Monolithic Epoxy Quartz	Ceramic Tile - Wainscot	Exposed Structure - Paint	Lighting Control	Specialized Exhaust Systems
10.05	Ware Washing		Transparency	Resilient Sheet		Exposed Structure - Unpainted	Natural Ventilation	
10.06	Kitchen Manager Office		Access Control	Resilient Tile			Sound Isolation	
10.07	Restroom			Carpet Tile			Sound Absorption	
10.08	Lockers			Hardwood Strip				
10.09	Serving Area [minimum 4 serving lines]	4	Resilient - Athletic					
10.10	Commons / Dining [Seating for 600]	1	Colored Concrete					
10.11	Table & Chair Storage	1						
10.12	Staff Dining w/Vending	1						
10.13	School Store	1						
10.14	Club Areas	2						

11.0 Custodial / Building Services		Qty.	Function	Floor Finish	Wall Finish	Ceiling Finish	Comfort & Health	Utilities
11.01	Receiving/Storage	1	Activity Level		Concrete Masonry - Paint		Natural Daylight	Water - Hot
11.02	Maintenance/Repair Area	1	Adaptability		Abuse Resistant Drywall - Paint		Lighting - Direct	Water - Cold
11.03	Office/Planning/Meeting Area/Break Room	1	Flexibility		Ceramic Tile - Full Height		Lighting - Indirect	General Exhaust Systems
11.04	Locker Room/Toilets	2	Movable Wall - One Side		Ceramic Tile - Wainscot		Lighting Control	Specialized Exhaust Systems
11.05	Electrical Switchgear Room	1	Transparency				Natural Ventilation	
11.06	Water/ Sprinkler Riser Room	1	Access Control				Sound Isolation	
11.07	Mechanical Rooms [in grossing factor]						Sound Absorption	



# 8.5 Space Technology Systems Summary

**Key**

<input checked="" type="checkbox"/>	Include within Space
<input type="checkbox"/>	Indirect Access from Space

White Marker Board Surfaces
Tackable Surfaces
Student Work Display/ Storage
Wi-Fi with High Bandwidth
Hardwire Data/Video System
Digital Interactive Display System
Digital Display System w/ Casting
Projection System w/Sound
Assistive Listening System
Specialized Sound System
Telephone / Intercom
Intercom Speaker Only
Synchronized Clock System

3.0 Special Needs Community		Qty.	Display	Technology Systems												
3.01	Self-contained SE Classroom	2	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
3.02	Restroom/Shower	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.03	Multi-Use Special Needs Room	2	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
3.04	Conference Room	1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
3.05	Storage	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.06	Teacher Prep/Offices	1	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
3.07	Additional Offices	2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

4.0 Career & Technical Education		Qty.	Display	Technology Systems												
4.01	Culinary Arts Lab - Large	1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
4.02	Foods Demonstration Lab	1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
4.03	Experiential Labs [See Learning Communities]	12	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
4.04	- M&HSP Multidisciplinary Labs		<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
4.05	- Sports Medicine		<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
4.06	- Tech. Education [Engin'g, Tech Drawings, PLTW]		<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
4.07	- Business, Marketing & IT		<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
4.08	- Communications & Imaging		<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
4.09	- Entrepreneurship		<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
4.10	- NJROTC		<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
4.11	- Future Program Expansion		<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
4.12	T&CE Office Spaces	6	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

# 8.5 Space Technology Systems Summary

**Key**

<input checked="" type="checkbox"/>	Include within Space
<input type="checkbox"/>	Indirect Access from Space

White Marker Board Surfaces	Wi-Fi with High Bandwidth	Hardware Data/Video System	Digital Interactive Display System	Digital Display System w/ Casting	Projection System w/Sound	Assitive Listening System	Specialized Sound System	Telephone / Intercom	Intercom Speaker Only	Synchronized Clock System
Tackable Surfaces										
Student Work Display/ Storage										

<b>5.0</b>	<b>Visual Arts</b>	<b>Qty.</b>	Display	Technology Systems	Furniture, Fixtures & Equipment
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5.01	Art Lab	2	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	
5.02	Ceramics Lab	1	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	
5.03	Kiln Room	1	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
5.04	Storage	4	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
5.05	Digital Art Lab	1	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	
5.06	Darkroom	1	<input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
5.07	Office	1	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	

<b>6.0</b>	<b>Music / Performing Arts</b>	<b>Qty.</b>	Display	Technology Systems	Furniture, Fixtures & Equipment
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6.01	Choral Room	1	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	
6.02	Storage [Robes, Music]	1	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
6.03	Band Room	1	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	
6.04	Band Storage [Instruments, Music]	1	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
6.05	Band Storage [Uniforms]	1	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
6.06	Orchestra Room	1	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	
6.07	Orchestra Storage [Instruments, Music]	1	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
6.08	Music Tech / Keyboarding Lab	1	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	
6.09	Small Practice Room	4	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
6.10	Large Practice Room	1	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
6.11	Auditorium Seating [900 seats]	1	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
6.12	Control Booth	1	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
6.13	Auditorium Stage	1	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
6.14	Orchestra Pit [not recessed in floor]	1	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
6.15	Scene Shop	1	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
6.16	Make Up/Dressing	2	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
6.17	Storage [Costumes, Props]	1	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
6.18	Restrooms	2	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
6.19	Offices	3	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	

# 8.5 Space Technology Systems Summary

**Key**

●	Include within Space
○	Indirect Access from Space

White Marker Board Surfaces	Wi-Fi with High Bandwidth
Tackable Surfaces	Hardwire Data/Video System
Student Work Display/ Storage	Digital Interactive Display System
	Digital Display System w/ Casting
	Projection System w/Sound
	Assistive Listening System
	Specialized Sound System
	Telephone / Intercom
	Intercom Speaker Only
	Synchronized Clock System

## 7.0 Gymnasium / Physical Education

Qty.

Display	Technology Systems
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Item	Qty.	White Marker Board Surfaces	Tackable Surfaces	Student Work Display/ Storage	Wi-Fi with High Bandwidth	Hardwire Data/Video System	Digital Interactive Display System	Digital Display System w/ Casting	Projection System w/Sound	Assistive Listening System	Specialized Sound System	Telephone / Intercom	Intercom Speaker Only	Synchronized Clock System
7.01 Gymnasium - 3 full-size Basketball Courts	1	●			●	●				●	●	●		
7.02 Telescoping Bleachers Seating [2000 seats]														
7.03 Auxiliary Gym	1	●			●	●		●		●	●	●		
7.04 PE Storage	M													
7.05 Team Sports Storage	M													
7.06 PE Locker Rooms	2													
7.07 PE Showers/ Restrooms	2													
7.08 PE Office / Conference	2	●	●		●	●					●		●	
7.09 PE Staff Toilets / Showers	2													
7.10 Team Locker Rooms	2	●			●									
7.11 Team Showers / Restrooms	2													
7.12 Coaches Office / Conference	2	●	●		●	●					●		●	
7.13 Coaches Toilet / Shower	2													
7.14 Officials Locker Room/ Shower/ Toilet	1	●			●							●	●	
7.15 Fitness Area	1	●			●	●	●				●		●	
7.16 Wrestling Room	1	●			●	●					●		●	
7.17 Weight Room	1	●			●	●					●		●	
7.18 Training / Rehabilitation / Cardio Lab	1	●	●		●	●	●				●		●	
7.19 Laundry	1													
7.20 Health Classroom	3	●	●		●	●	●	●			●		●	
7.21 Concessions	1													
7.22 Athletic Director's Office	1	●	●		●	●					●		●	
7.23 Athletic Director's Storage	1													

# 8.5 Space Technology Systems Summary

**Key**

<input checked="" type="checkbox"/>	Include within Space
<input type="checkbox"/>	Indirect Access from Space

8.0 Library / Media Center		Qty.	White Marker Board Surfaces	Tackable Surfaces	Student Work Display/ Storage	Wi-Fi with High Bandwidth	Hardwire Data/Video System	Digital Interactive Display System	Digital Display System w/ Casting	Projection System w/Sound	Assitive Listening System	Specialized Sound System	Telephone / Intercom	Intercom Speaker Only	Synchronized Clock System
			Display	Technology Systems											
8.01	Reading Room / Circulation	1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
8.02	Large Collabs	2	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
8.03	Help Desk / Genius Bar	2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
8.04	Media Specialist Office	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
8.05	Workroom / Storage	2	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
8.06	MDF/ Telecommunications Room	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8.07	IDF Hub Rooms, distributed thru Bldg	10	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

# 8.5 Space Technology Systems Summary

**Key**

●	Include within Space
○	Indirect Access from Space

White Marker Board Surfaces	Technology Systems
Tackable Surfaces	
Student Work Display/ Storage	
Wi-Fi with High Bandwidth	
Hardwire Data/Video System	
Digital Interactive Display System	
Digital Display System w/ Casting	
Projection System w/Sound	
Assistive Listening System	
Specialized Sound System	
Telephone / Intercom	
Intercom Speaker Only	
Synchronized Clock System	

9.0	Welcome Center / Administration	Qty.	Display	Technology Systems
<b>Administration</b>				
9.01	Welcome / Reception	1		● ● ● ● ● ● ● ●
9.02	Secretarial Area	4		● ● ● ● ● ● ● ●
9.03	Principal's Office / Rest Room	1		● ● ● ● ● ● ● ●
9.04	Assistant Principal's Office	4		● ● ● ● ● ● ● ●
9.05	Conference Room	1	●	● ● ● ● ● ● ● ●
9.06	Mail/Copy Room	1	● ●	● ● ● ● ● ● ● ●
9.07	Storage	1		
9.08	Kitchenette	1	●	● ● ● ● ● ● ● ●
9.09	Staff Restrooms	2		
9.10	Resource Officer (Police)	1		● ● ● ● ● ● ● ●
9.11	School Security Office (4)	1		● ● ● ● ● ● ● ●
9.12	Bookkeeper	1		● ● ● ● ● ● ● ●
9.13	Data Technician	1		● ● ● ● ● ● ● ●
9.14	Access Office	1		● ● ● ● ● ● ● ●
9.15	Health Clinic	1	● ●	● ● ● ● ● ● ● ●
<b>Guidance</b>				
9.20	Career Center	1	●	● ● ● ● ● ● ● ●
9.21	Counselors' Offices	7		● ● ● ● ● ● ● ●
9.22	Secretarial Area	1		● ● ● ● ● ● ● ●
9.23	Student Record Storage	1		● ● ● ● ● ● ● ●
9.24	Conference Room	1	●	● ● ● ● ● ● ● ●
9.25	Staff Restrooms	2		
<b>Decentralized [See Support Communities]</b>				
9.30	School Improvement Specialist	1		● ● ● ● ● ● ● ●
9.31	Offices for Itinerant and Others	5		● ● ● ● ● ● ● ●

# 8.5 Space Technology Systems Summary

**Key**

<input checked="" type="checkbox"/>	Include within Space
<input type="checkbox"/>	Indirect Access from Space

White Marker Board Surfaces
Tackable Surfaces
Student Work Display/ Storage
Wi-Fi with High Bandwidth
Hardwire Data/Video System
Digital Interactive Display System
Digital Display System w/ Casting
Projection System w/Sound
Assistive Listening System
Specialized Sound System
Telephone / Intercom
Intercom Speaker Only
Synchronized Clock System

10.0	Commons / Dining / Food Service	Qty.	Display	Technology Systems
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Item	Qty.	White Marker Board Surfaces	Tackable Surfaces	Student Work Display/ Storage	Wi-Fi with High Bandwidth	Hardwire Data/Video System	Digital Interactive Display System	Digital Display System w/ Casting	Projection System w/Sound	Assistive Listening System	Specialized Sound System	Telephone / Intercom	Intercom Speaker Only	Synchronized Clock System
10.01 Kitchen														
10.02 Preparation/Warming Areas														
10.03 Dry Food Storage														
10.04 Cooler/Freezer														
10.05 Ware Washing	1													
10.06 Kitchen Manager Office							●	●				●		●
10.07 Restroom														
10.08 Lockers														
10.09 Serving Area [minimum 4 serving lines]	4						●							
10.10 Commons / Dining [Seating for 600]	1			●			●	●	●	●		●		●
10.11 Table & Chair Storage	1													
10.12 Staff Dining w/Vending	1	●					●	●	●				●	●
10.13 School Store	1	●		●			●	●	●			●		●
10.14 Club Areas	2	●	●	●			●	●	●				●	●

11.0	Custodial / Building Services	Qty.	Display	Technology Systems
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Item	Qty.	White Marker Board Surfaces	Tackable Surfaces	Student Work Display/ Storage	Wi-Fi with High Bandwidth	Hardwire Data/Video System	Digital Interactive Display System	Digital Display System w/ Casting	Projection System w/Sound	Assistive Listening System	Specialized Sound System	Telephone / Intercom	Intercom Speaker Only	Synchronized Clock System
11.01 Receiving/Storage	1	●					●	●						●
11.02 Maintenance/Repair Area	1	●					●	●						●
11.03 Office/Planning/Meeting Area/Break Room	1	●	●				●	●	●			●		●
11.04 Locker Room/Toilets	2													
11.05 Electrical Switchgear Room	1													
11.06 Water/ Sprinkler Riser Room	1													
11.07 Mechanical Rooms [in grossing factor]														

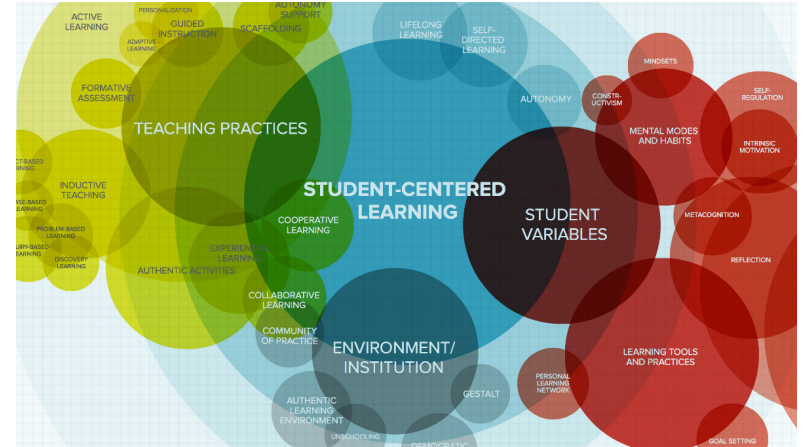


# 9.1 Planning Learning Communities

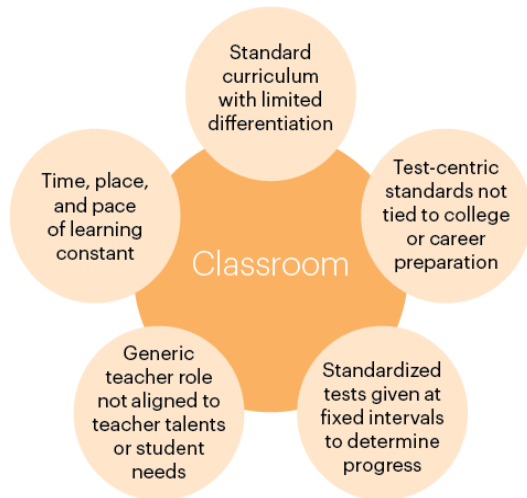
Student-centered approaches provide students with a variety of opportunities to learn and develop skills and competencies based on their individual needs. Organizational models such as grade-level teaming, schools-within-a-school, and thematic approaches often characterize these student-centered approaches.

“Best practices” might suggest that facilities be organized into learning community complexes, which are instructional units comprised of classroom spaces, student production spaces, and teacher preparation areas. “Best practices” might also suggest that double-loaded corridor designs cannot provide the flexibility necessary to accommodate multiple organizational models nor can they foster the same level of cooperation, teaming, and sharing of professional resources as learning community complex designs.

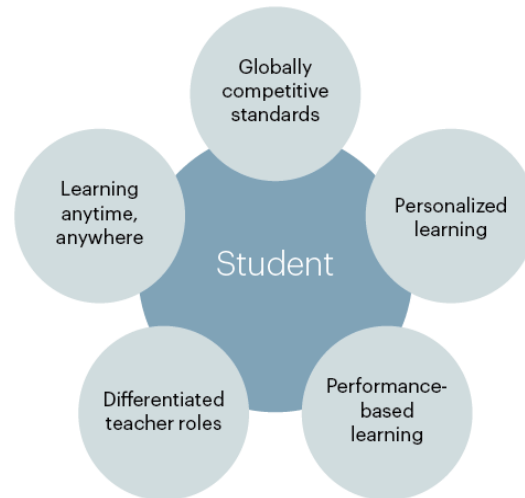
The building should consider adjacencies that promote both programmatic and space efficiencies. Blending of spaces for multiple use and multi-functioning circulation space for learning will contribute to the entire building as a teaching tool.



## Traditional classroom-centered model



## Student-centered mastery model



**Facilities Impact:** Implementing these organizational models, specifically the learning community complex concept, offers significant advantages to the delivery of curriculum and observation of students. While the impact implementing the learning community complex concept has on facilities is continually being evaluated in terms of major systems, it typically should not outweigh the educational advantages.

The facility, much like the classroom should be focused on student centered concepts that shift the model of the building shaping learning, to the exact opposite concept of the learning shaping the facility.

# 9.1 Planning Learning Communities

The learning community accommodates a variety of instructional strategies and student-grouping approaches. This concept also provides a learning environment that is characterized by flexibility and a sense of community for the students and teachers working in a safe/well-supervised environment. Teachers and facilitators will have the option and flexibility within a cluster to create and organize learning environments that work for students and their learning styles.

In Dr. David Thornburg's *Campfires in Cyberspace: Primordial Metaphors for Learning in the 21st Century* (2007) he states: "The existence of learning communities probably predates civilization. As we embark on our great adventure into the infosphere of cyberspace, we can find guideposts in the primordial ooze of consciousness."

These primordial metaphors set the foundation of how to think about space in the educational environment. How learning communities function from an educational perspective, driven by function and not form.

Learning communities consist of several space types and should provide for the concepts as described in Thornburg's concepts of Primordial Metaphors. This educational specification process, in consideration of Maury HS motto of "C.L.A.S.S.", has added a fifth dimension, the "mountain-top" to the metaphors by making the showing and sharing of what has been learned an important element of the life-long learning process.

The illustrations below describe the metaphors for how space types will be described and how learning communities are formed when these work in collaboration with one another.

## Metaphors for Primordial Learning Environments:



campfire

experts / storytellers

a place characterized by communication flowing from one to many, where everyone can focus on the person(s) talking or presenting



watering-hole

peers

a place for exchanging communication, typically placed in a location you would naturally move to or through; where people gather in groups of varies sizes and times, and where you might bump into someone



cave

oneself

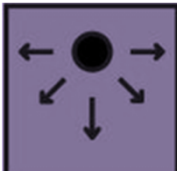
a place for individual study, quiet reflection, to explore questions, make connections and experience creative flow; a place where communication flows within oneself, requiring a physical frame that promotes seclusion



life

real world

a place that encourages immersive student-centered hands-on real-world learning experiences where students can apply what they have learned and create meaning



mountain-top

showing & sharing

a place where one person or a small group communicates towards the rest of the world, showing what she, he or they can do with what has been learned

# 9.1 Planning Learning Communities

The metaphors of space can be interpreted into terms that are commonly used in today's facilities vernacular. The following diagram bridges the most commonly used terms of space types to the metaphorical learning space interpretations.

Reading forward for each of the programmatic areas, each of these metaphors will be combined to create the learning spaces most suited for those particular programs. Combined even further begin to shape into learning communities and even further into a student centered educational facility.



campfire



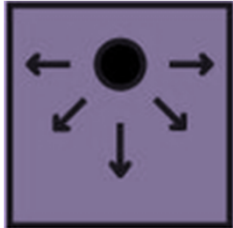
watering- hole



cave



life



mountain-top  
showing &  
sharing

learning  
from:

experts /  
storytellers

peers

oneself

real world

present space  
pitch platform

e  
x  
a  
m  
p  
l  
e  
s

classroom  
lecture room  
**learning studio**  
Theater  
**learning lab**  
schola

conference  
breakout  
**collab**  
café / coffee  
project room  
small group area  
**sticky space**  
3<sup>rd</sup> space

study carrel  
quiet space  
**pod**

project lab  
STE(A)M lab  
CTE lab  
maker-space  
multi-discipline lab  
**learning lab**  
wet lab  
**experiential lab**  
sandbox  
holodeck  
workplace  
community

shark tank  
**gallery**  
display  
**share space**

# 9.1 Planning Learning Communities

## Metaphors for Learning Resources:

Within the learning spaces and connective/circulation spaces that are developed to create learning communities, there are functional components that should be provided to support learning and teaching. These learning resource components can work independently of each other, but are more often used in combination to supplement the space and provide the learning environments that are most effective for the educational programs being offered.

By overlaying these components with the metaphorical / program space types, the picture of space is completed for a design professional to apply.



toolbox

a condensed organized unit containing teaching and learning supplies and/or raw materials for making; can be fixed or mobile



genius bar

a technology rich help-station where students can plug in, print, and peer tutor; typically placed in a location you would naturally move to or through



water

provide access to cold and hot water and drainage to support learning processes and clean-up in types and quantities appropriate to the context



student storage

provide a variety of student storage types, sizes and locations that facilitate just-in-time storage solutions versus storage-as-a-hub solution; integrate with work-surface space and charging stations

## Prototyping Learning Spaces:

*Over the next 12 pages we will begin to assemble our Learning Space Prototypes from these Metaphors for Learning Environments, and these Learning Space Prototypes will in turn be assembled into Prototypical Learning Community Organizational Models.*

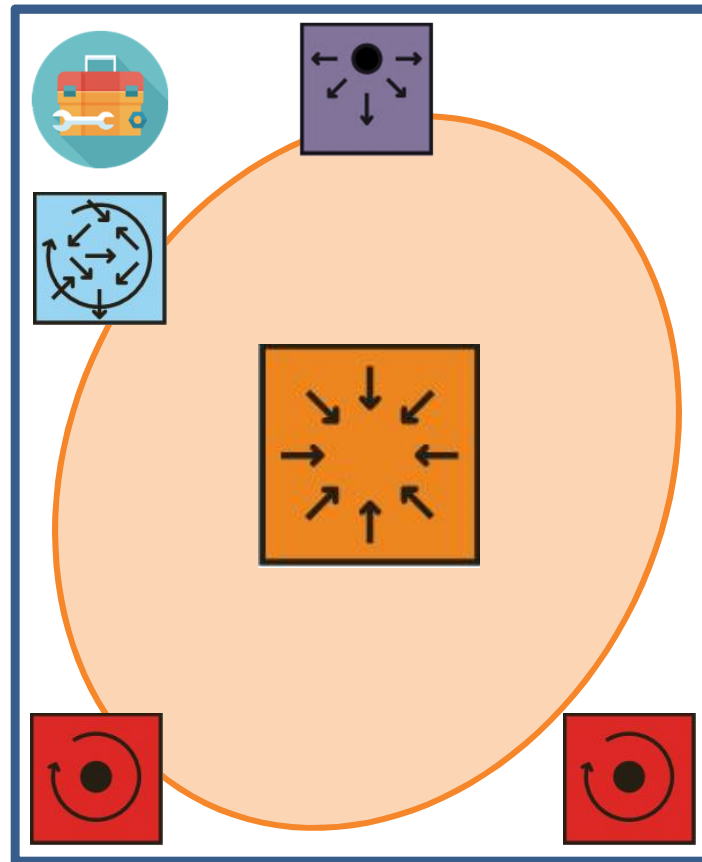
# 9.2 Learning Community Space Prototypes

## Learning Studio

Core Learning

# of people **20-30**

FUNCTION	core learning
ACTIVITY LEVELS	low to moderate
FLEXIBILITY	high
FURNISHINGS	movable tables movable chairs soft seating movable storage
TECHNOLOGY	white boards WiFi display w/casting
LEARNING RESOURCES	toolbox [mobile]



# 9.2 Learning Community Space Prototypes

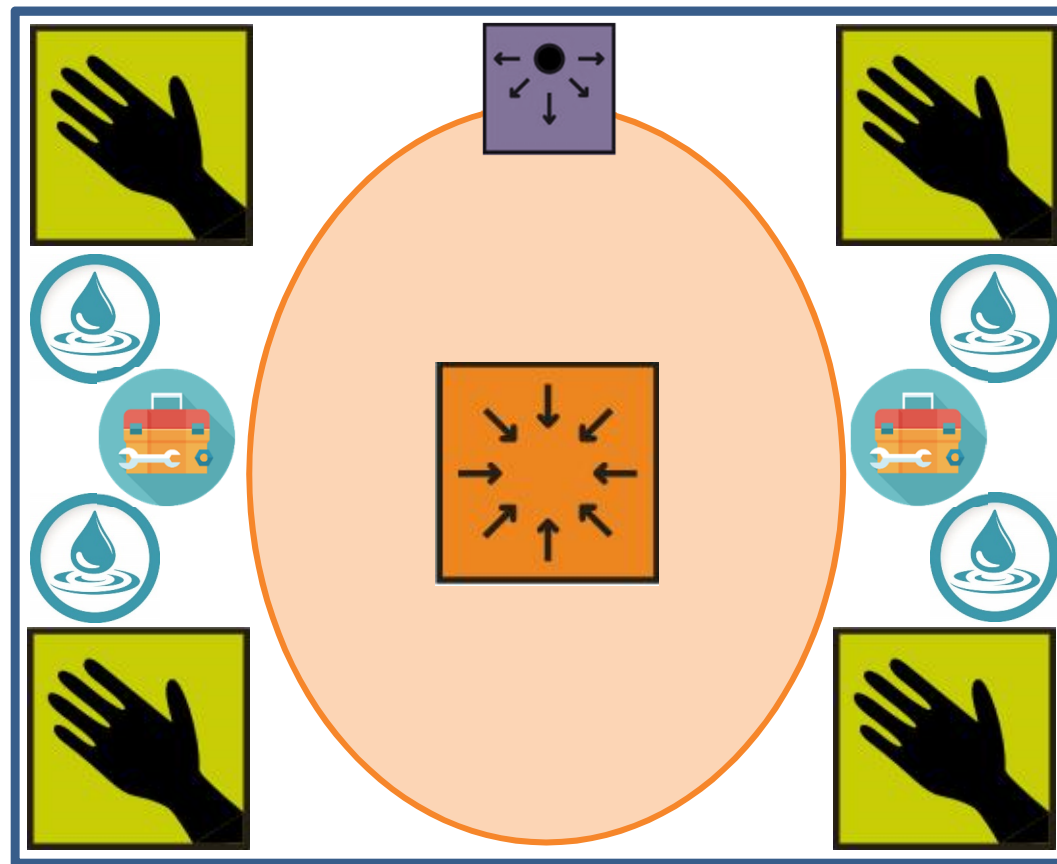
## Learning Lab

# of people **20-24**

Core Learning

Experiential Learning

FUNCTION	core learning experiential
ACTIVITY LEVELS	passive to moderate
FLEXIBILITY	medium
FURNISHINGS	movable tables movable chairs movable storage fixed storage
TECHNOLOGY	white boards WiFi display w/casting
LEARNING RESOURCES	toolbox [fixed] water



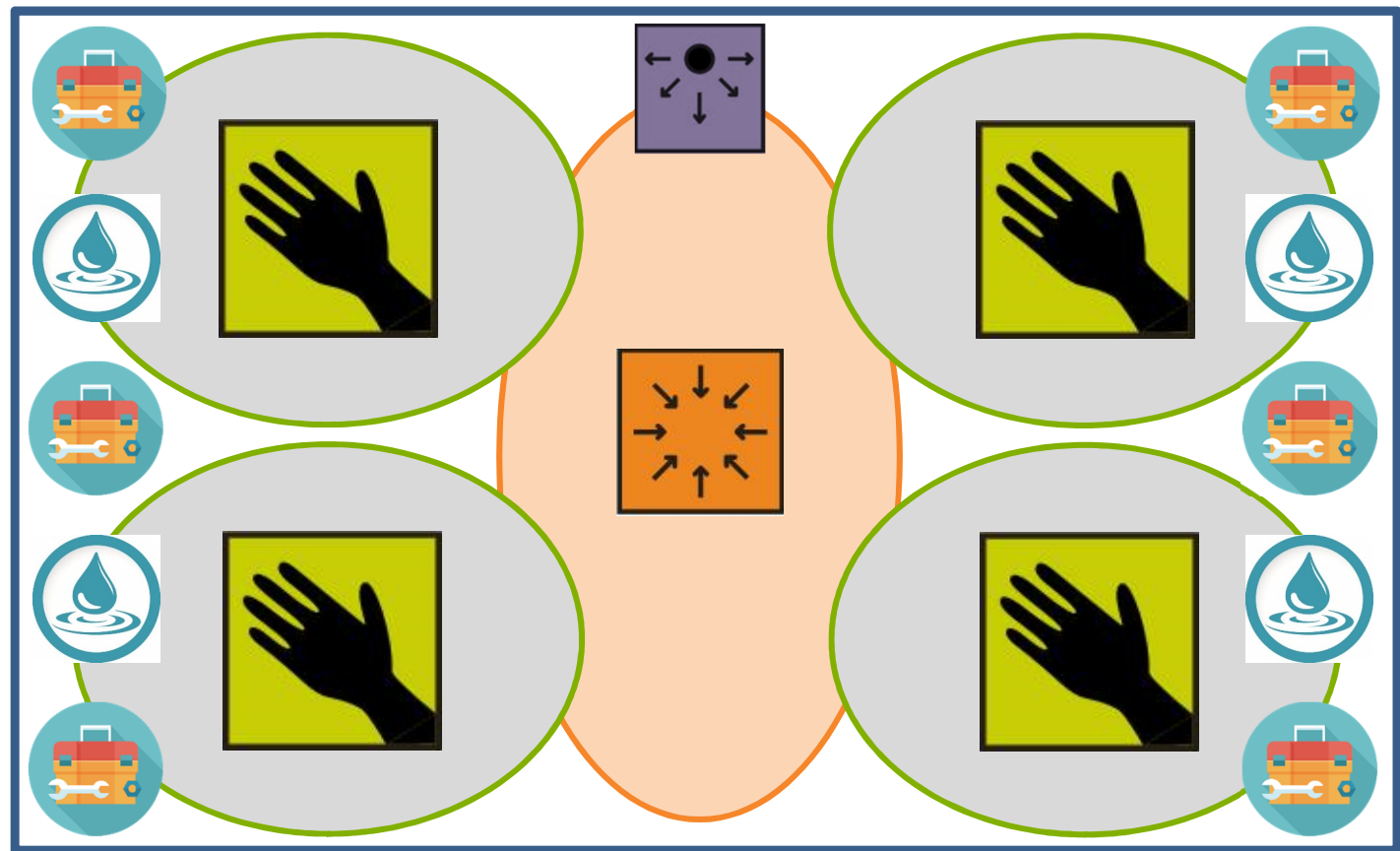
# 9.2 Learning Community Space Prototypes

## Experiential Lab

Experiential Learning

# of people **20-24**

FUNCTION	exploratory experiential
ACTIVITY LEVELS	moderate to high
FLEXIBILITY	medium
FURNISHINGS	movable tables fixed tables movable chairs movable storage fixed storage
TECHNOLOGY	white boards WiFi display w/casting
LEARNING RESOURCES	toolbox [fixed] toolbox [mobile] water

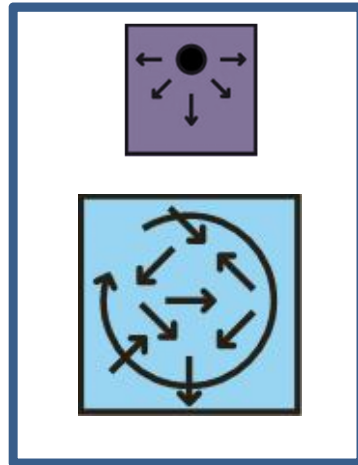


# 9.2 Learning Community Space Prototypes

## Collab

# of people **6-8**

FUNCTION	collaboration group project demonstration
ACTIVITY LEVELS	low to moderate
FLEXIBILITY	medium
FURNISHINGS	movable tables movable chairs movable storage
TECHNOLOGY	white boards WiFi display w/casting
LEARNING RESOURCES	toolbox [mobile]

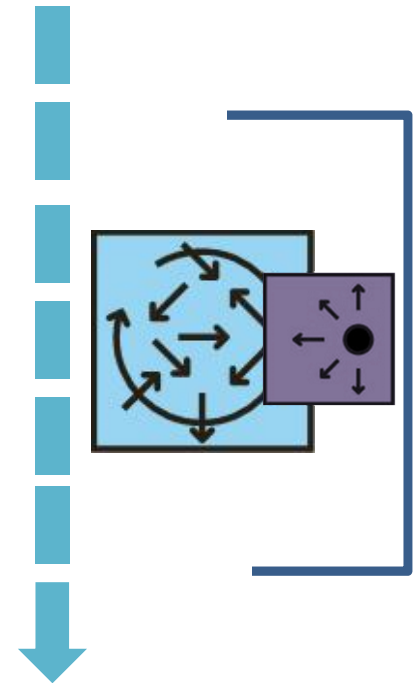


## Sticky Space

# of people **6-12**

FUNCTION	collaboration group project demonstration
ACTIVITY LEVELS	moderate
FLEXIBILITY	medium
FURNISHINGS	movable tables movable chairs fixed storage
TECHNOLOGY	white boards WiFi display w/casting
LEARNING RESOURCES	toolbox [mobile]

## Collaboration

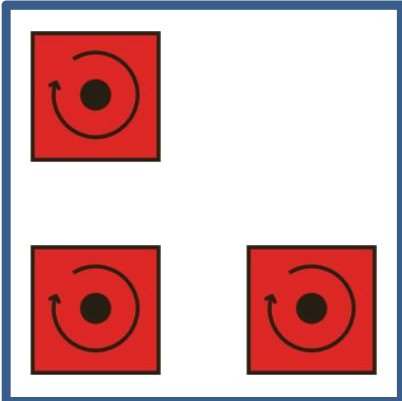
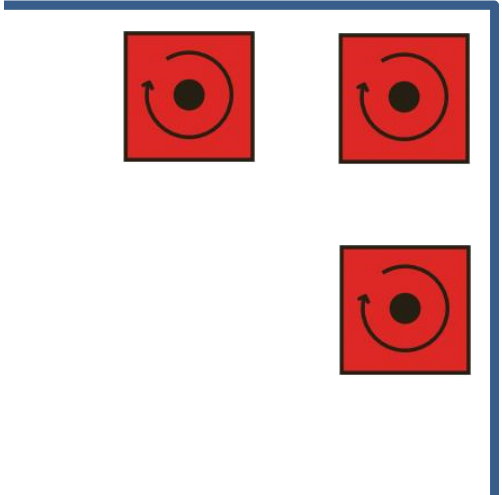



# 9.2 Learning Community Space Prototypes

## Pod

Individual Learning / Reflection / Collaboration

# of people **1-3**

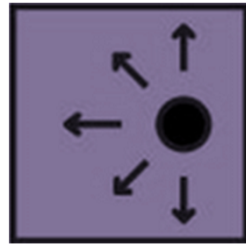
FUNCTION	individual study small group collaboration		
ACTIVITY LEVELS	low		
FLEXIBILITY	medium		
FURNISHINGS	soft seating		
TECHNOLOGY	WiFi display w/casting		
LEARNING RESOURCES			

# 9.2 Learning Community Space Prototypes

## Share Space

# of people **4-30**

FUNCTION	demonstration presentation
ACTIVITY LEVELS	low to moderate
FLEXIBILITY	medium
FURNISHINGS	movable tables movable chairs movable storage
TECHNOLOGY	white boards WiFi display w/casting
LEARNING RESOURCES	

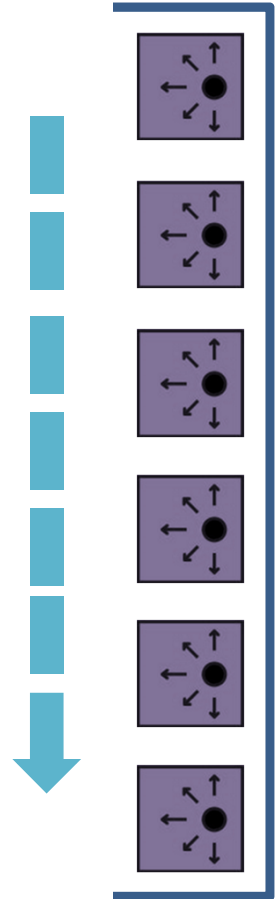


## Gallery

# of people **unlimited**

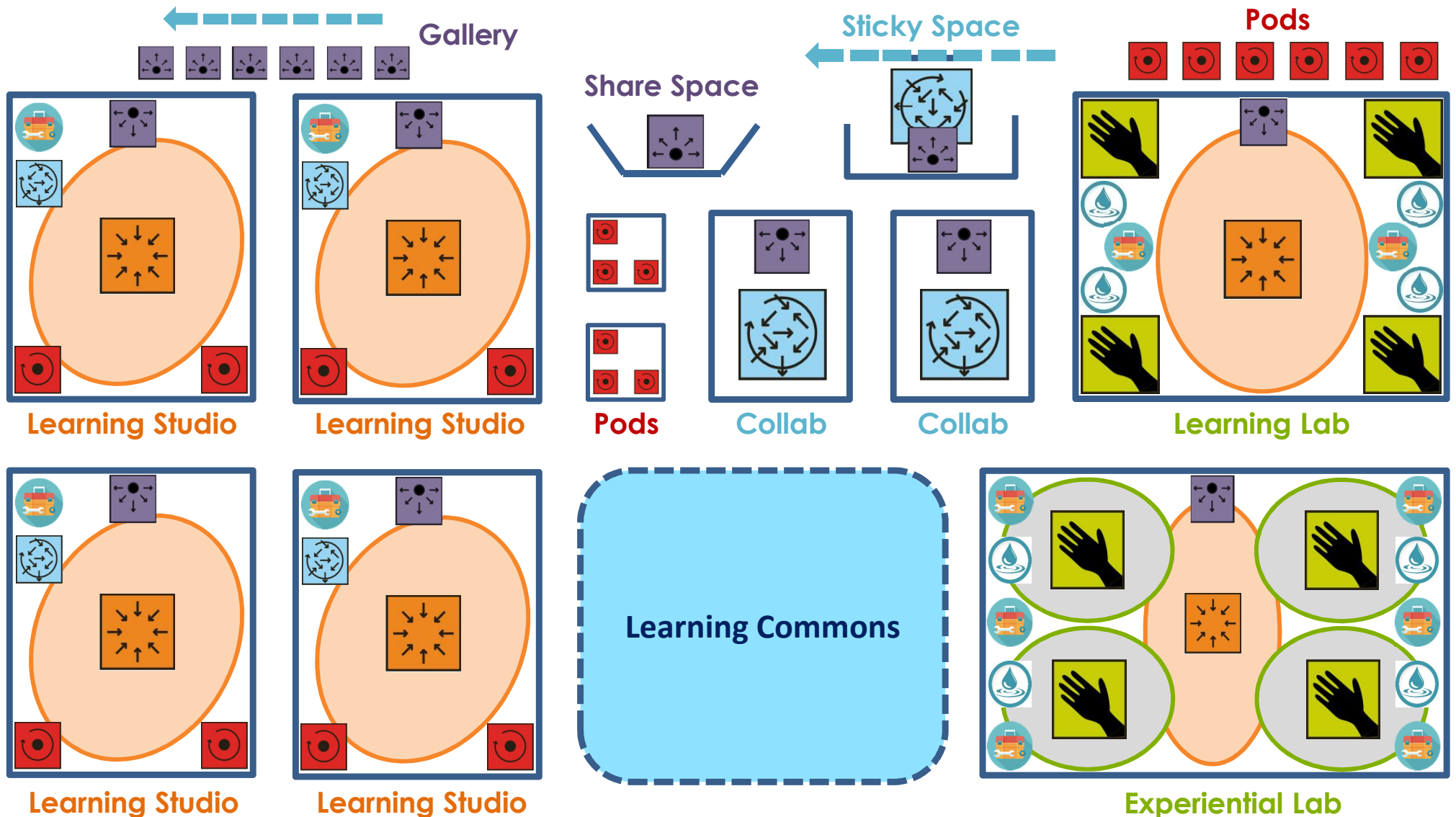
Showing / Sharing

FUNCTION	display
ACTIVITY LEVELS	moderate
FLEXIBILITY	medium
FURNISHINGS	display systems movable chairs
TECHNOLOGY	
LEARNING RESOURCES	



# 9.3 Learning Community Organizational Models

One 140 Student Learning Community =



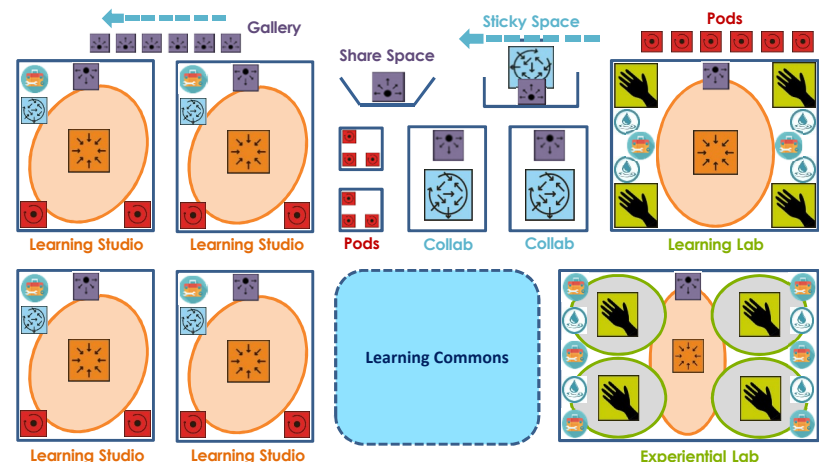
# 9.3 Learning Community Organizational Models

1.0 Learning Communities x 12		Recommended 1889 Student Program			
		Quantity	TS	SF	Total
1.01	Learning Studio	4	4	750	3,000
1.02	Learning Lab [Science, M&HSP]	1	1	1,125	1,125
1.03	Experiential Lab [TS counted in C&TE]	1	0	1,500	1,500
1.04	Lab Storage	2		200	400
1.05	Collab [Breakout]	2		250	500
1.06	Pod	2		75	150
1.07	Learning Commons [Flex Space]	1		825	825
1.08	Toolbox [included in Learning Commons]	1		0	0
1.09	Genius Bar [included in Learning Commons]	1		0	0
1.10	Pod [included in Learning Commons]	6		0	0
1.11	Student Storage [included in Learning Commons]	1		0	0
<b>Net Space Subtotal</b>			<b>5</b>		<b>7,500</b>
<b>Number of Learning Communities</b>				<b>x</b>	<b>12</b>
<b>Learning Communities Net Area Subtotal</b>			<b>60</b>		<b>90,000</b>

2.0 Support Communities x 6		Recommended 1889 Student Program			
		Quantity	TS	SF	Total
2.01	Flex Resource Room [Remediation, Special Needs]	2		375	750
2.02	Conference Room	1		250	250
2.03	Admin Office [Decentralized]	1		150	150
2.04	Teacher Planning Space	1		750	750
2.05	Instructional Material Storage	1		150	150
2.06	Work/ Copy	1		300	300
2.07	Staff Restrooms	2		50	100
2.08	Student Restroom [Male / Female]	2		200	400
<b>Net Space Subtotal</b>					<b>2,850</b>
<b>Number of Support Community Connectors</b>				<b>x</b>	<b>6</b>
<b>Support Communities Net Area Subtotal</b>					<b>17,100</b>

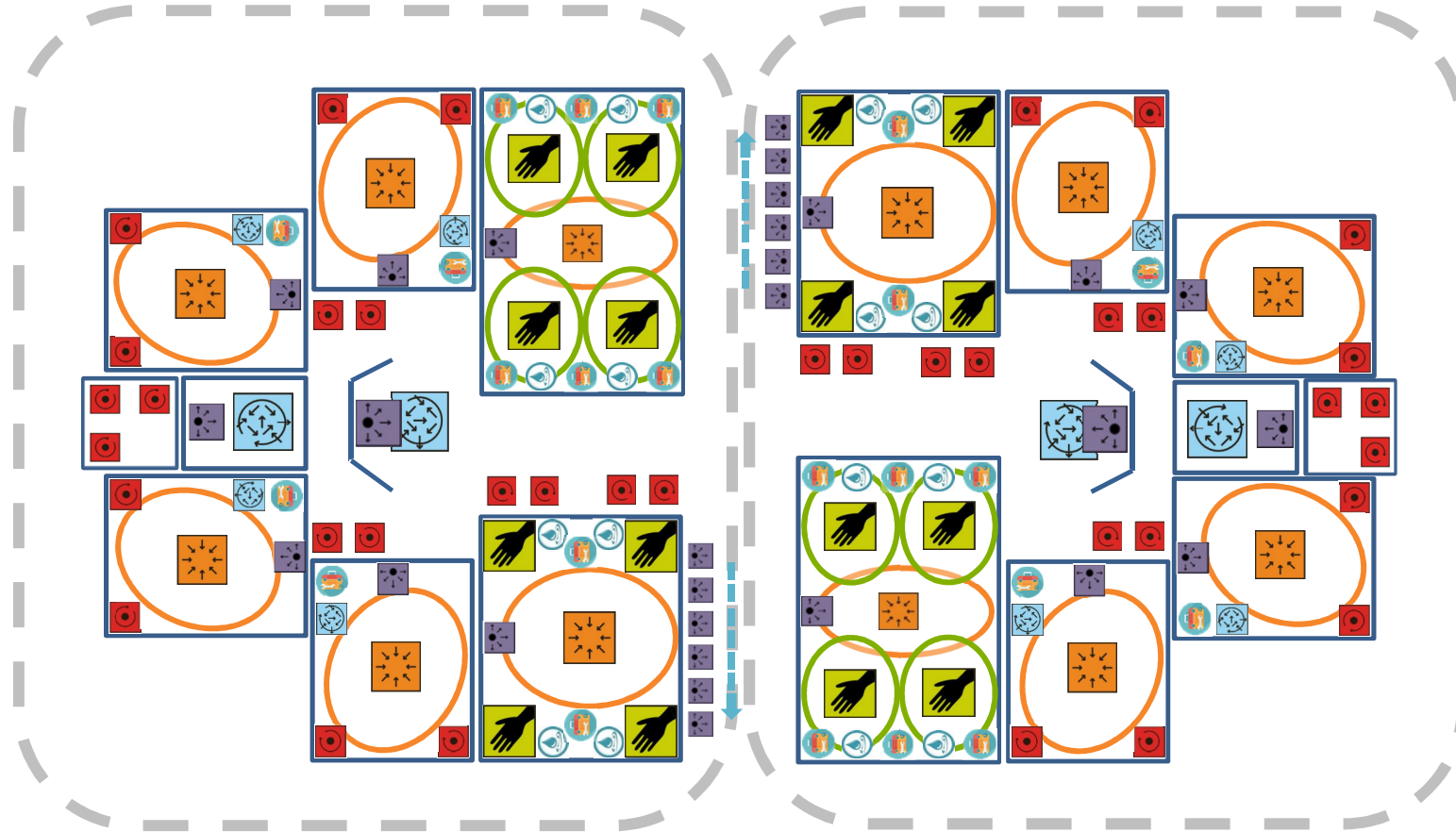
## Applicable Prototype Spaces

One 140 Student Learning Community =



# 9.3 Learning Community Organizational Models

LC  
140  
Students

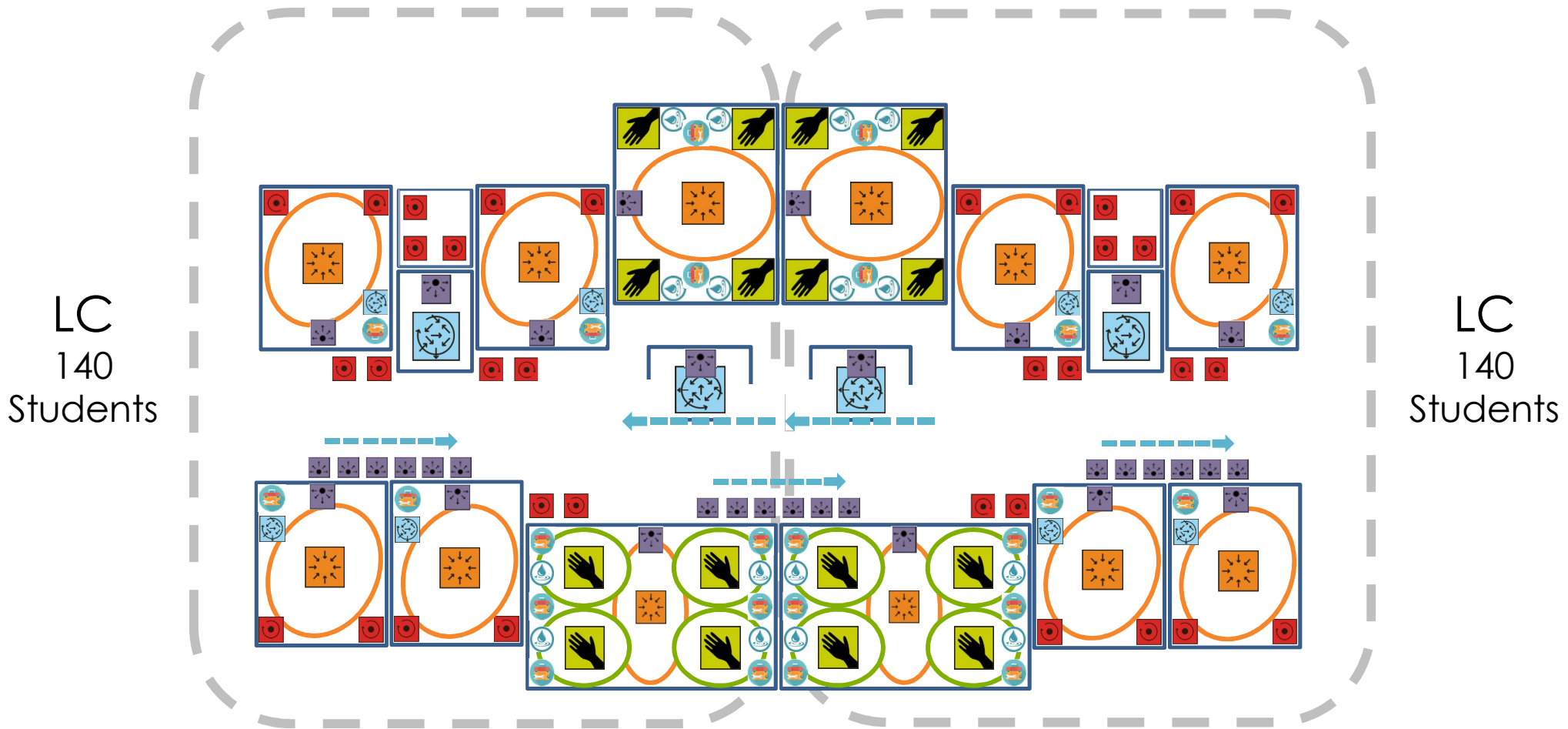


LC  
140  
Students

LC 140 x 2 = 280 Students

12 LC 140s or 6 LC 280s = 1,680 Students x .85 = 1,428 Optimal Student Capacity

# 9.3 Learning Community Organizational Models

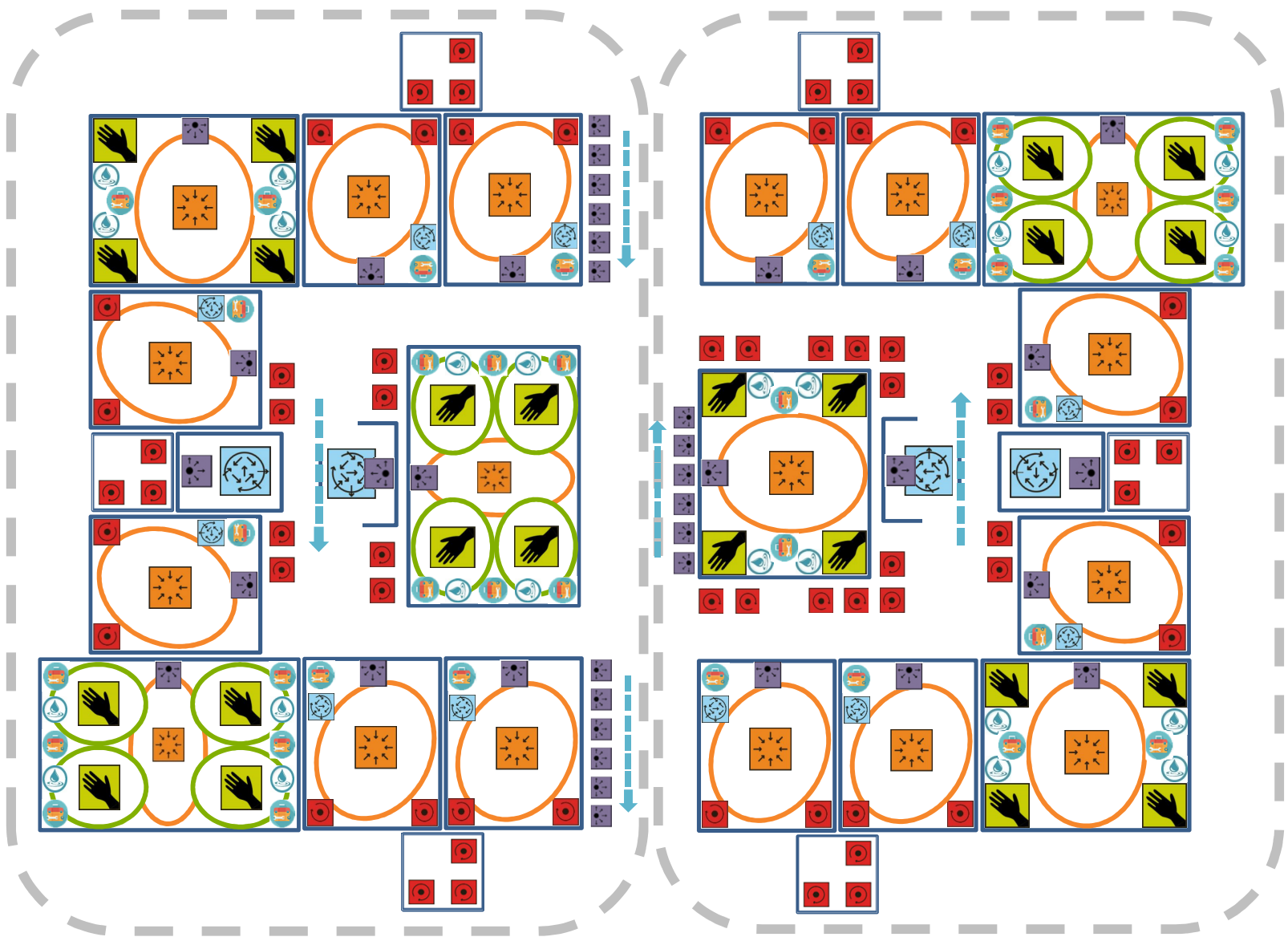


LC 140 x 2 = 280 Students

12 LC 140s or 6 LC 280s = 1,680 Students x .85 = 1,428 Optimal Student Capacity

# 9.3 Learning Community Organizational Models

LC  
210  
Students



LC  
210  
Students

LC 210 x 2 = 420 Students

8 LC 210s or 4 LC 420s = 1,680 Students x .85 = 1,428 Optimal Student Capacity

# 9.3 Learning Community Organizational Models

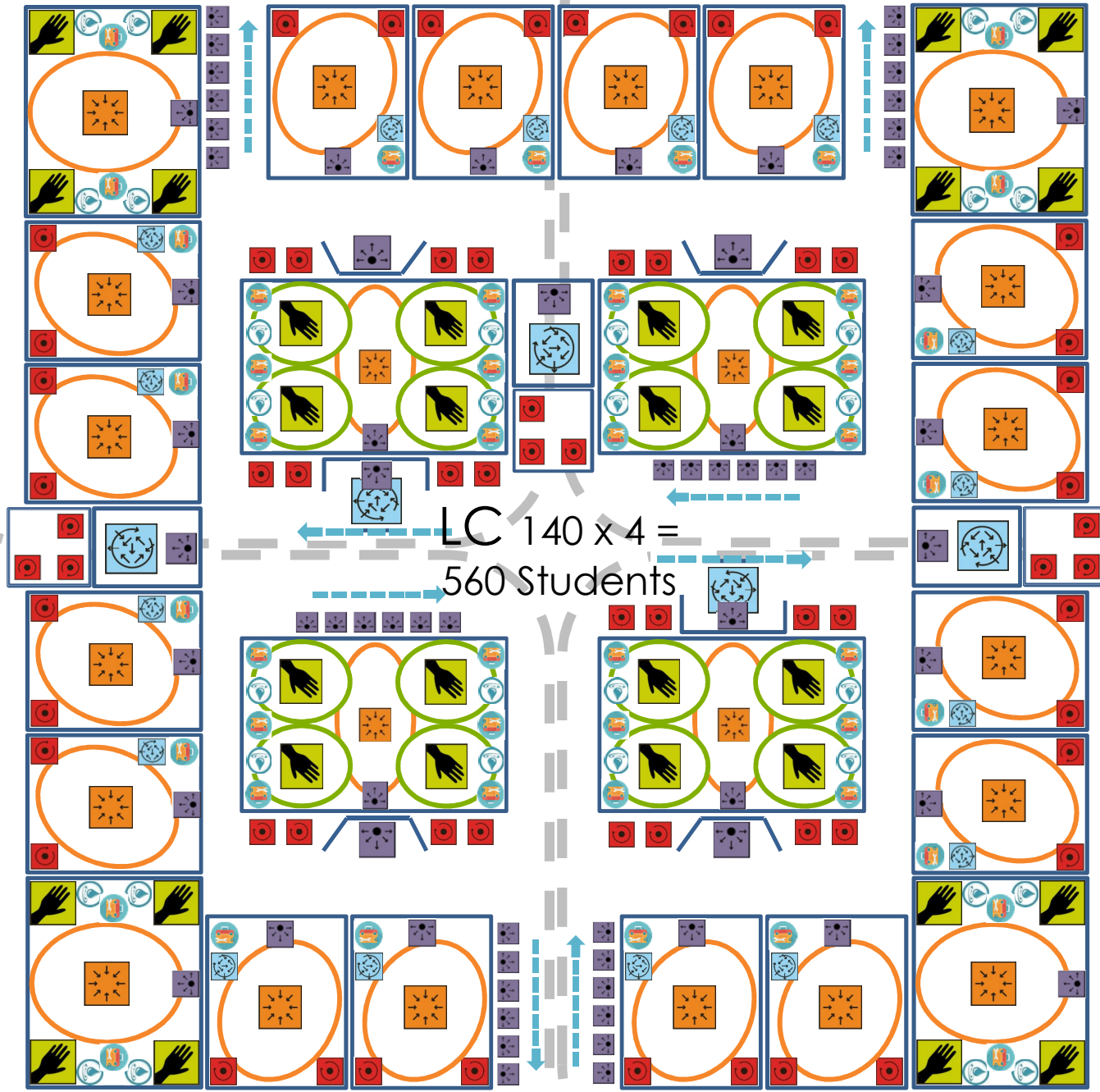
LC  
140  
Students

3 LC 560s =  
1,680 Students  
x .85 = 1,428  
Optimal  
Student  
Capacity

LC  
140  
Students

LC  
140  
Students

LC  
140  
Students



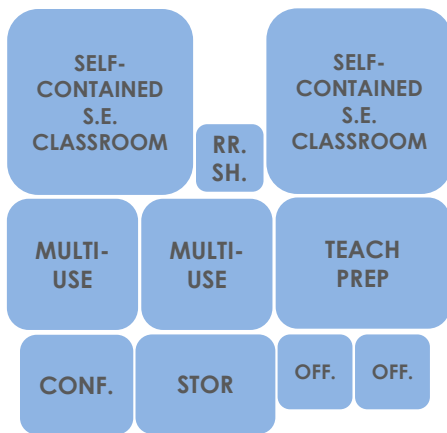
LC 140 x 4 =  
560 Students

# 9.4 Special Needs Community

To ensure that students with special needs are integrated into the high school, it is important to provide various types of learning environments to best their needs. A learning community for special needs students will be developed for students who benefit by learning in self contained classrooms.

Special education space should also provide space for special needs teacher offices, a teacher prep area, conference room, restrooms, a shower, and related support services such as speech therapy. Resource rooms should also be located within each of the Core Academic Learning Communities for students to have access for small group learning and assistance. The core classrooms will also provide inclusion for students within each learning community.

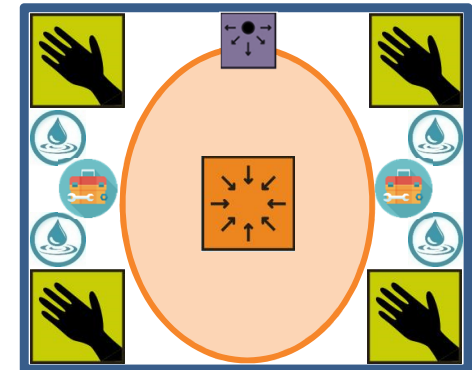
3.0 Special Needs Community		Recommended 1889 Student Program			
		Quantity	TS	SF	Total
3.01	Self-contained SE Classroom	2	2	750	1,500
3.02	Restroom/Shower	1		100	100
3.03	Multi-Use Special Needs Room	2		375	750
3.04	Conference Room	1		200	200
3.05	Storage	1		300	300
3.06	Teacher Prep/Offices	1		500	500
3.07	Additional Offices	2		120	240
<b>Special Needs Net Area Subtotal</b>			<b>2</b>		<b>3,590</b>



## Applicable Prototype Spaces

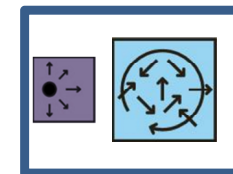
### Learning Lab

# of people **8-10**



### Collab

# of people **3-4**



### Pod



# 9.5 Career & Technical Education

The World Economic Forum (in consultation with the Boston Consulting Group, January 2018) published a report titled *Towards a Reskilling Revolution; A Future of Jobs for All*. This report focuses on scenarios for what the future of work might look like by the year 2030 and what the key implications are for actions today. Not surprisingly, the need to anticipate changes in the labor market, giving workers the skills and capabilities needed for future workplace, and support of job transitions emerge as prominent priorities.

As the types of skills needed in the labor market change rapidly, individual workers will have to engage in life-long learning if they are to remain not just employable but are to achieve fulfilling and rewarding careers that allow them to maximize their employment opportunities. For companies, reskilling and upskilling strategies will be critical if they are to find the talent they need and to contribute to socially responsible approaches to the future of work.

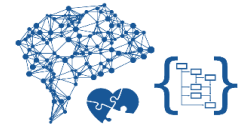
## Top 10 Skills Future Employers will be looking for:

in 2020

1. Complex Problem Solving
2. Critical Thinking
3. Creativity
4. People Management
5. Coordinating with Others
6. Emotional Intelligence
7. Judgment and Decision Making
8. Service Orientation
9. Negotiation
10. Cognitive Flexibility

in 2015

1. Complex Problem Solving
2. Coordinating with Others
3. People Management
4. Critical Thinking
5. Negotiation
6. Quality Control
7. Service Orientation
8. Judgment and Decision Making
9. Active Listening
10. Creativity

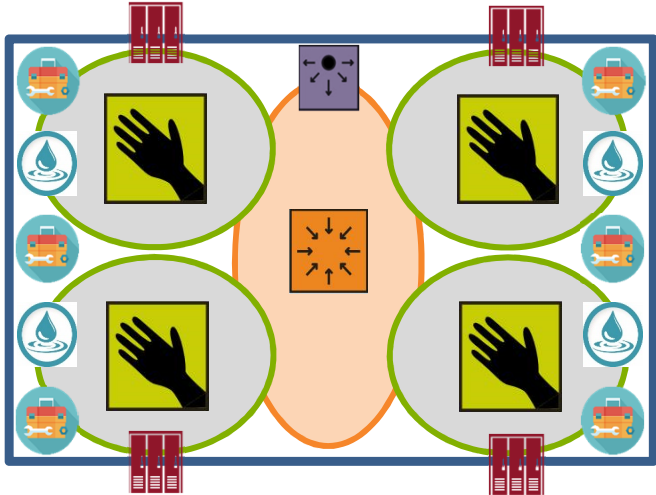


Source: Future of Jobs Report, World Economic Forum

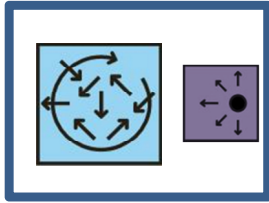
## Applicable Prototype Spaces

### Experiential Lab

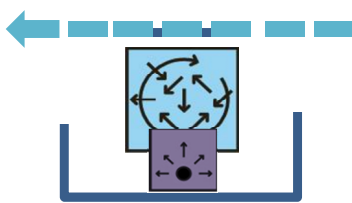
# of people **20-24**



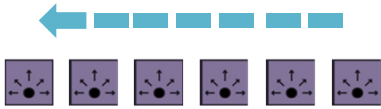
### Collab



### Sticky Space



### Gallery

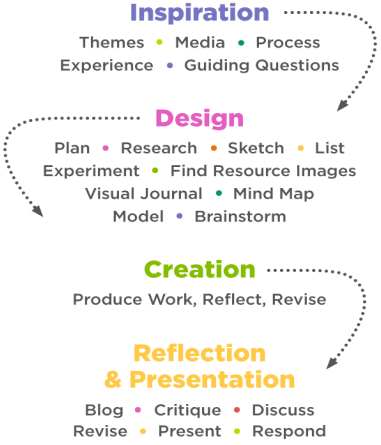


# 9.5 Career & Technical Education

Re-Imagined Maury High School will include a component of Career and Technical space that will support the rapidly changing and growing needs for career pathways for all students. These spaces should provide adaptability and flexibility that allows for multiple programming models as well as a variety of teaching and learning pedagogies.

4.0 Career & Technical Education		Recommended 1889 Student Program			
		Quantity	TS	SF	Total
4.01	Culinary Arts Lab - Large	1	1	1,800	1,800
4.02	Foods Demonstration Lab	1	1	1,200	1,200
4.03	Experiential Labs [See Learning Communities]	12	12	0	0
4.04	- M&HSP Multidisciplinary Labs				
4.05	- Sports Medicine				
4.06	- Tech. Education [Engin'g, Tech Drawings, PLTW]				
4.07	- Business, Marketing & IT				
4.08	- Communications & Imaging				
4.09	- Entrepreneurship				
4.10	- NJROTC				
4.11	- Future Program Expansion				
4.12	T&CE Office Spaces	6		350	2,100
<b>Career &amp; Technical Education Net Area Subtotal</b>			<b>14</b>		<b>5,100</b>

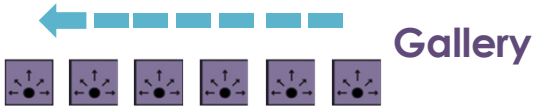
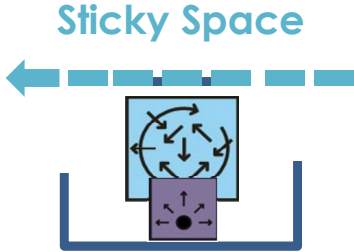
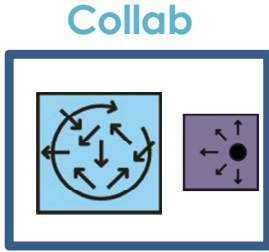
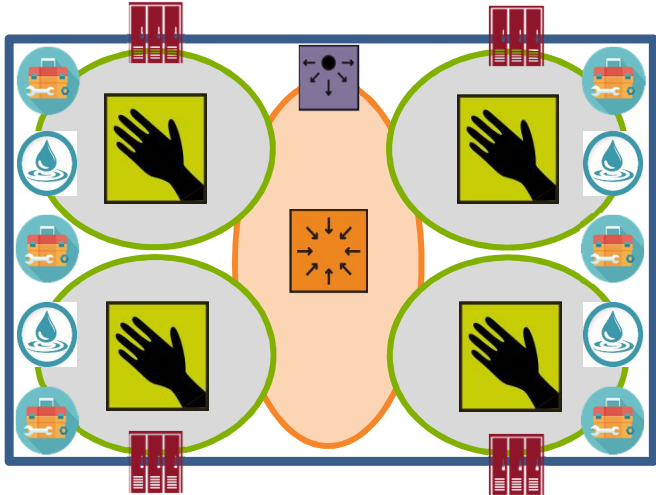
## DESIGN PROCESS THINKING



## Applicable Prototype Spaces

### Experiential Lab

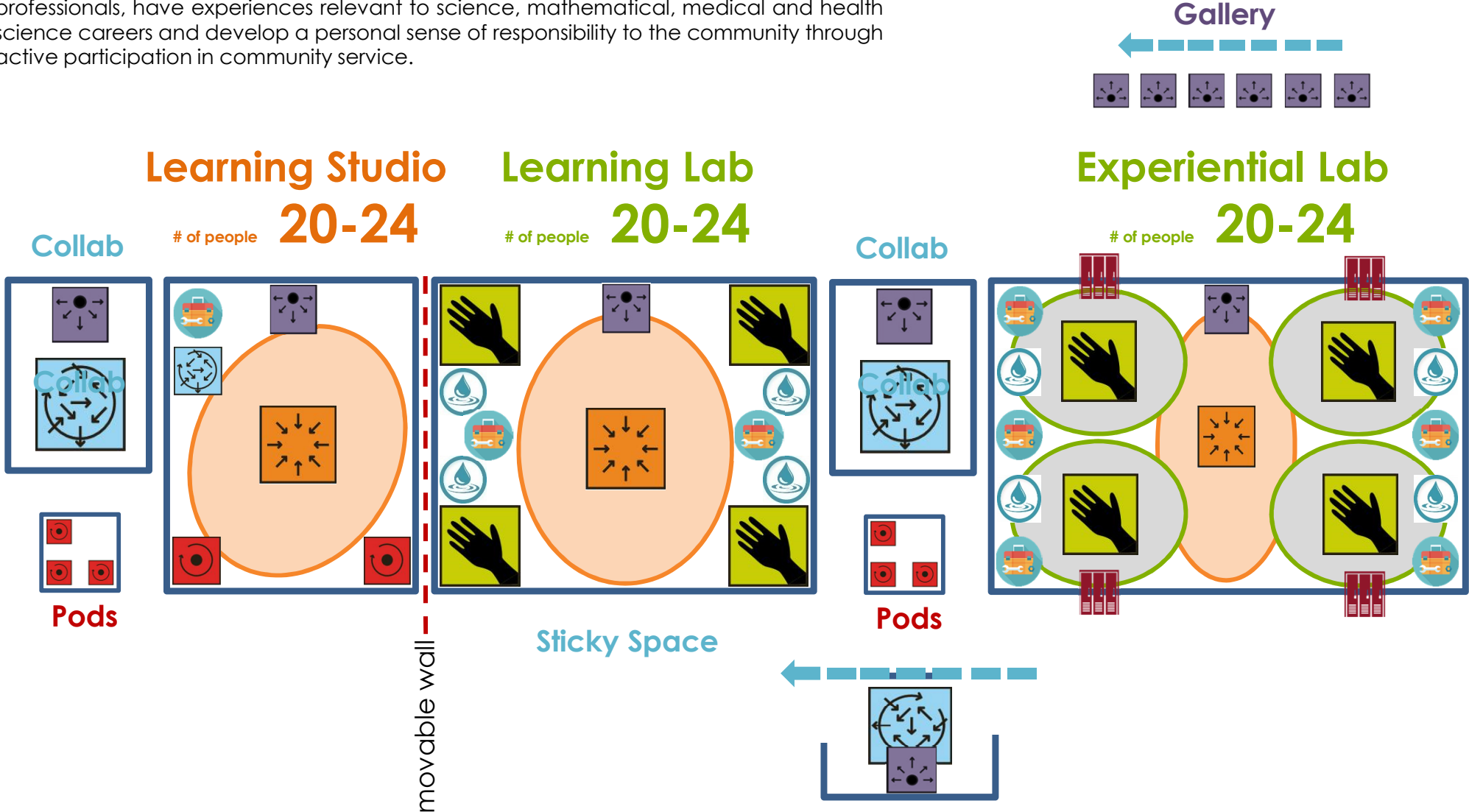
# of people **20-24**



# 9.6 Medical & Health Specialties Program

The goals of the Medical & Health Specialties Program are to provide a program of challenging high school science courses that emphasize medical applications. Through this coursework, students have opportunities to work with specialized equipment and resources, identify and pursue research through collaboration with practicing professionals, have experiences relevant to science, mathematical, medical and health science careers and develop a personal sense of responsibility to the community through active participation in community service.

## Applicable Prototype Spaces



## 9.6 Medical & Health Specialties Program

### **COURSE DESCRIPTIONS:**

There are several key classes which make up the curriculum for the Medical and Health Specialties Program: BioMed; ChemMed; Anatomy and Physiology and Accelerated Health and Physical Education 9. Each of these classes will have medical applications enriching the basic curriculum. Specific course descriptions are listed below. Seniors will be required to select one of three possible classes as their core class for the senior year: BioEthics; Forensic Science or Sports Medicine.

**ACCELERATED HEALTH & PE 9: FRESHMEN:** All ninth grade MHSP students are required to take the specially designed Accelerated Health component integrated into PE 9. Essentially, this course is an introduction to anatomy and will provide students an overview of the human body. Special focus will include medical applications as they pertain to the human body systems, including the integumentary system, the cardiovascular system, the respiratory system, the skeletal system, the muscular system and the reproductive system. Specific diseases, conditions and treatments as they relate to each of these areas will be covered. Varied enrichment opportunities will enhance the career awareness of the students.

**BIOLOGY w/MEDICAL APPLICATIONS: FRESHMEN:** This course is the first in the sequence of required science classes. Included in the curriculum will be cell theory, bio-chemical processes, scientific investigations and the study of life functions including theories of evolution and natural selection. Specially designed mini-labs will focus on special sense and body systems. Speakers, field trips and peer mentoring will support the curriculum.

**CHEMISTRY w/ MEDICAL APPLICATIONS: SOPHOMORES:** The study of chemistry will take on greater importance to the students in the MHSP as they explore in depth the intermingling between science and medicine. An introduction to the chemical basis of medications, chemical interactions within the body such as ion levels, issues of solubility in relationship to tooth decay as well as reaction rates as they related to body temperature and organic chemistry are but a few of the applications to be explored. Students will have specially arranged field trips to observe surgical procedures, clinical settings and specific lab techniques in practice.

**ANATOMY PHYSIOLOGY: JUNIORS:** Building upon the introduction to anatomy in the accelerated health & PE class, this human anatomy and physiology class will provide a comprehensive, year-long examination encompassing topics covered in all prior MHSP science courses. Students will have an in-depth study of each body systems, including: anatomical structure, skeletal physiology as related to the muscular system; the sensory system, the endocrine, circulatory, lymphatic, immune, digestive, urogenital and respiratory systems as well as homeostasis, diagnostics, scientific terminology and development. Students will attend classes held in the labs of the **Eastern Virginia Medical School** and have unique learning experiences including working in the cadaver lab and clinical rotations.

**BIOETHICS: SENIORS:** Students will study ethical issues as they apply to fields such as health care, medical science and medical technologies. Students will be asked to justify and/or refute answers to difficult ethical questions related to topics such as, but not limited to, human cloning, medical research, organ recipients, euthanasia, etc. Students will be given an in-depth look at moral philosophy as it relates to medical, scientific, technological and legal fields.

**FORENSIC SCIENCE: SENIORS:** This course presents the scientific principles, laboratory and field methods forensic scientists use to solve problems. Students will take on the various roles of crime scene investigator, scientist and medical examiner in order to collect and evaluate evidence in a problem-solving environment. Topics include DNA technology and its uses, toxicology, anthropology, entomology, evidence law, criminalities and career opportunities.

**SPORTS MEDICINE: SENIORS:** This course is designed to introduce the student to the field of sports medicine. Students will look at issues associated with athletic training and sports medicine; focus on anatomy, recognition and treatment of various injuries and conditions related to the athlete. Labs will introduce the student to hands-on evaluation and treatment of injuries.

**EMERGENCY MEDICAL RESPONDER: SENIORS:** Specifically geared for students who have an interest in pursuing studies in a health or medical related career, the Commonwealth of Virginia EMS Emergency Medical Responder (EMR) curriculum will be taught in this class. Lectures, group-work, projects, practical lab work and other activities will prepare students to sit for two exams; students who successfully complete the course and pass these exams will be awarded national and state level certification in EMR.

# 9.7 Visual Arts

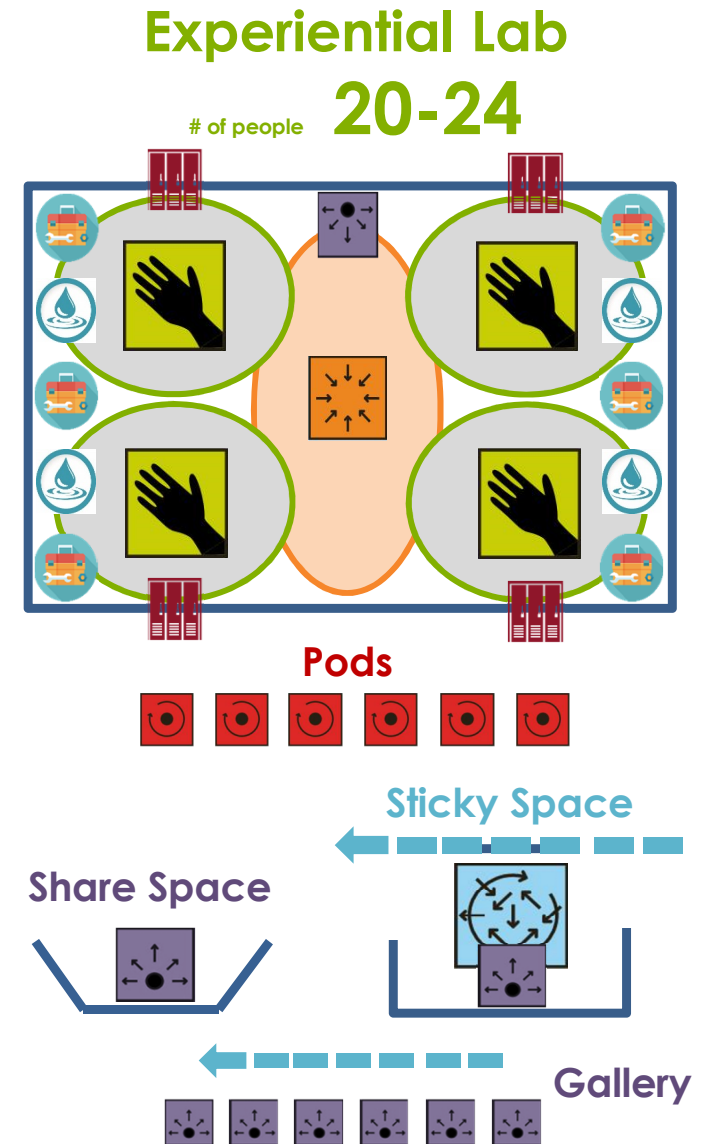
Art education plays a crucial role in the development of innovation skills often identified as necessary to prepare for complex life and work environments in the 21<sup>st</sup> century. Student centered art education delivery is often an iterative process that often starts high level of direction from the instructor that demonstrate specific strategies that students use to increase independence and creativity.

In *Teaching Skills for the 21<sup>st</sup> Century: Creativity* (2018), Melissa Purtee identifies an approach described as *Design Process thinking*. This process outlines the iterative process of student centered learning in four parts and how those play out in the classroom:

- 1. Inspiration:** Students learn about themes, media, processes, and personal experiences as possible starting points for ideas. As learners become more comfortable with searching for ideas, they learn how to develop guiding questions that drive self-directed work.
- 2. Design:** Instead of following steps, students develop the capacity to select the strategy that represents the best way to develop ideas. To teach the skills needed to bring ideas to fruition we need to differentiate by teaching additional strategies, like researching, experimenting with materials, and mind mapping.
- 3. Creation:** This phase hinges on teaching students the types of questions to ask themselves as they work: Is this working?; What needs to be changed?; Is it finished?; Is it Successful?
- 4. Reflection & Presentation:** This phase is used to sum up the learning that has occurred and to examine next steps. It's a time to share and celebrate work but also to be accountable for learning.

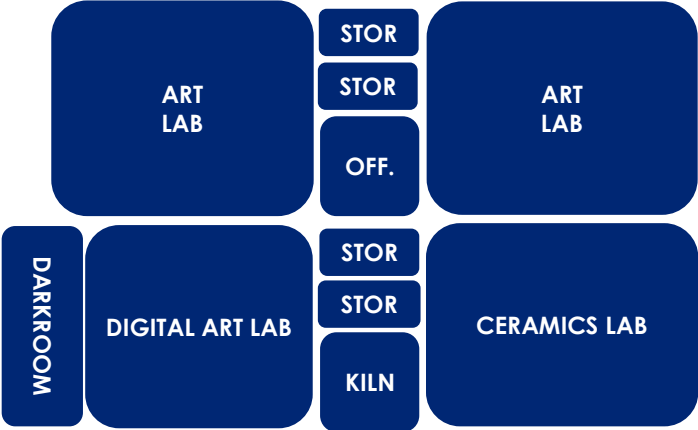
Source: *The Art of Education*

## Applicable Prototype Spaces

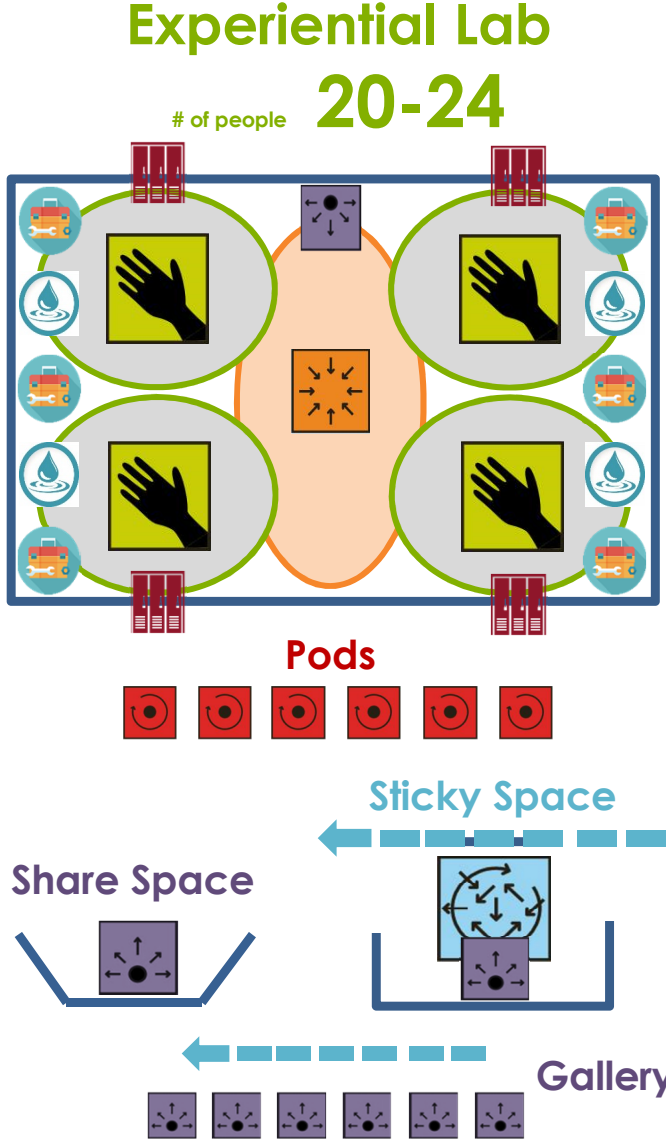


# 9.7 Visual Arts

5.0 Visual Arts		Recommended 1889 Student Program			
		Quantity	TS	SF	Total
5.01	Art Lab	2	2	1,125	2,250
5.02	Ceramics Lab	1	1	1,200	1,200
5.03	Kiln Room	1		200	200
5.04	Storage	4		100	400
5.05	Digital Art Lab	1	1	1,000	1,000
5.06	Darkroom	1		400	400
5.07	Office	1		200	200
<b>Visual Arts Net Area Sub-Total</b>			<b>4</b>		<b>5,650</b>



## Applicable Prototype Spaces



# 9.8 Music & Performing Arts

Music and performing arts should be accommodated in teaching spaces specifically designed for this curriculum. Vocal and instrumental music and performing arts are a dynamic part of any curriculum, providing students with an opportunity to improve their creative skills.

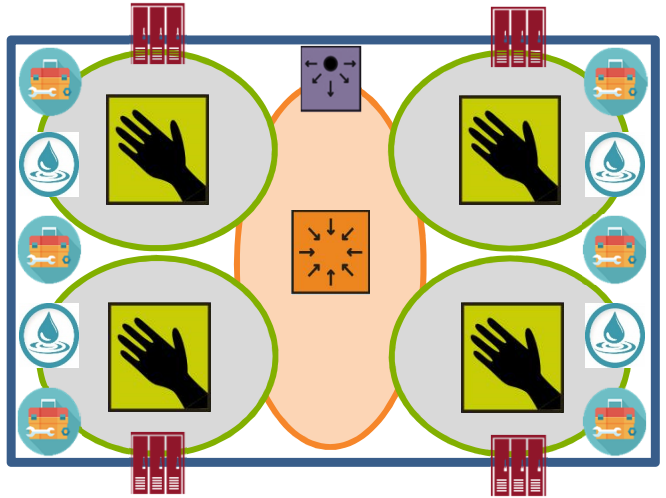
Design, size and shape of room, flexibility, ceiling heights, acoustics, storage, and room adjacencies should be especially considered when planning these spaces. Further, since the community will use these spaces, the location should be strategically placed within close proximity to an exterior entrance.

6.0 Music / Performing Arts		Recommended 1889 Student Program			
		Quantity	TS	SF	Total
6.01	Choral Room	1	1	1,800	1,800
6.02	Storage [Robes, Music]	1		500	500
6.03	Band Room	1	1	2,500	2,500
6.04	Band Storage [Instruments, Music]	1		800	800
6.05	Band Storage [Uniforms]	1		300	300
6.06	Orchestra Room	1	1	2,000	2,000
6.07	Orchestra Storage [Instruments, Music]	1		400	400
6.08	Music Tech / Keyboarding Lab	1	1	600	600
6.09	Small Practice Room	4		50	200
6.10	Large Practice Room	1		100	100
6.11	Auditorium Seating [900 seats]	1		9,000	9,000
6.12	Control Booth	1		200	200
6.13	Auditorium Stage	1		3,000	3,000
6.14	Orchestra Pit [not recessed in floor]	1		800	800
6.15	Scene Shop	1		1,000	1,000
6.16	Make Up/Dressing	2		300	600
6.17	Storage [Costumes, Props]	1		500	500
6.18	Restrooms	2		50	100
6.19	Offices	3		150	450
<b>Music/ Performing Arts Net Area Subtotal</b>			<b>4</b>		<b>24,850</b>

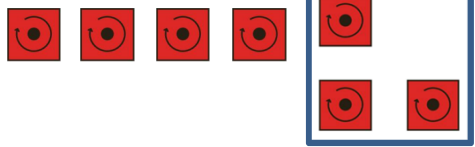
## Applicable Prototype Spaces

### Experiential Lab

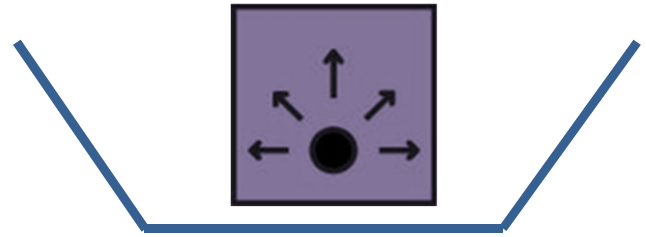
# of people **50-60**



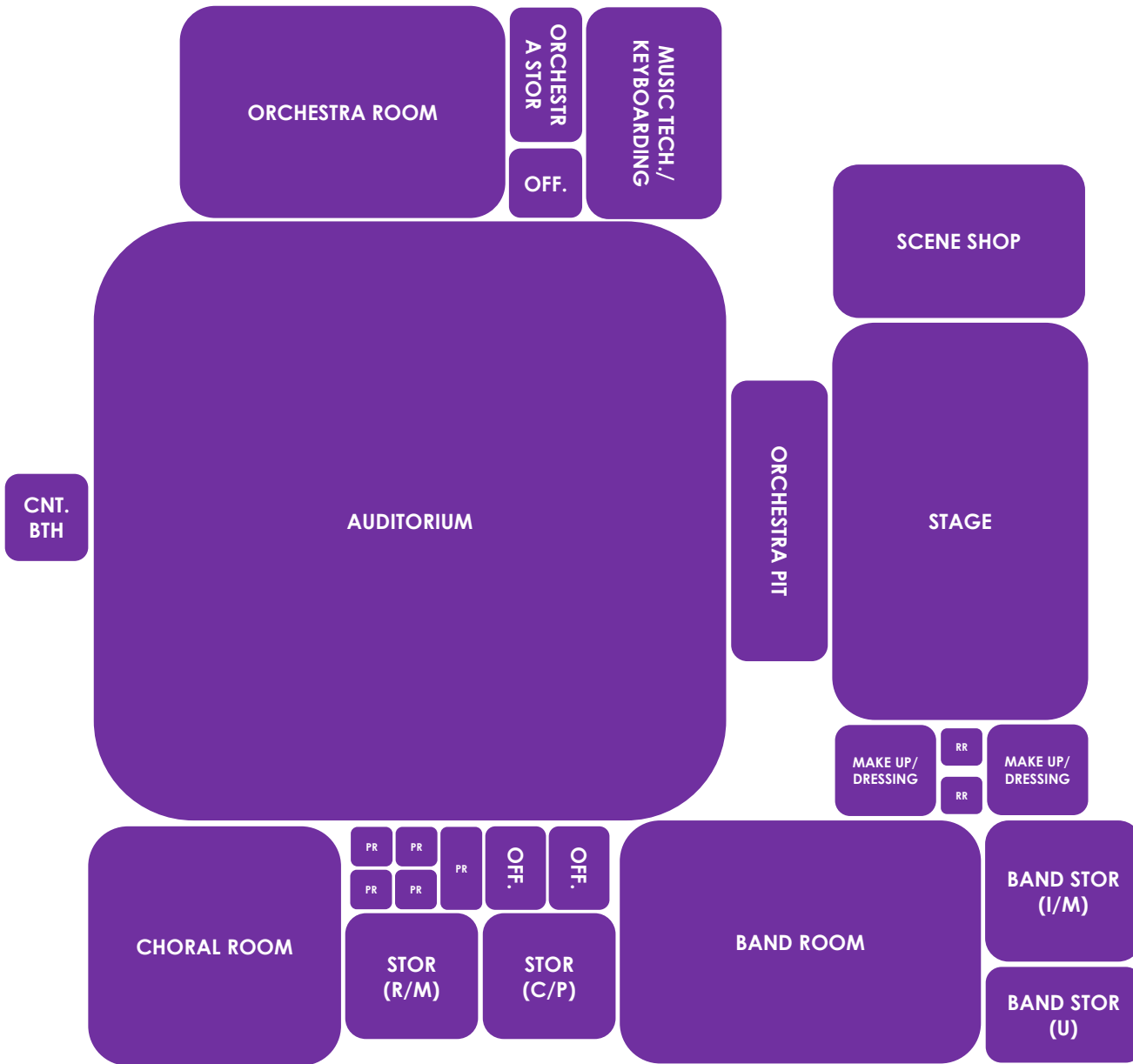
### Pods



### Share Space



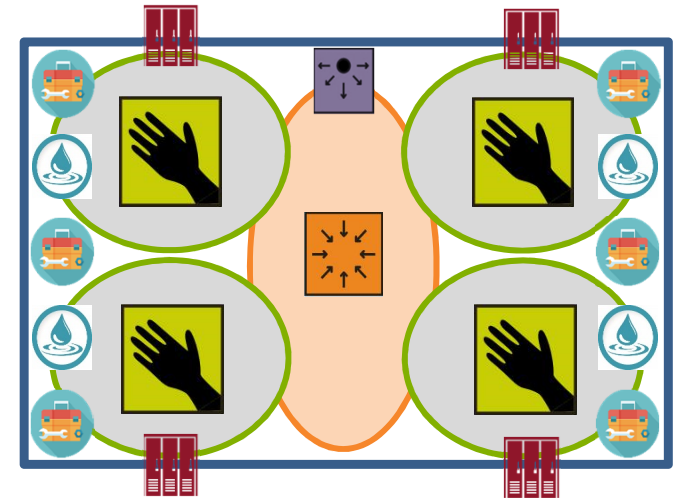
# 9.8 Music & Performing Arts



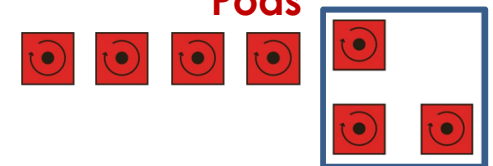
## Applicable Prototype Spaces

### Experiential Lab

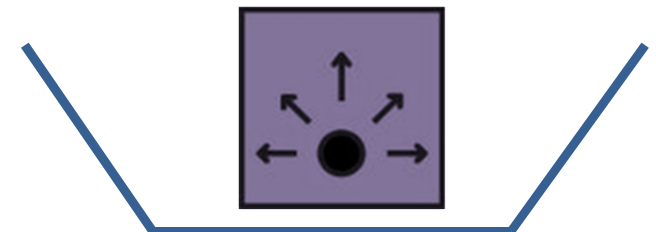
# of people **50-60**



### Pods



### Share Space



# 9.9 Health & Physical Education

The focus of physical education has evolved to include all aspects of the healthy lifestyle of individuals. Physical education is therefore directed toward fitness and wellness through activity and theory-based instruction for nutrition and healthy lifestyle choices. The Gymnasium should accommodate the evolving curriculum of physical education.

The Society of Health and Physical Educators [SHAPE America] outlines national standards and grade level outcomes for K-12 Education. These standards define what a student should know and be able to do as a result of a highly effective physical education and health program. These standards include:

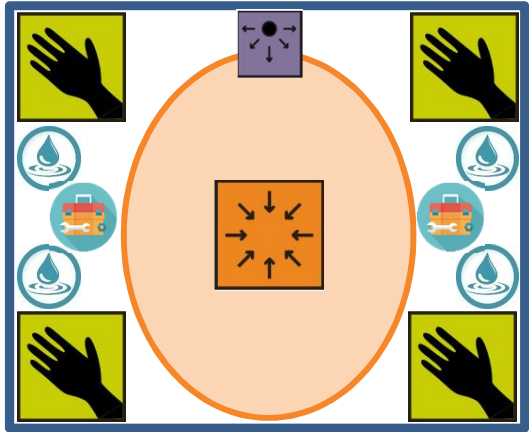
- Standard 1:** The physically literate individual demonstrates competency in a variety of motor skills and movement patterns.
- Standard 2:** The physically literate individual applies knowledge of concepts, principles, strategies and tactics related to movement and performance.
- Standard 3:** The physically literate individual demonstrates the knowledge and skills to achieve and maintain a health-enhancing level of physical activity and fitness.
- Standard 4:** The physically literate individual exhibits responsible personal and social behavior that respects self and others.
- Standard 5:** The physically literate individual recognizes the value of physical activity for health, enjoyment, challenge, self-expression and/or social interaction

*Citation: National Standards for K-12 Physical Education Copyright 2013, SHAPE America – Society of Health and Physical Educators*

The Gymnasium will often be used for after-school events, so it should be able to function discretely from the remainder of the school building. The Gymnasium is a noisy activity space. If the Gymnasium is designed to open to an adjacent space such as the Commons for increased flexibility, the Gymnasium must have the capability to be completely closed off to limit noise intrusion when the spaces are used separately.

## Applicable Prototype Spaces

**Learning Lab**  
# of people **24-30**

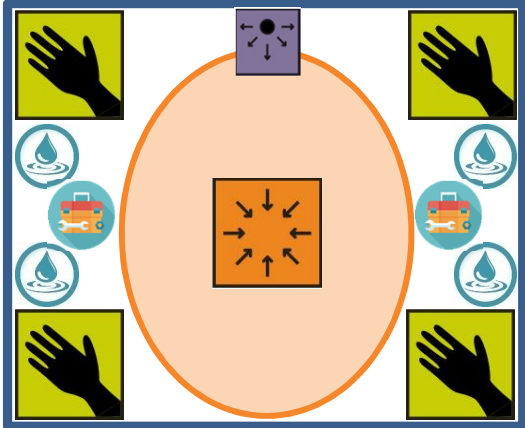


# 9.9 Health & Physical Education

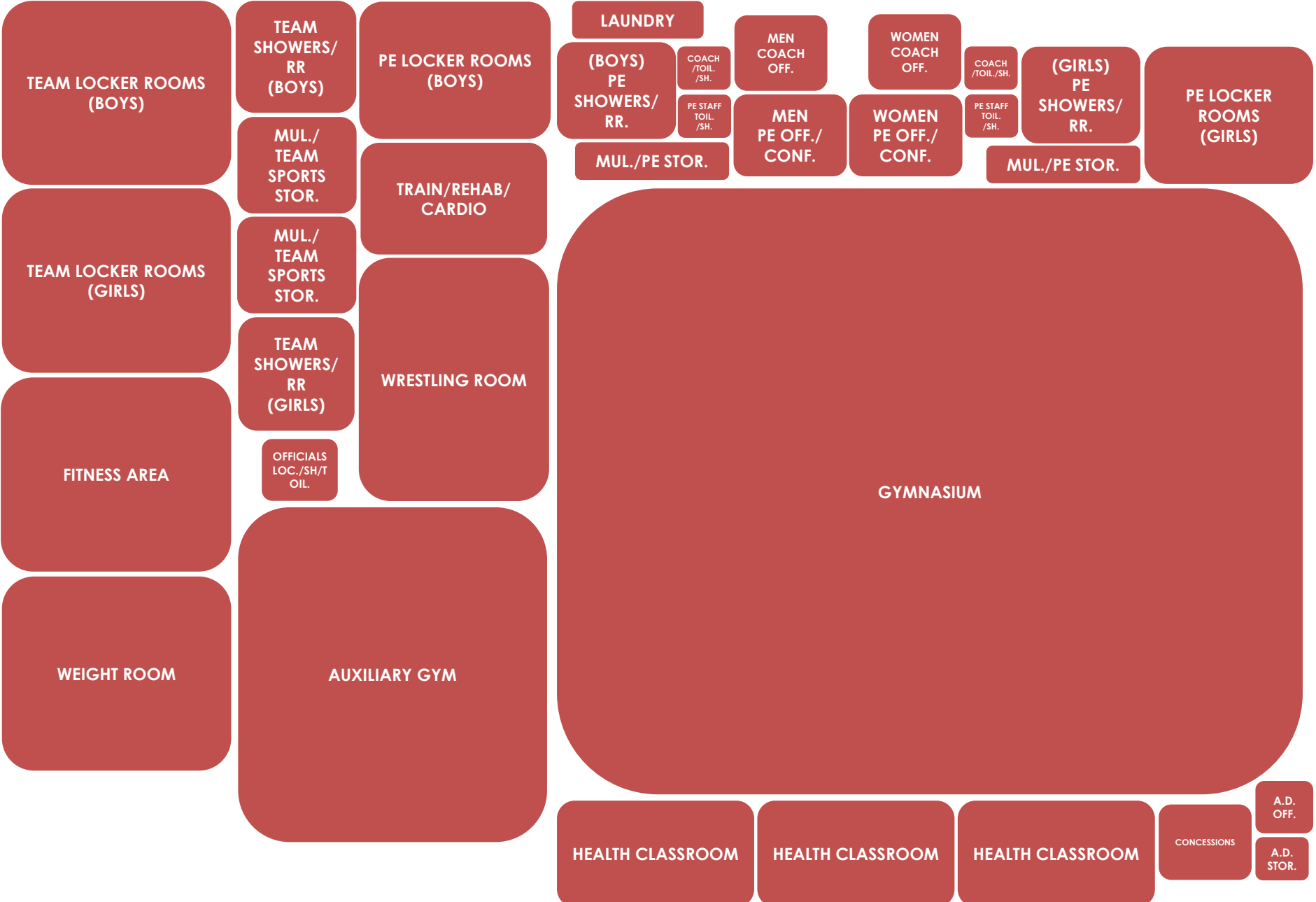
7.0 Gymnasium / Physical Education		Recommended 1889 Student Program			
		Quantity	TS	SF	Total
7.01	Gymnasium - 3 full-size Basketball Courts	1	3	19,500	19,500
7.02	Telescoping Bleachers Seating [2000 seats]				
7.03	Auxiliary Gym	1	1	4,500	4,500
7.04	PE Storage	Multiple		Varied	500
7.05	Team Sports Storage	Multiple		Varied	1,000
7.06	PE Locker Rooms	2		1,000	2,000
7.07	PE Showers/ Restrooms	2		500	1,000
7.08	PE Office / Conference	2		400	800
7.09	PE Staff Toilets / Showers	2		100	200
7.10	Team Locker Rooms	2		1,800	3,600
7.11	Team Showers / Restrooms	2		600	1,200
7.12	Coaches Office / Conference	2		300	600
7.13	Coaches Toilet / Shower	2		100	200
7.14	Officials Locker Room/ Shower/ Toilet	1		200	200
7.15	Fitness Area	1	1	2,000	2,000
7.16	Wrestling Room	1	0.5	2,000	2,000
7.17	Weight Room	1	0.5	2,000	2,000
7.18	Training / Rehabilitation / Cardio Lab	1		1,000	1,000
7.19	Laundry	1		200	200
7.20	Health Classroom	3	3	900	2,700
7.21	Concessions	1		300	300
7.22	Athletic Director's Office	1		150	150
7.23	Athletic Director's Storage	1		100	100
<b>Physical Education Net Area Subtotal [Indoor]</b>			<b>9</b>		<b>45,750</b>

## Applicable Prototype Spaces

**Learning Lab**  
# of people **24-30**



# 9.9 Health & Physical Education

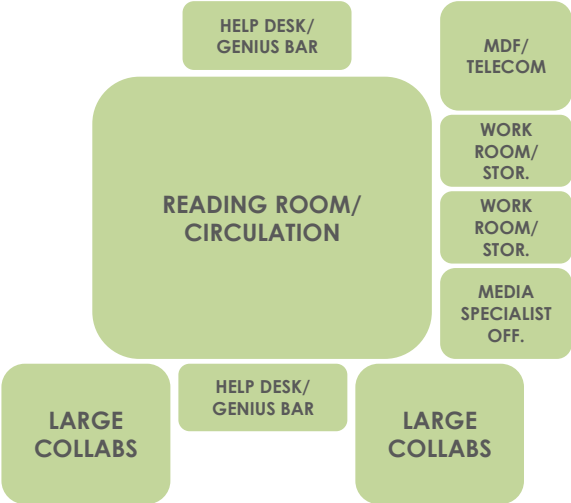


# 9.10 Library / Media Center

The Library / Media Center serves a dual role. Its traditional role is a library and a place to conduct research. Its new role is to serve as a technology and information literacy center. In this new role, the Media Center houses a transparent voice/video/data network, that connects throughout the entire building. This network enables seamless instructional support to other program area and learning communities.

The Library / Media Center is likely the most "student-centered space in the entire school facility. Therefore, the space must be accessible and adaptable to different needs that students and instructor/facilitators might need. This space will serve as the hub of technology as well as the center for creativity and "hands-on" project-based learning within the school.

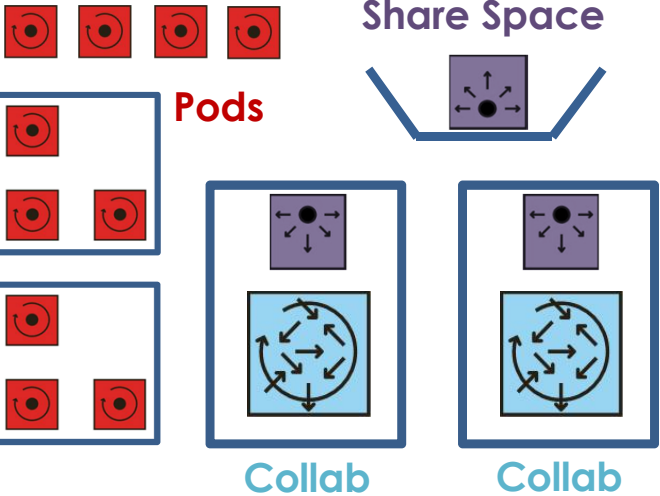
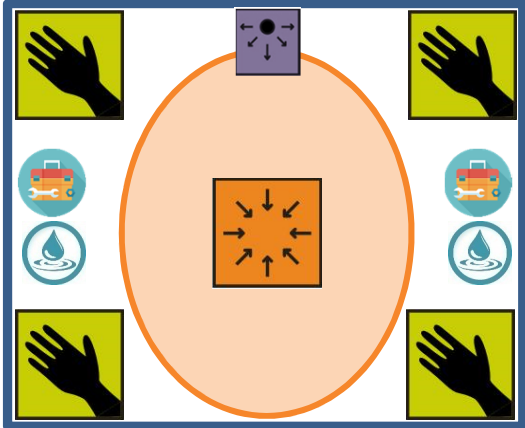
8.0	Library / Media Center	Recommended 1889 Student Program			
		Quantity	TS	SF	Total
8.01	Reading Room / Circulation	1		2,000	2,000
8.02	Large Collabs	2		500	1,000
8.03	Help Desk / Genius Bar	2		250	500
8.04	Media Specialist Office	1		250	250
8.05	Workroom / Storage	2		200	400
8.06	MDF/ Telecommunications Room	1		300	300
8.07	IDF Hub Rooms, distributed thru Bldg	10		60	600
	<b>Library / Media Center Net Area Subtotal</b>				<b>5,050</b>



## Applicable Prototype Spaces

### Learning Lab

# of people **Many**



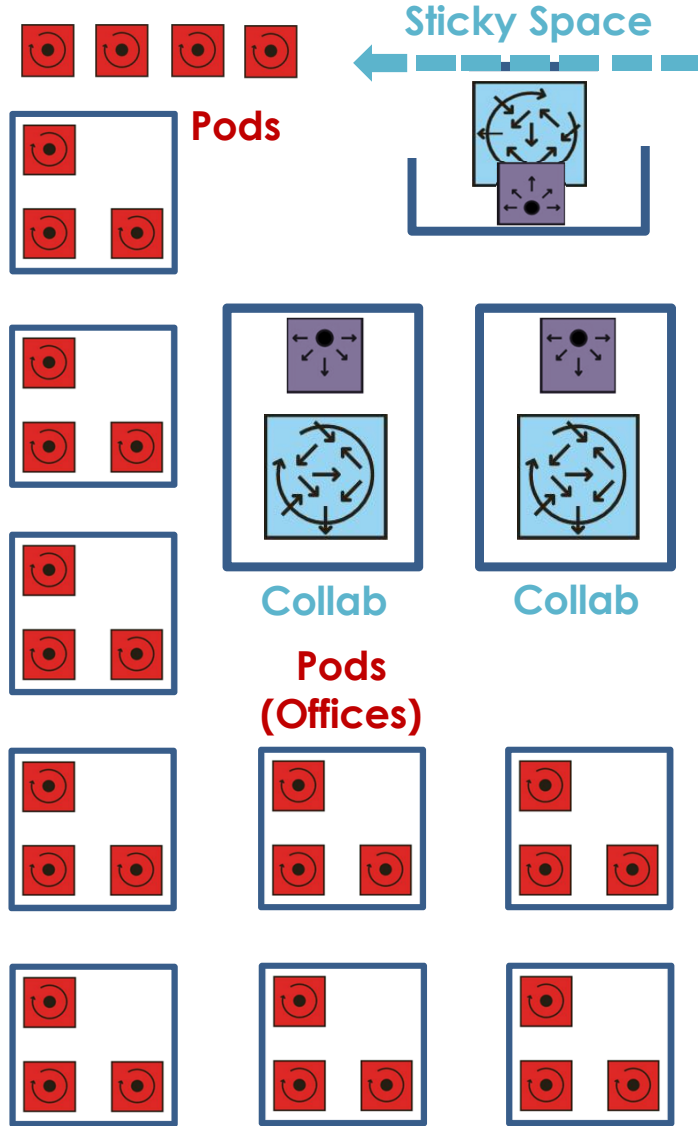
# 9.11 Welcome Center / Administration

Immediately upon entry, visitors will be greeted in the administration "welcome area." This area should be a single point of entry during school hours in which school visitors should be directed to upon immediate entry into the facility. This space specifically has an influence on the safety & security of the school facility, therefore should be designed in that function along with the primary function of administration.

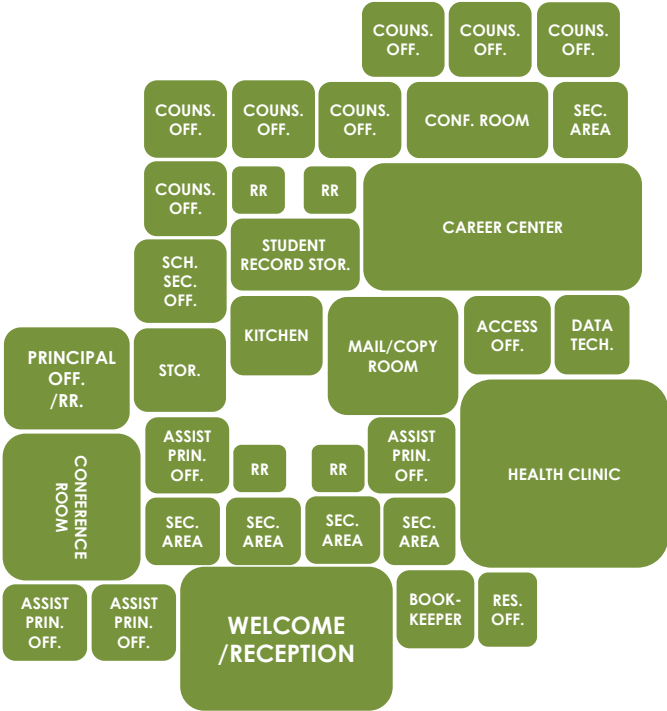
The school principal office, support staff offices, guidance, and health services should be located in a centralized area at the main entrance of the school. Additional offices will be housed in the Learning Communities to offer a decentralized approach for administration and/or guidance if desired. These offices can be used for itinerant staff as well.

9.0 Welcome Center / Administration		Recommended 1889 Student Program			
	Administration	Quantity	TS	SF	Total
9.01	Welcome / Reception	1		600	600
9.02	Secretarial Area	4		100	400
9.03	Principal's Office / Rest Room	1		225	225
9.04	Assistant Principal's Office	4		125	500
9.05	Conference Room	1		400	400
9.06	Mail/Copy Room	1		300	300
9.07	Storage	1		150	150
9.08	Kitchenette	1		150	150
9.09	Staff Restrooms	2		50	100
9.10	Resource Officer (Police)	1		100	100
9.11	School Security Office (4)	1		150	150
9.12	Bookkeeper	1		120	120
9.13	Data Technician	1		100	100
9.14	Access Office	1		120	120
9.15	Health Clinic	1		800	800
	Guidance				
9.20	Career Center	1		700	700
9.21	Counselors' Offices	7		120	840
9.22	Secretarial Area	1		100	100
9.23	Student Record Storage	1		200	200
9.24	Conference Room	1		250	250
9.25	Staff Restrooms	2		50	100
	Decentralized [See Support Communities]				
9.30	School Improvement Specialist	1		0	0
9.31	Offices for Itinerant and Others	5		0	0
<b>Welcome Center / Administration Net Area Subtotal</b>					<b>6,405</b>

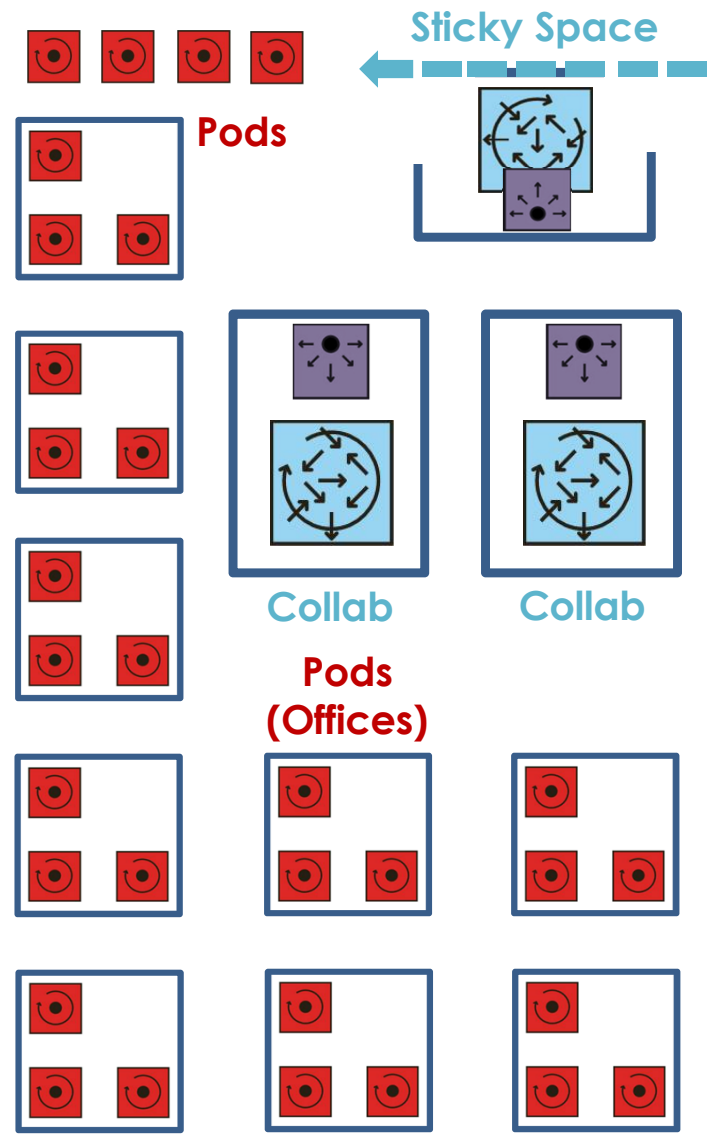
## Applicable Prototype Spaces



# 9.11 Welcome Center / Administration



## Applicable Prototype Spaces



# 9.12 Dining & Food Service

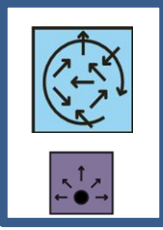
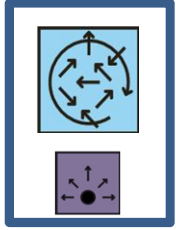
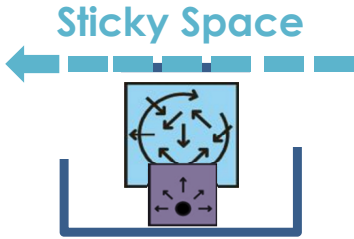
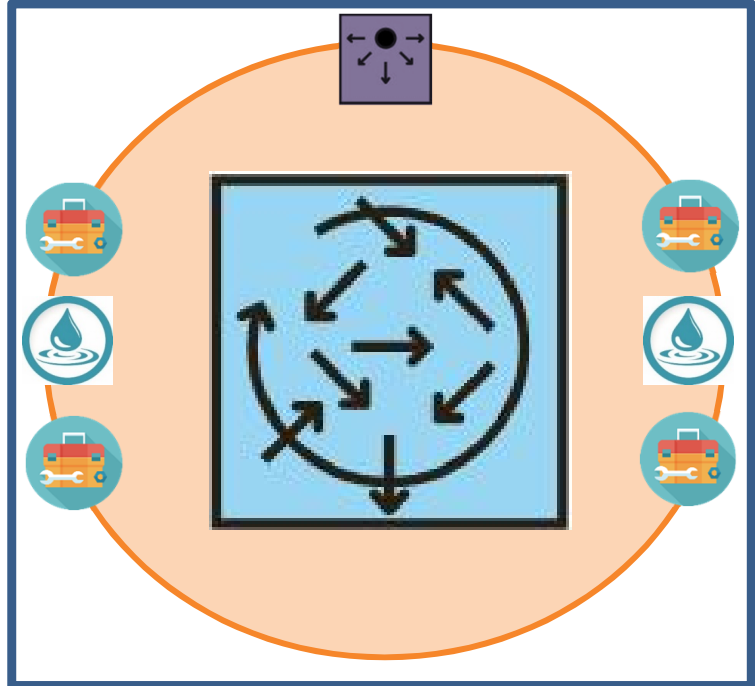
This area is planned as a flexible room that can accommodate student dining, assemblies, and community meetings. It is proposed, through creative design, that this area will effectively house multiple functions with seating space for all uses. Adjacencies to other large gathering spaces (including outdoor spaces) to expand for more flexibility is ideal.

This space should be convenient for use as community space while being separated from instructional areas.

10.0	Commons / Dining / Food Service	Recommended 1889 Student Program			
		Quantity	TS	SF	Total
10.01	Kitchen				
10.02	Preparation/Warming Areas				
10.03	Dry Food Storage				
10.04	Cooler/Freezer	1		3,500	3,500
10.05	Ware Washing				
10.06	Kitchen Manager Office				
10.07	Restroom				
10.08	Lockers				
10.09	Serving Area [minimum 4 serving lines]	4		300	1,200
10.10	Commons / Dining [Seating for 600]	1		8,000	8,000
10.11	Table & Chair Storage	1		300	300
10.12	Staff Dining w/Vending	1		600	600
10.13	School Store	1		700	700
10.14	Club Areas	2		500	1,000
<b>Cafeteria / Food Service Net Area Subtotal</b>					<b>15,300</b>

## Applicable Prototype Spaces

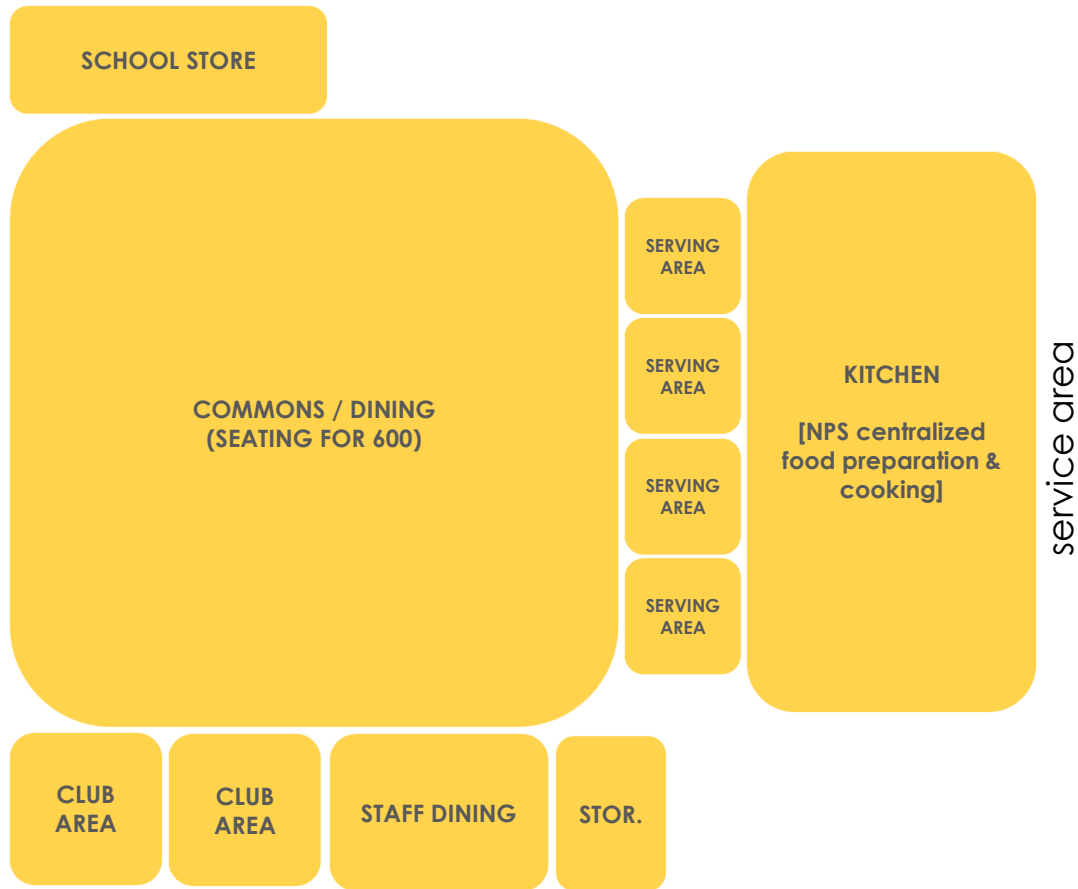
### Gathering Space # of people **Many**



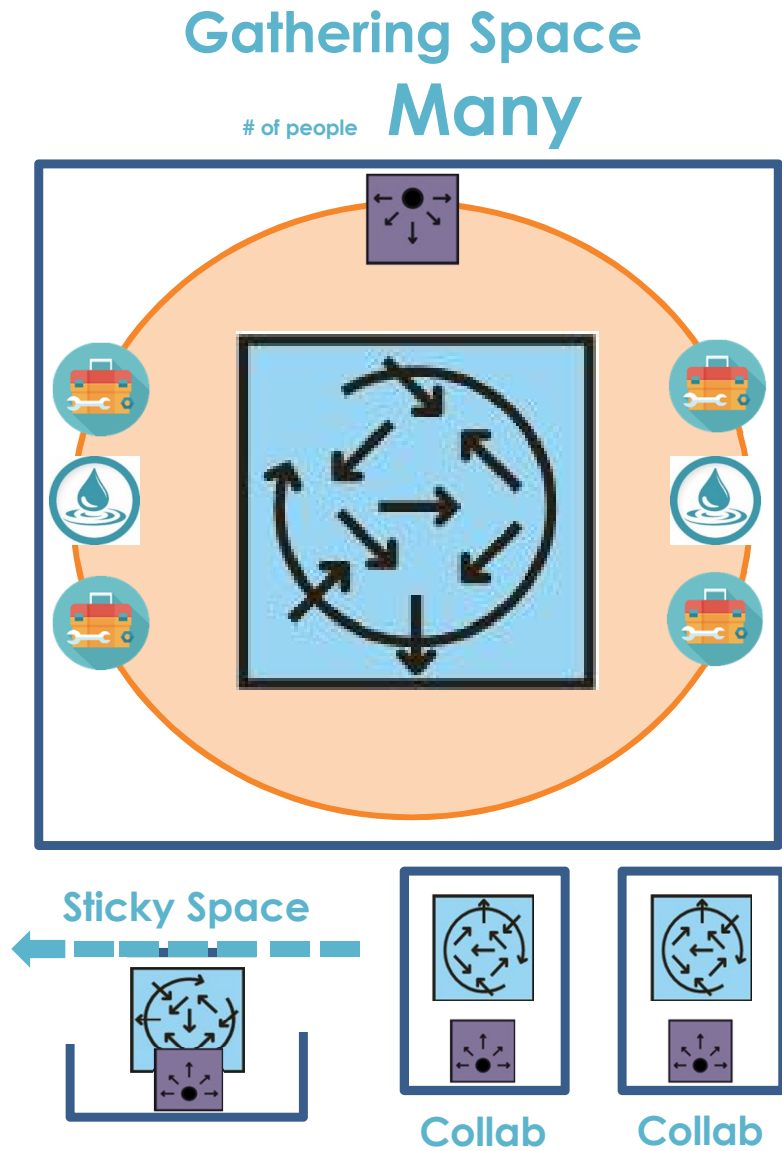
Collab

Collab

# 9.12 Dining & Food Service



## Applicable Prototype Spaces



# 9.13 Outdoor Learning Environments

Outdoor Learning— bringing the outdoors in and the indoors out and making connections are important components in 21st Century education. The options are endless and will vary based on site parameters and willingness to include outdoor learning into every day curriculum.

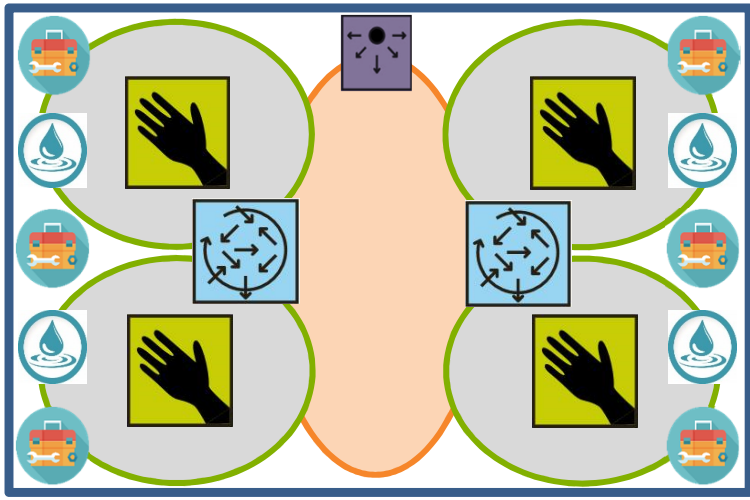
Unlike traditional inside classrooms that are characterized by expository methods of instruction with an occasional lab for artificial "hands-on" activities, outdoor environments are rich with opportunities for active learning of social, emotional, and academic objectives in a variety of subject areas. First hand observation and hands-on experiences capture the attention of students as they learn about and begin to appreciate the world around them and the interconnectedness of disciplines.

Unique natural settings offer countless opportunities for developing contextual learning skills as well as a wide range of 21st Century Learning Skills. Lessons that focus on developing skills within relevant contexts offer students more meaningful experiences that link to other areas of the curriculum and apply directly to their lives.

Some examples include outdoor classrooms and gathering spaces, art patio, plazas, outdoor amphitheaters or performance spaces, gardens for cultivation and demonstration, walking/running paths, and nature areas. The purpose of these spaces is to connect and engage the learners with the natural environment, further their health and social skills, and increase awareness of natural resources. Outdoor Learning areas should be provided to the greatest extent possible.

## Applicable Prototype Spaces

### Gathering Space # of people **Many**



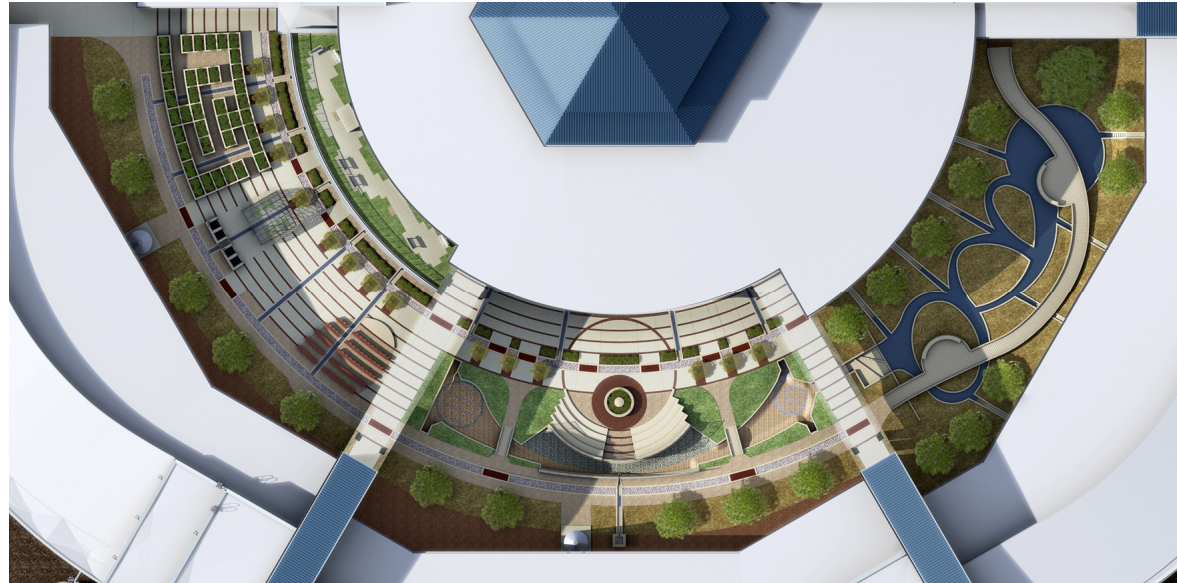
### Share Space



# 9.13 Outdoor Learning Environments

BE SUSTAINABLE

Incorporate sustainable design themes and strategies into the planning and design of the school facility that will become embedded in the curriculum and that will encourage students to become engaged as life-long learners and sustainability-conscious citizens.

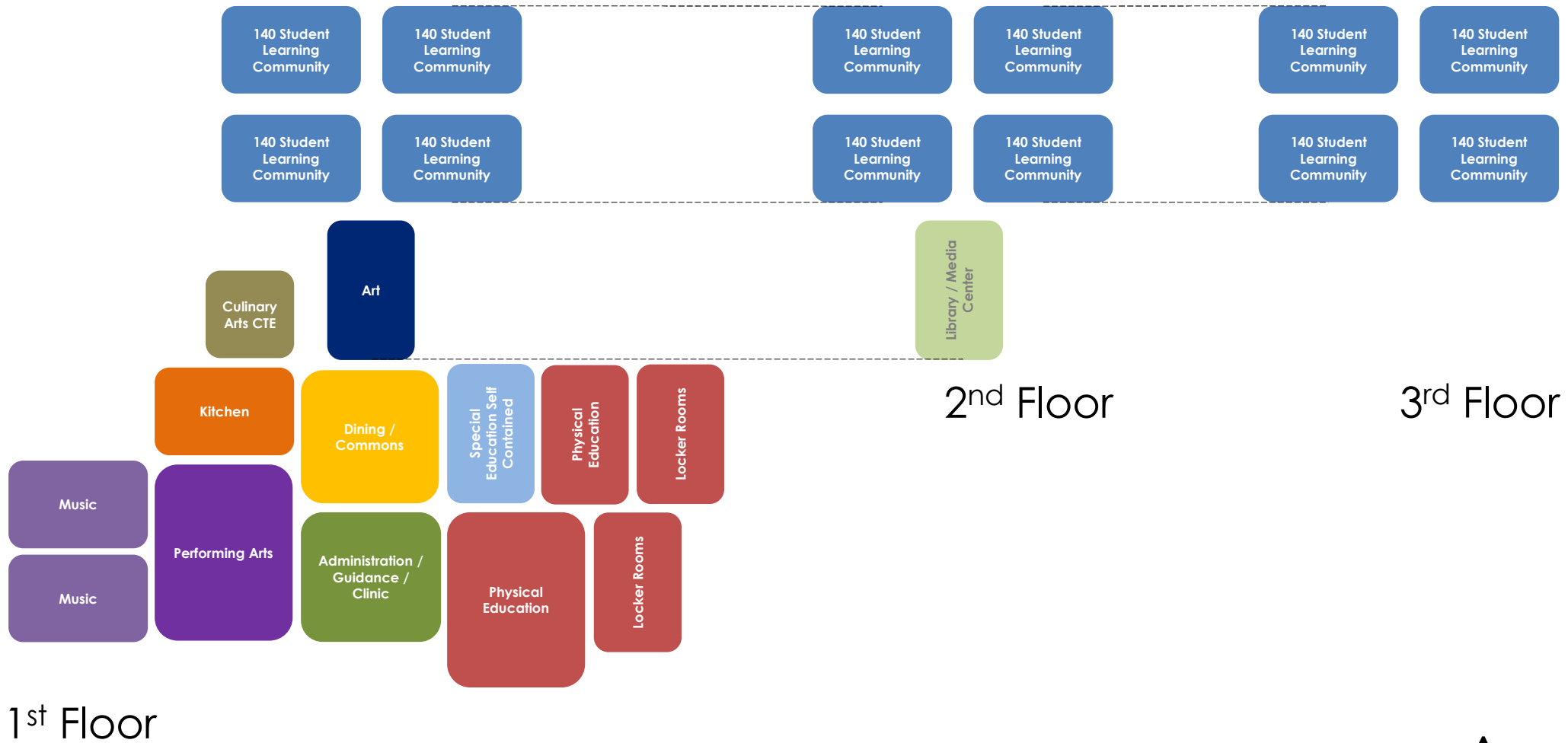


# 9.14 Building Organization Models

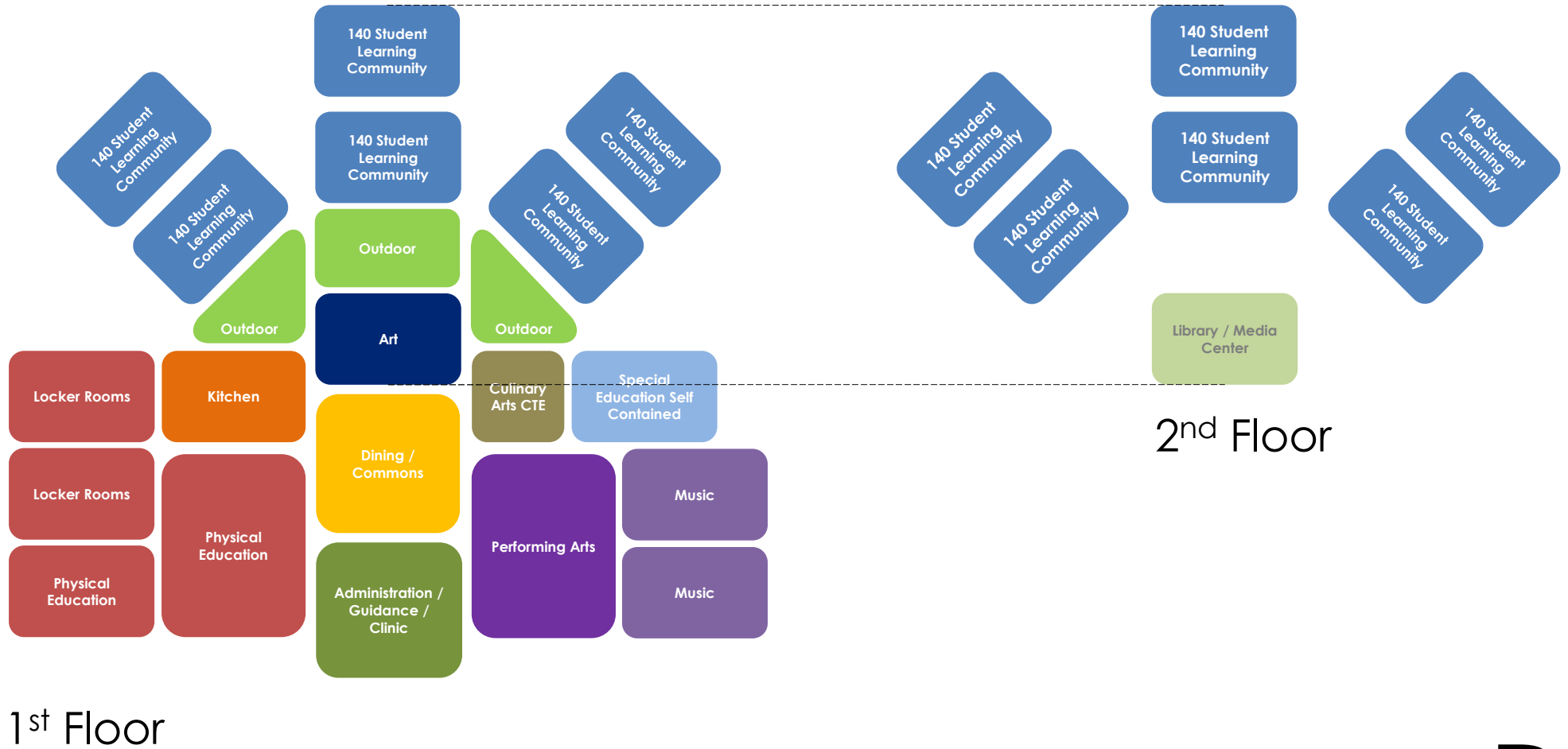
Members of the Re-Imagine Maury High School Planning Committee "designed" Building Organization Models in small groups in their last exercise of Planning Lab #3, and the Planning Team has synthesized the common themes of these designs into four (4) Prototypical Building Organization Models to guide the designers of the future Moderation and/or Replacement of Maury High School. These Building Organization Models are strictly pre-conceptual in the nature and do not pre-suppose a site or a project construction type. They are solely intended to relay desired organizational concepts and space relationships to the eventual design team and should be used in that context in order to make value decisions regarding site placement of new facilities elements and the renovation feasibility of existing facilities.

The four (4) Prototypical Building Organization Models shown on the following pages have been developed utilizing the Learning Space Prototypes described in the preceding pages.

# 9.14 Building Organization Models



# 9.14 Building Organization Models

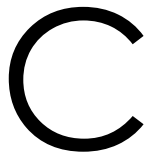
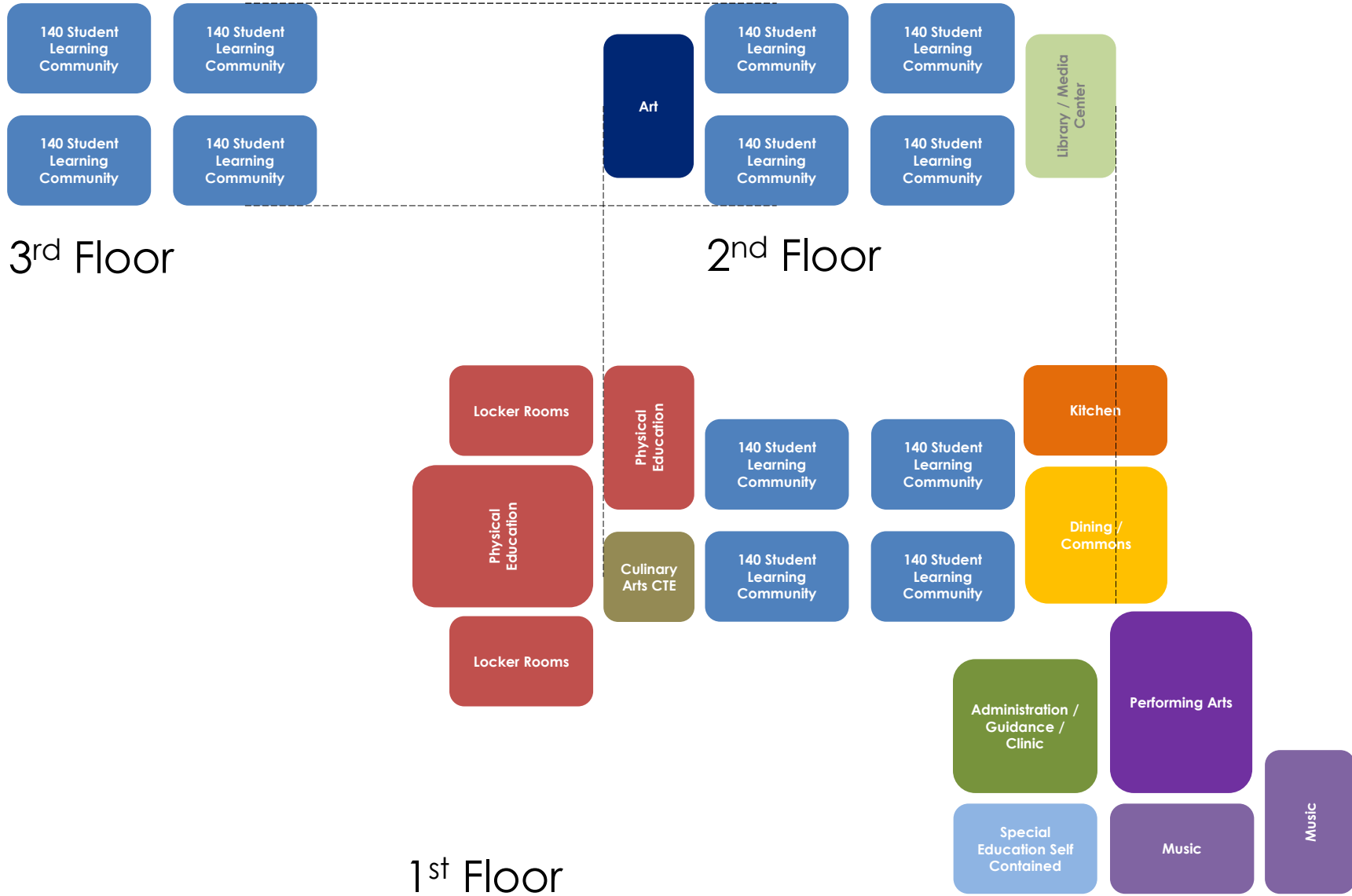


1<sup>st</sup> Floor

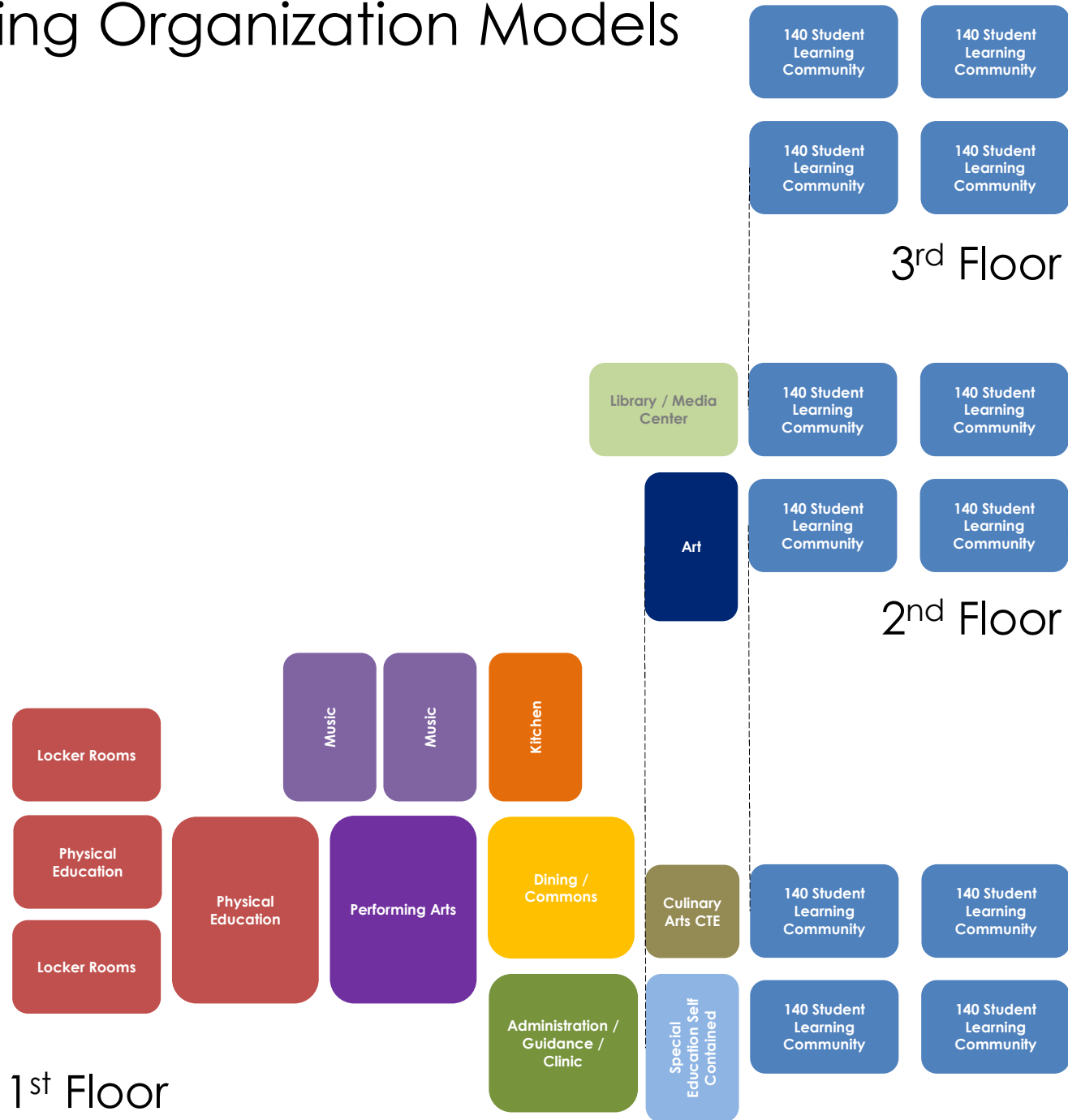
2<sup>nd</sup> Floor

B

# 9.14 Building Organization Models



# 9.14 Building Organization Models



D

# 9.14 Building Organization Models

## Common Design Attributes of the Building Organization Models that should be incorporated into a Re-Imagined Maury High School:

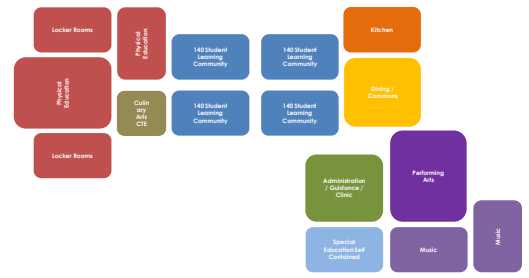
- Commons/Dining as hub or center point of school
- 140 / 280 student Learning Communities
- Multi-story Classroom Wings
- Natural Light to all Learning Spaces
- Library / Media Center on 2<sup>nd</sup> Floor
- Auditorium accessible from Commons
- Separate Entrance/Lobby for Gym and Auxiliary Gym
- Special- Education Self-Contained Suite on 1st Floor with proximity to Learning Communities & Commons
- Administration Area with both front door presence and adjacent to Commons
- Kitchen and Building Operations access to Service Area
- Culinary Arts CT&E near Commons and Kitchen
- Music Suite adjacent to Auditorium and Stage
- Locker Room access direct to exterior play fields



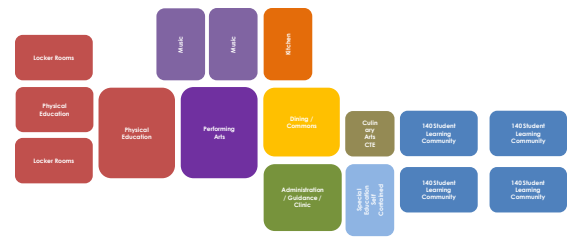
A



B



C



D

# 10.0 TECHNOLOGY for LEARNING



# 10.1 Technology Supported Learning



Technology is used extensively to help students learn basic and critical thinking skills. In the future, the applications and capabilities of educational and information management technology will increase dramatically. Today, the majority of jobs require at least some technology proficiency and as such, it is expected that students will leave school with the ability to work with and use technology.

Increased connectivity also increases the importance of teaching learners how to become responsible digital citizens. We need to guide the development of competencies to use technology in ways that are meaningful, productive, respectful, and safe. For example, helping students learn to use proper online etiquette, recognize how their personal information may be collected and used online, and leverage access to a global community to improve the world around them can help prepare them for successfully navigating life in a connected world.

Mastering these skills requires a basic understanding of the technology tools and the ability to make increasingly sound judgments about the use of them in learning and daily life. For the development of digital citizenship, educators can turn to resources such as Common Sense Education's digital citizenship curriculum or the student technology standards from the International Society for Technology in Education (ISTE).

The National Educational Technology Standards for Students are divided into six broad categories. Standards within each category are to be introduced, reinforced, and mastered by students. Teachers can use these standards as guidelines for planning technology-based activities in which students achieve success in learning, communication, and life skills.

## Basic Operations and Concepts

**Students:** a. demonstrate a sound understanding of the nature and operation of technology systems. b. are proficient in the use of technology.

## 2. Social, Ethical, and Human Issues

**Students:** a. understand the ethical, cultural, and societal issues related to technology. b. practice responsible use of technology systems, information and software. c. develop positive attitudes toward technology uses that support life-long learning, collaboration, personal pursuits and productivity.

## 3. Technology Productivity Tools

**Students:** a. use technology tools to enhance learning, increase productivity, and promote creativity. b. use productivity tools to collaborate in constructing technology-enhanced models, preparing publications, and producing other creative works.

## 4. Technology Communications Tools

**Students:** a. use telecommunications to collaborate, publish, and interact with peers, experts, and other audiences. b. use a variety of media and formats to communicate information and ideas effectively to multiple audiences.

## 5. Technology Research Tools

**Students:** a. use technology to locate, evaluate, and collect information from a variety of sources. b. use technology tools to process data and report results. c. evaluate and select new information resources and technological innovations based on the appropriateness to specific tasks.

## 6. Technology Problem-Solving and Decision-Making Tools

**Students:** a. use technology resources for solving problems and making informed decisions. b. employ technology in the development of strategies for solving problems in the real world.

# 10.2 Technology Infrastructure

Preparing students to be successful for the future requires a robust and flexible learning infrastructure capable of supporting new types of engagement and providing ubiquitous access to the technology tools that allow students to create, design, and explore.

The essential components of an infrastructure capable of supporting transformational learning experiences include the following:

- Ubiquitous connectivity. Persistent access to high-speed internet in and out of school.
- Powerful personal learning devices. Access to mobile hand-held devices that connect learners and educators to the vast resources of the internet and facilitate communication and collaboration.
- Interactive digital displays that promote screen sharing and collaboration in teams.
- High-quality digital learning content. Digital learning content and tools that can be used to design and deliver engaging and relevant learning experiences.
- Responsible Use Policies (RUPs). Guidelines to safeguard students and ensure that the infrastructure is used to support learning.

Source: US Dept. of Education; Office of Educational Technology; *Reimagining the Role of Technology in Education (2017 Update)*

See Section 8.5 for Technology Systems recommendations by space type.

## INFRASTRUCTURE

To Support Everywhere, All the Time Learning



# 10.3 Technology Distributions Systems

Research suggests that multi-sensory teaching is most effective in the mastery of basic skills. Technology supports visual, auditory and experiential learning; therefore, it is recommended that all instructional spaces have voice, video, and data accessibility. This access enhances the flexibility of the learning environment to respond positively to alterations in the use of space.

The wiring and other infrastructure components should be the **first priority** since terminal devices can be added later; however, wireless networks can also be added as the need arises. The facility should have surplus electrical power capacity and network wiring/bandwidth to permit expansion of technology.

It is important to note that all students demonstrate technology skills appropriate to their grade level. Students will be expected to possess skills as defined and assessed through authentic learning opportunities and applicable technology.

Today's schools are being wired and equipped to support management and instructional applications. Current voice, data, and video systems can provide leadership, instruction, data management, internet access, and student services which go far beyond the systems in schools previously. As home and business worlds move into higher levels of technological applications, it is critical for schools to be equipped and play a leadership role in the integration of technology into the teaching, learning, and communication processes.



## Technology Wiring Backbone Components

**Voice:** Telephone and voice communications in every classroom and workspace to support internal and external communications

**Video:** Video distribution in every classroom and throughout the building with interactive video capabilities to support large and small group instruction, distance learning, and providing access to a wide range of internal and external resources

**Voice / Data Combined Network VOIP (Voice Over Internet Protocol):** Data retrieval capabilities in every classroom and throughout the building as well as network capabilities City-wide and to other external resources (i.e. internet, network fiber)

**Cable Trays:** All wiring should be routed through above-ceiling wire management systems such as cable trays.

**Distributed IDF Rooms:** Intermediate Distribution Frames should be distributed throughout the school building to ensure that wire lengths can be maintained below maximum length thresholds

# Re-Imagine Maury High School



## An Educational Specifications Process



ARCHITECTURE  
INTERIOR DESIGN

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