



Re-Imagine Maury High School



An Educational
Specifications Process

School Board Presentation
of Draft Report

June 6, 2018

Our 2 driving questions:



What should Learning look like in the future?

What should culture, space and time look like to support this?



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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 Process & Timeline

Plan for Planning Conference, January 19th , 2018

NPS Division Staff & Maury HS Staff Interviews, February 12th - 13th, 2018

EVMS Tours and Collaboration, February 14th, 2018

Planning Lab #1, February 28th, 2018

Community Meeting #1, March 1st, 2018

School Tours to Observe Facility Responsiveness to Innovative Educational Programs, March 15th – March 22nd, 2018

Planning Lab #2, March 28th 2018

Community Meeting #2, April 12th, 2018

Planning Lab #3, April 26th, 2018

Community Meeting #3, May 3rd, 2018

Draft Educational Specification Report Delivery, May 21st, 2018

Presentation to NPS Division Leadership Team, May 22nd, 2018

Presentation to School Board, June 6th, 2018



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.

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2.0 CONTEXT

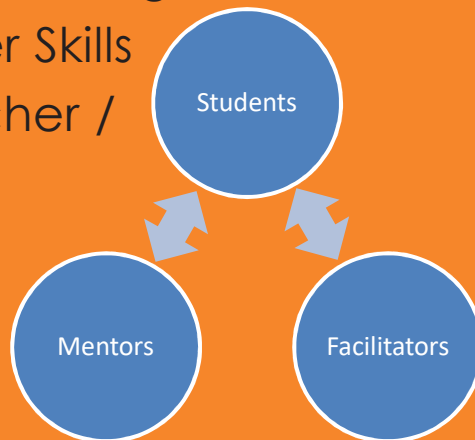


3.4 Profiles of Learners

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:

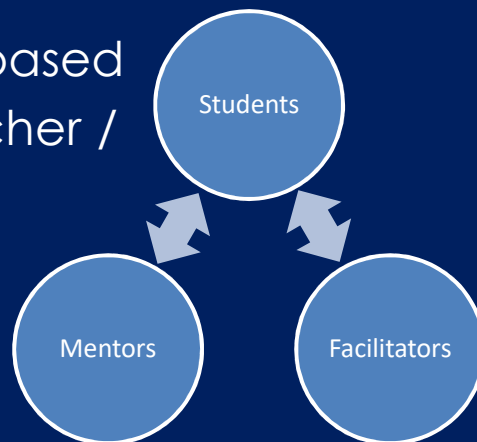
- Self-directed Learning
- Learning How to Learn
- Learning Anytime-Anywhere
- Learning Resiliency
- Learning Social & Emotional Skills
- Learning Communication Skills
- Learning Collaboration Skills & Teamwork
- Dual Enrollment w/ Higher Ed.
- Learning Career Skills
- Changing Teacher / Student Relationships



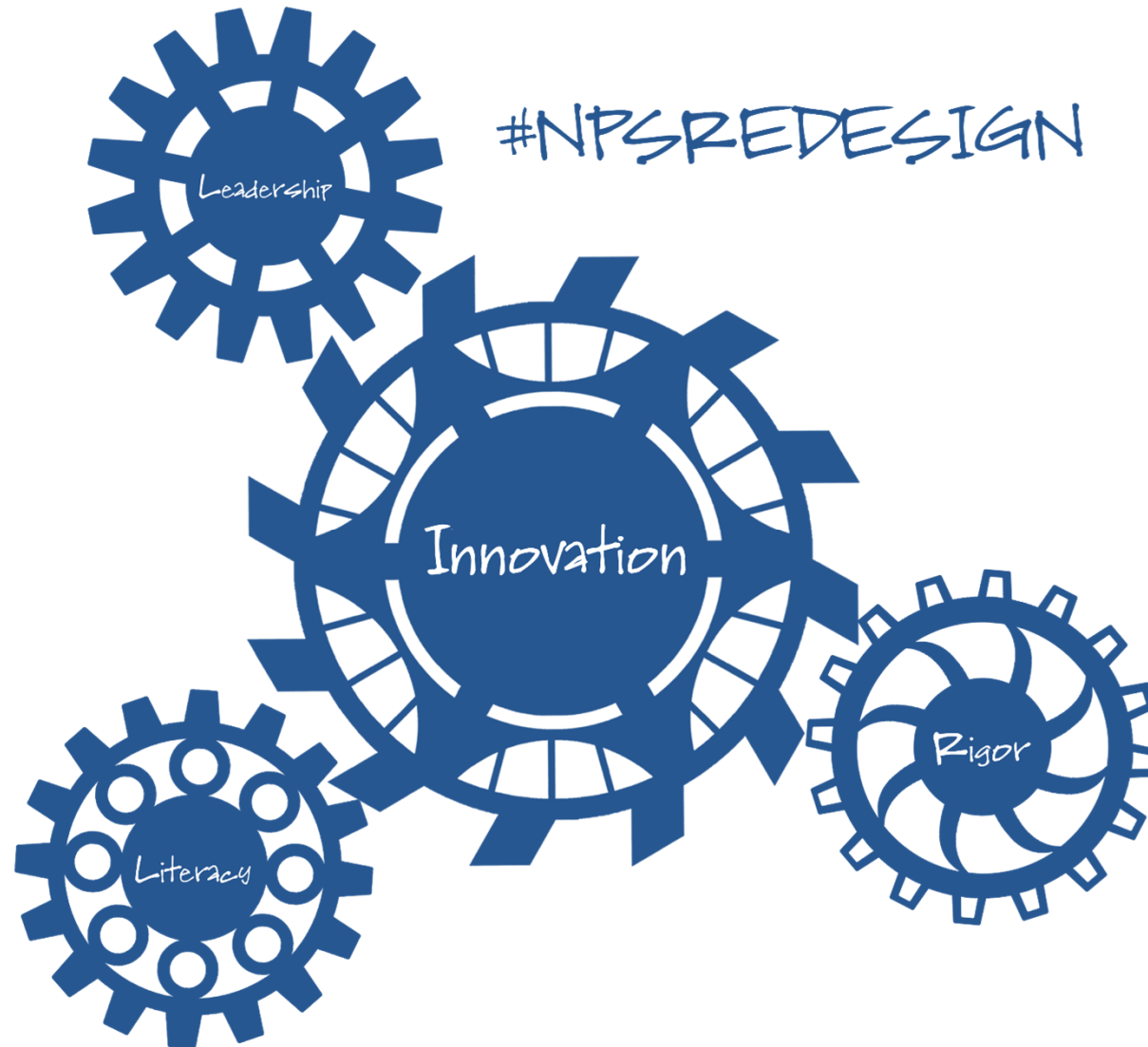
3.4 Profiles of Learners

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



3.0 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

3.3 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

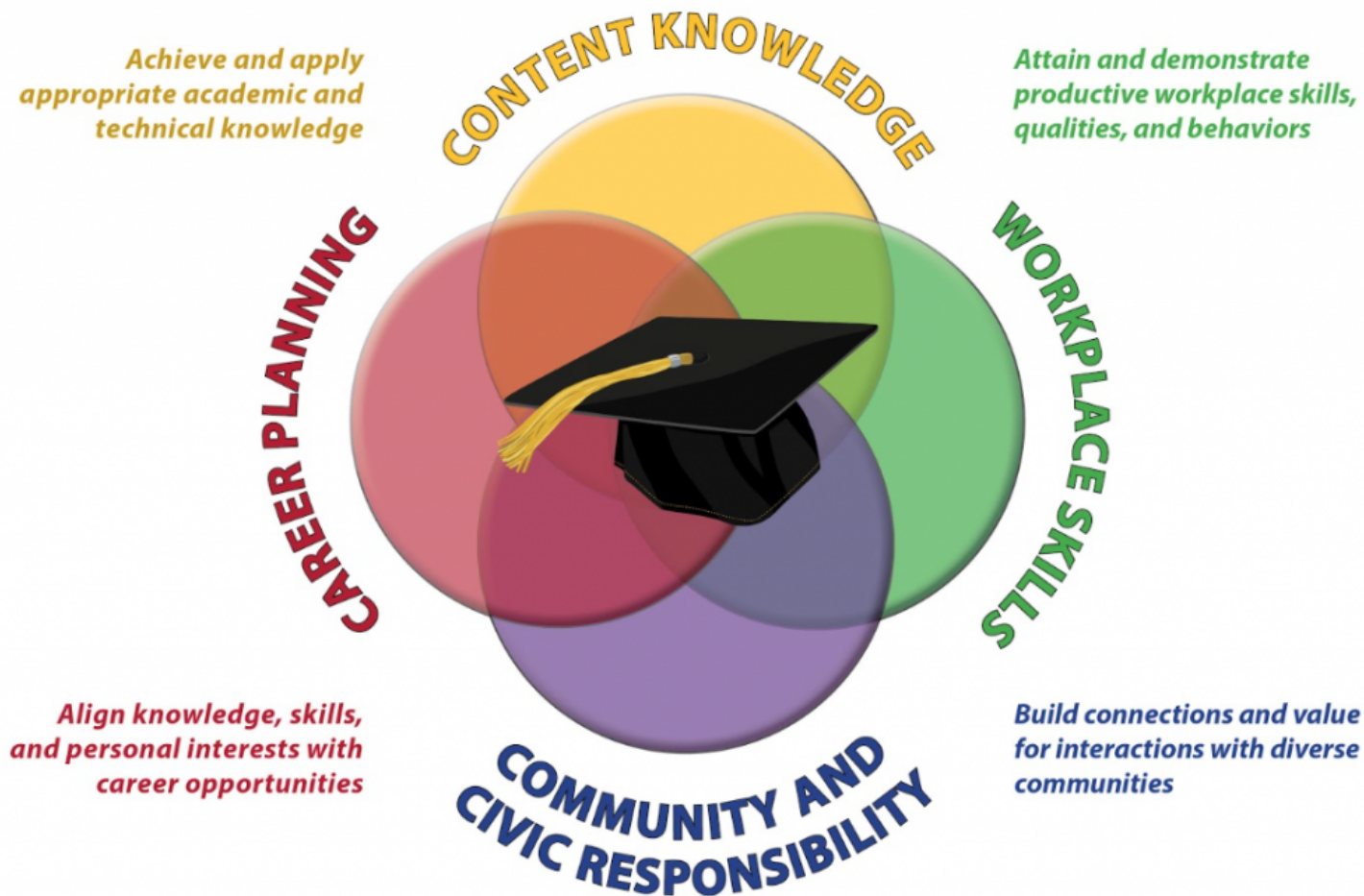
Sharing

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

3.4 Profiles of Learners

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

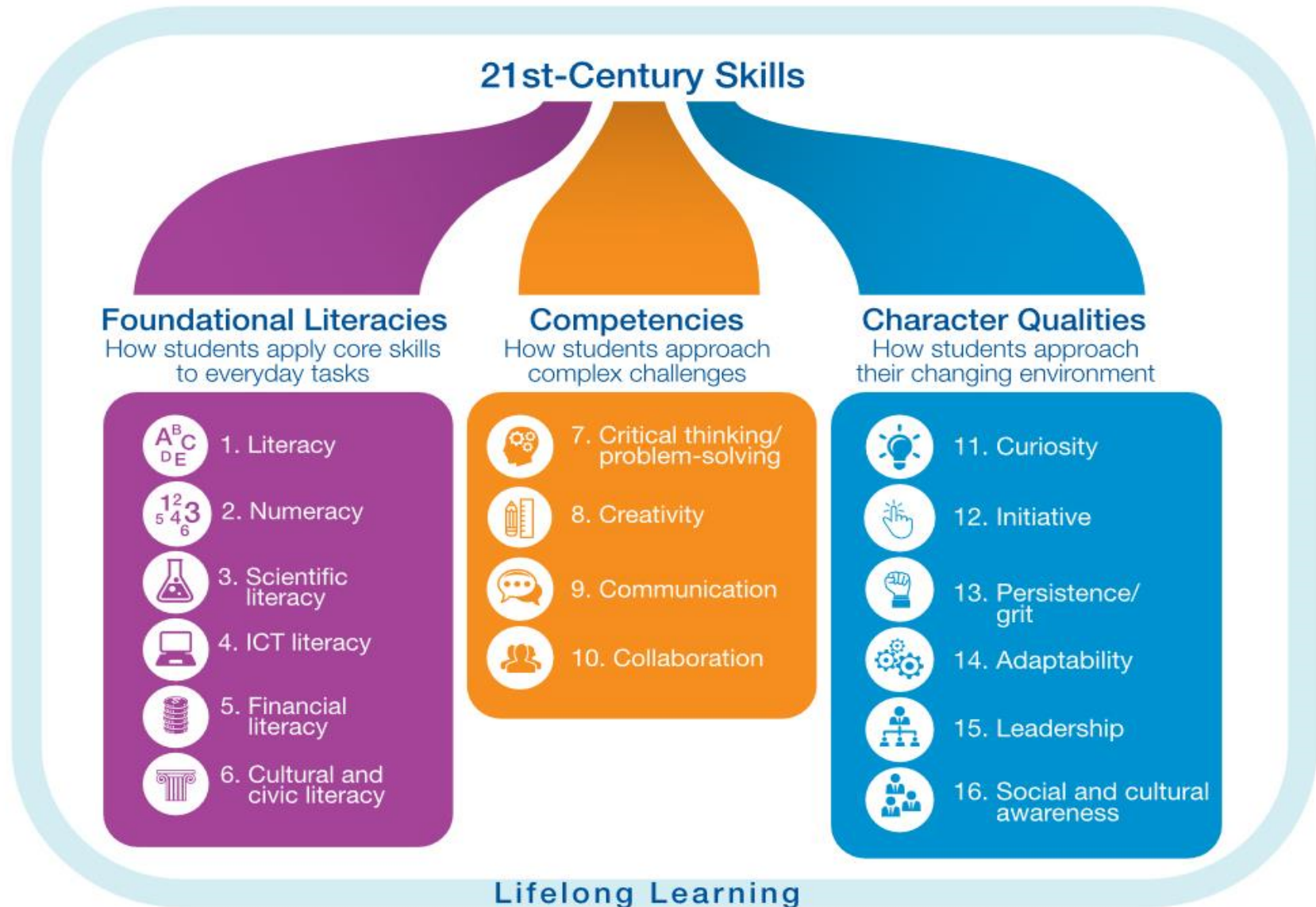
**In Virginia, the Life Ready Individual Will
During His or Her K-12 Experience:**



3.4 Profiles of Learners

What are the 21st-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)

4.0 DESIGN PRINCIPLES



4.1 Design Principles for Learning

Learning is...

STUDENT-CENTERED

ACCESSIBLE to ALL

INQUIRY - BASED

INTERDISCIPLINARY

COLLABORATIVE

RELATIONAL

AUTHENTIC / EXPERIENTIAL

WHOLE - LIFE / LIFE - LONG

COMMUNITY - ORIENTED



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

Achieve and apply appropriate academic and technical knowledge

CONTENT KNOWLEDGE

Attain and demonstrate productive workplace skills, qualities, and behaviors

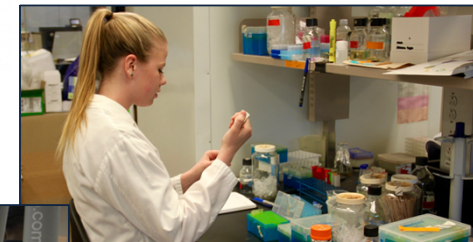
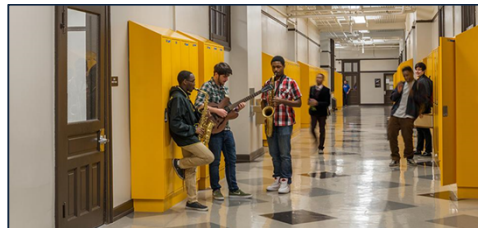
WORKPLACE SKILLS

CAREER PLANNING

Align knowledge, skills, and personal interests with career opportunities

COMMUNITY AND CIVIC RESPONSIBILITY

Build connections and value for interactions with diverse communities



4.2 Design Principles for Learning Environments

Our Reimagined Maury High School will...

BUILD on TRADITION

BE TIMELESS /
FOCUS on the FUTURE

PROVIDE LEARNING
COMMUNITIES

BE ADAPTABLE & FLEXIBLE

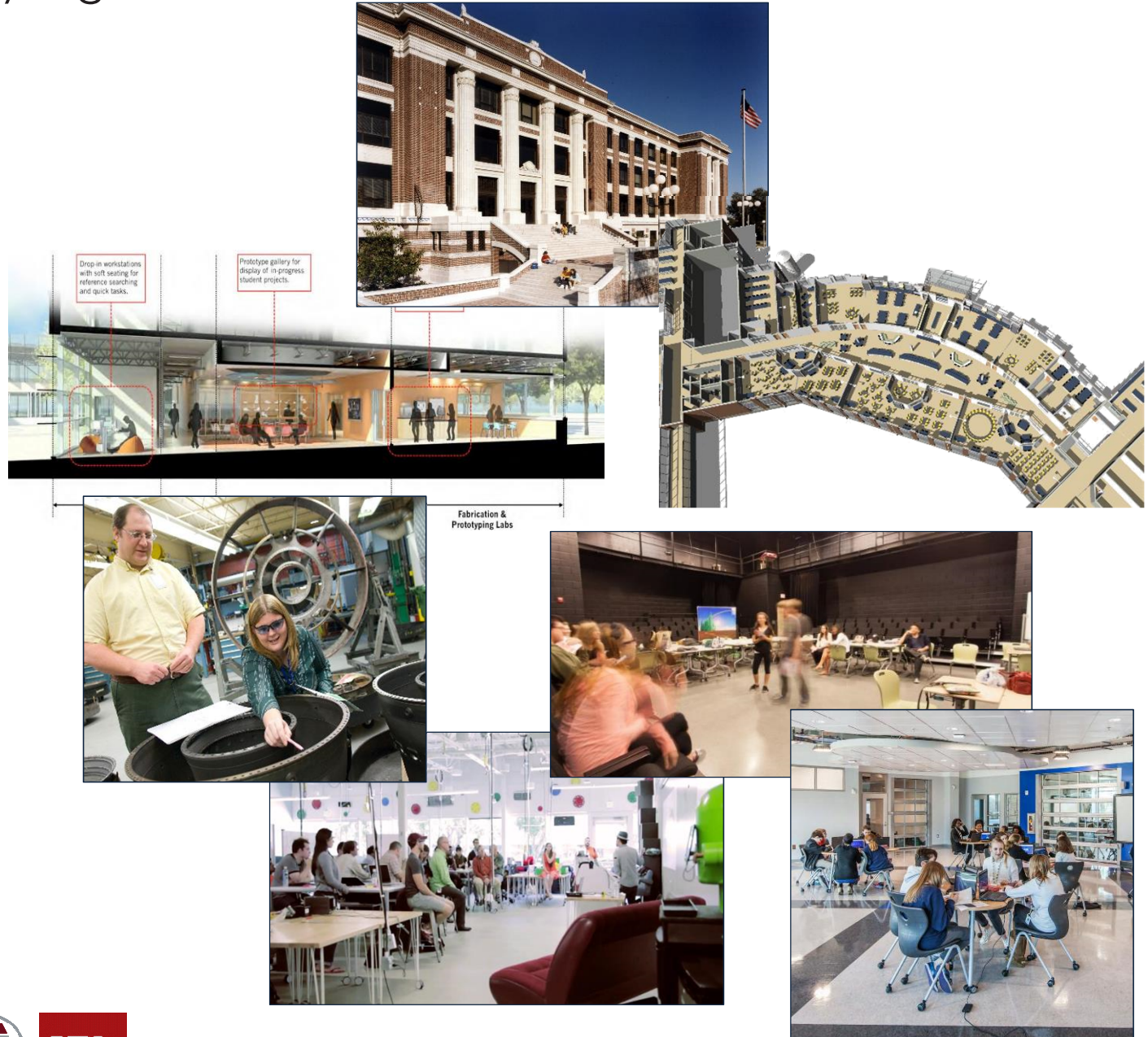
FACILITATE ANYTIME /
ANYWHERE - LEARNING

BE SAFE & SECURE

BE SUSTAINABLE

PROVIDE SPACE for COMMUNITY

RESPECT COMMUNITY CONTEXT



Design Principles for Learning Environments

Our Reimagined 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.

adaptability

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

Examples:

non-load bearing walls
daylighting strategies
adaptive/ 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

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.

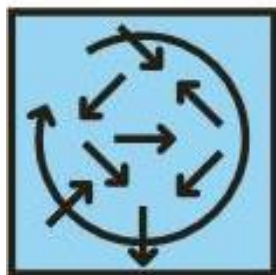


5.1 Metaphors for Primordial Learning Environments

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



campfire



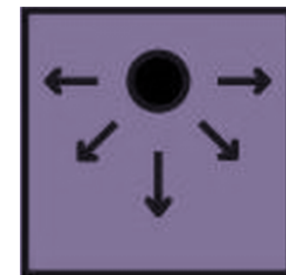
watering-hole



cave



life



mountain-top
showing & sharing

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

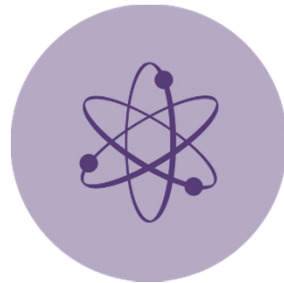
a place where one person or a small group communicates towards the rest of the world, showing what she, he or they can do with what has been learned

5.2 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






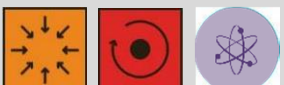





student storage

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:

5.3 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	

6.1 Planning for Learning Communities



campfire



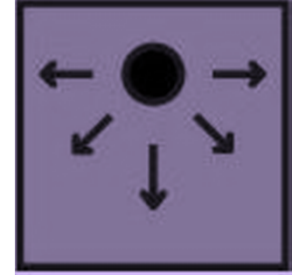
watering-hole



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
3rd 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

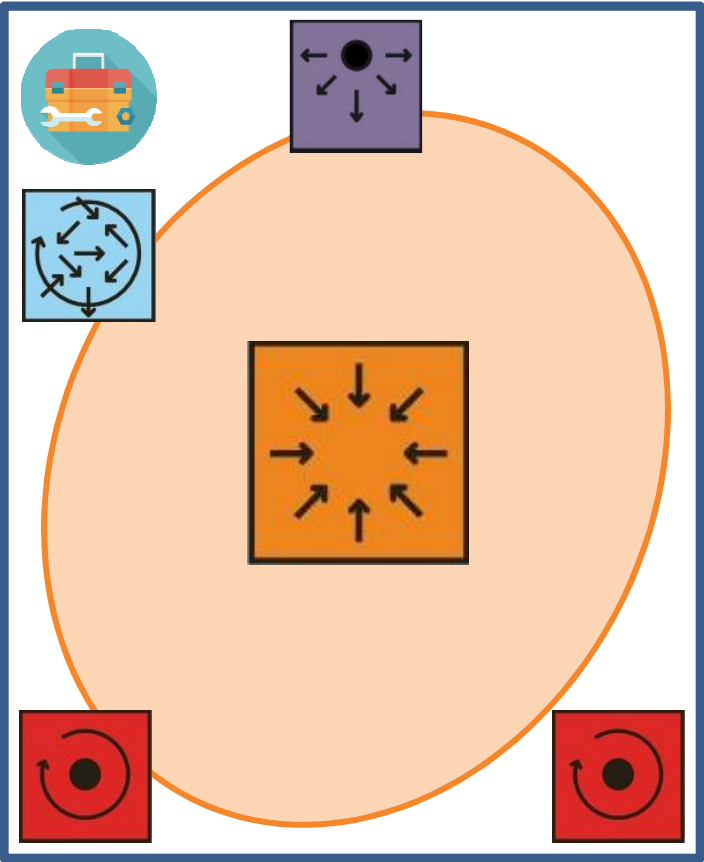
6.1 Planning for Learning Communities

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

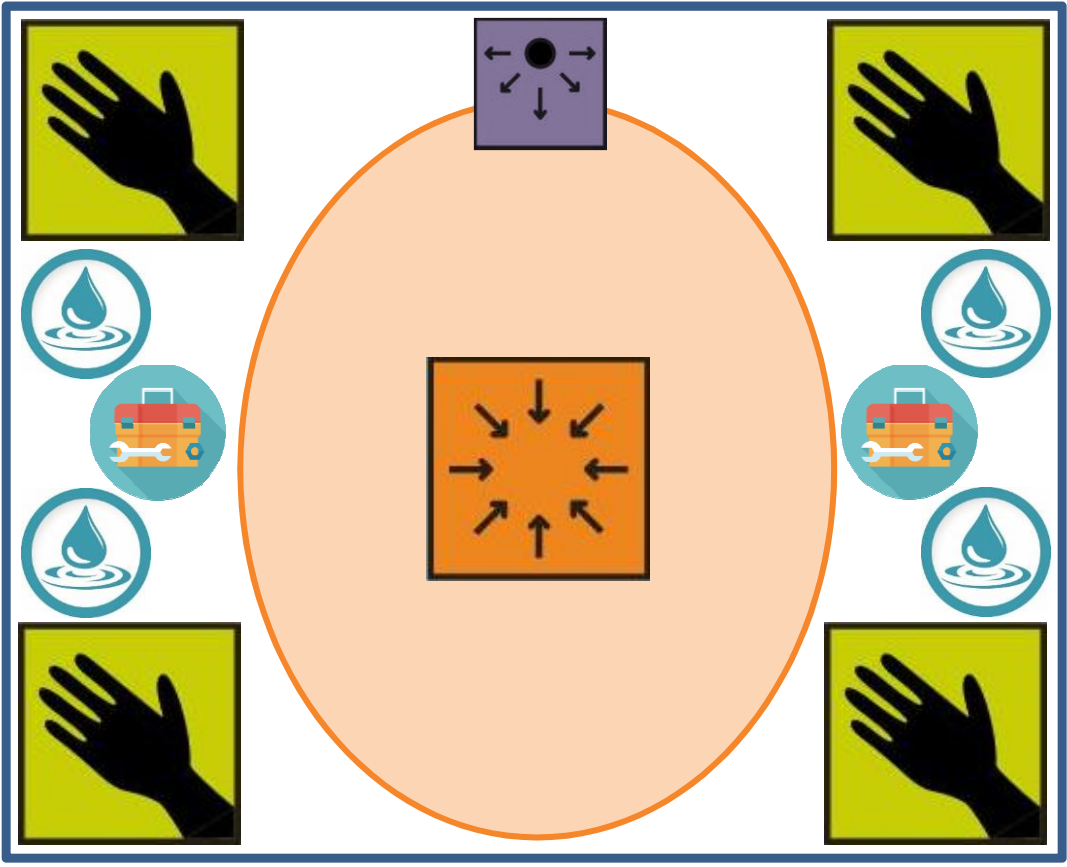
Learning Lab

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



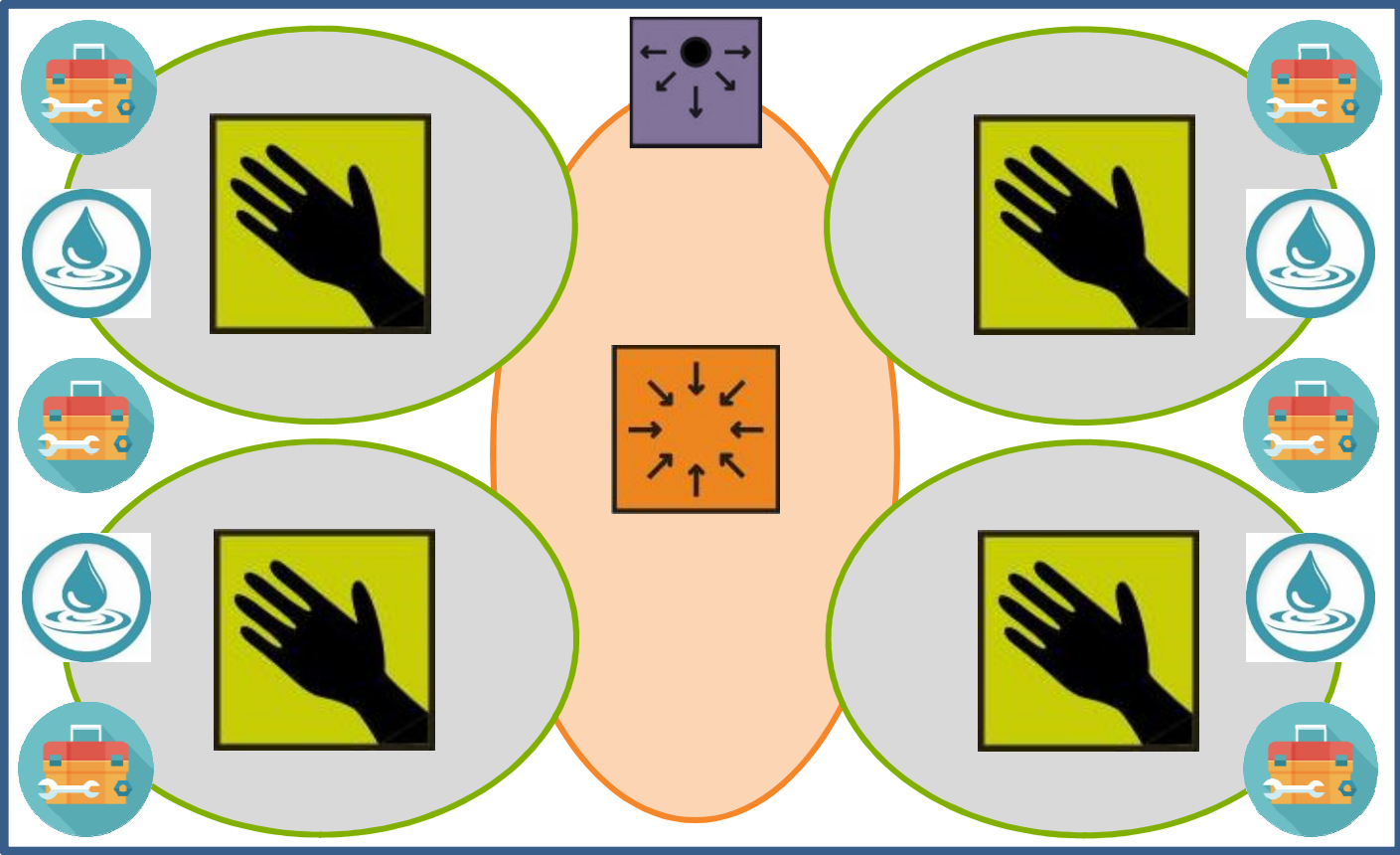
6.1 Planning for Learning Communities

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

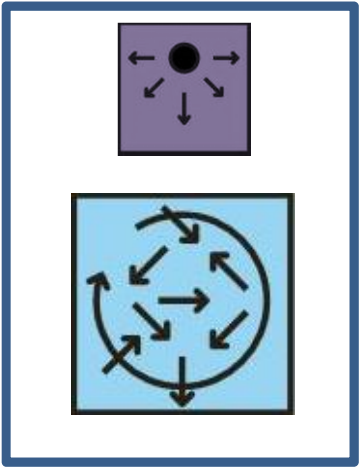


6.1 Planning for Learning Communities

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]

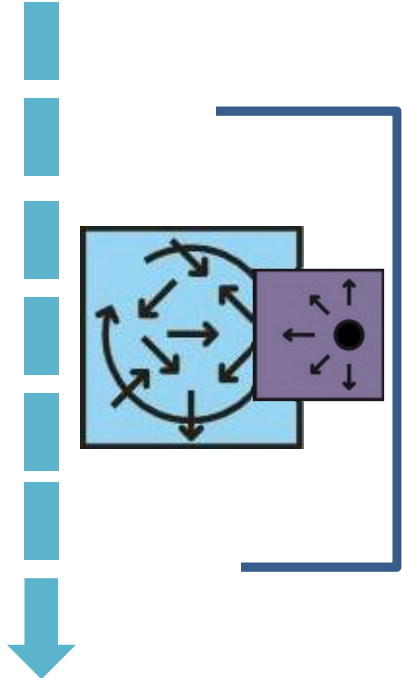


Sticky Space

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



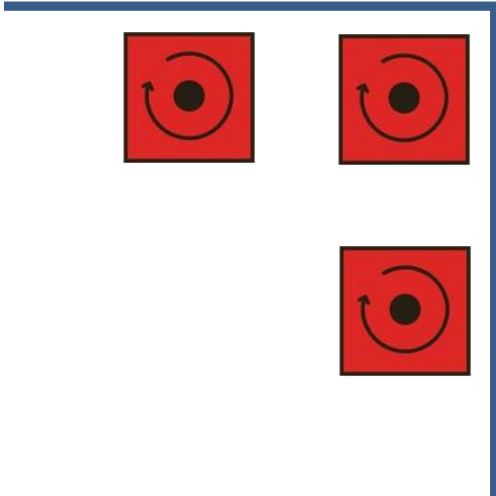
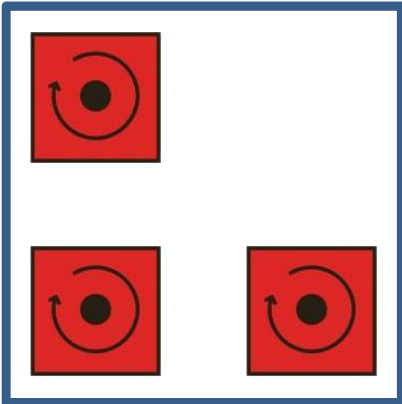
6.1 Planning for Learning Communities

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	

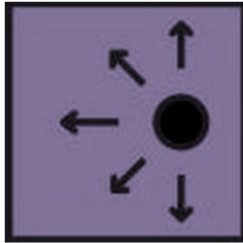


6.1 Planning for Learning Communities

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	

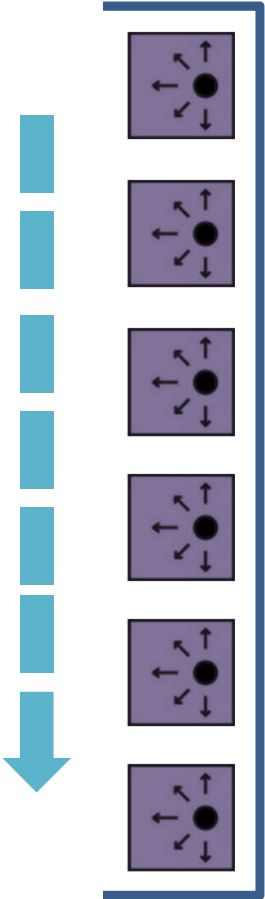


Gallery

Showing / Sharing

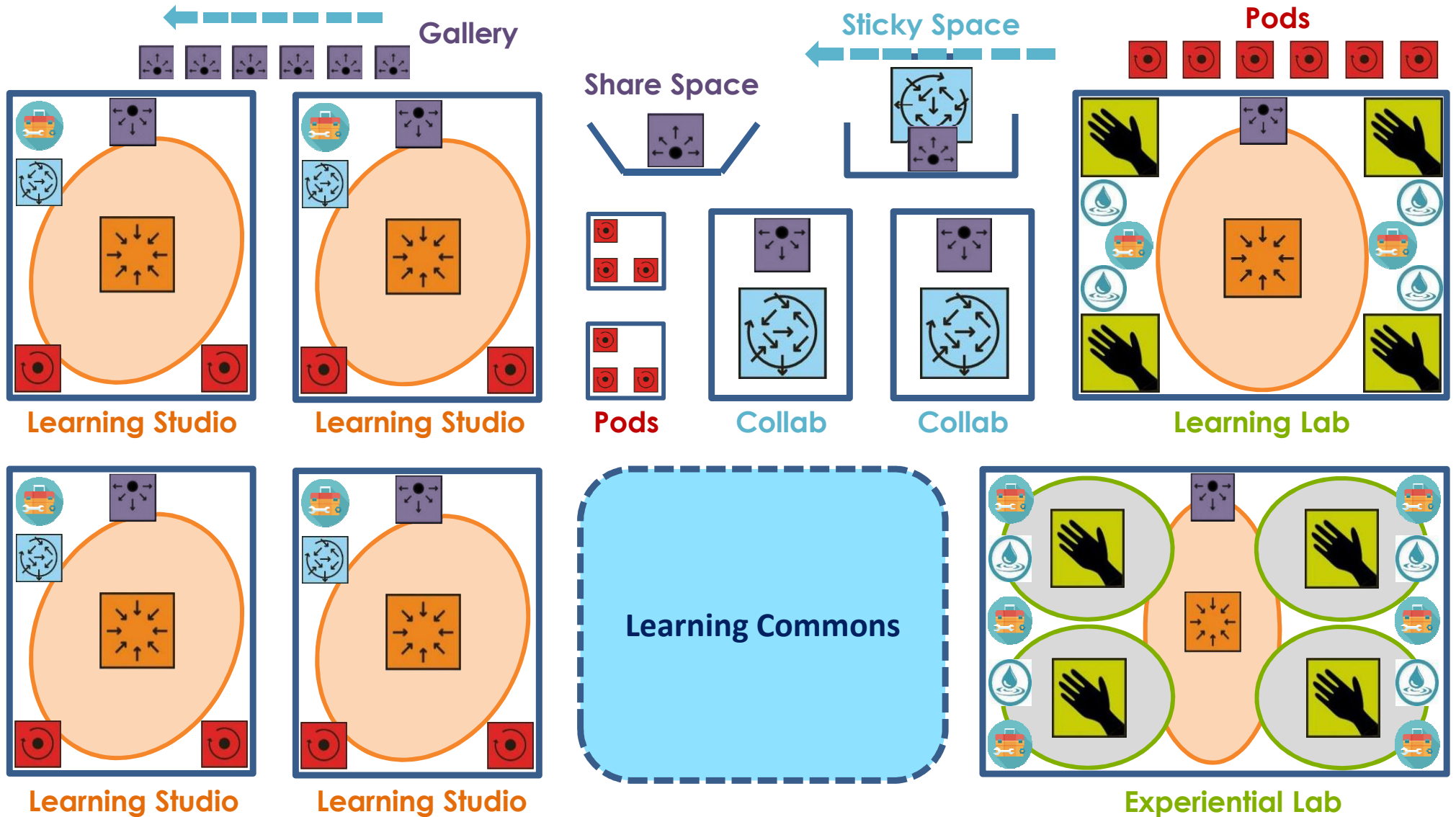
of people **unlimited**

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 =



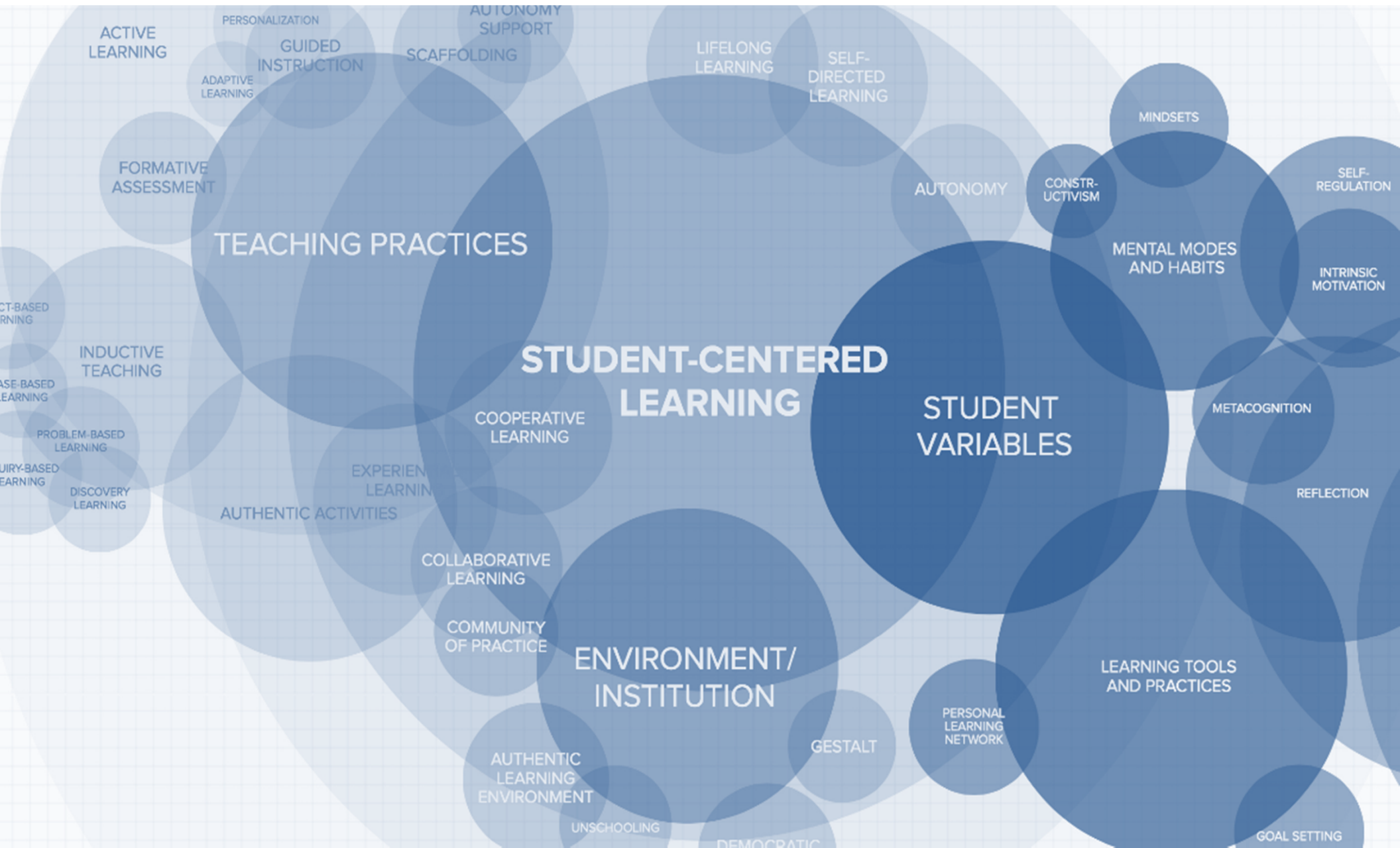
8.0 SPACE REQUIREMENTS



8.2 Building Area, Teaching Space & Capacity Summary

Space Type		Recommended		Learning Community Model [12 Learning Communities]		
Main School Building		# TS	Total SF	# 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	Potential Types of Learning Communities		
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	CAPACITY CALCULATIONS		
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
Net Subtotal Programmed Areas			222,145	Science	24	12
Grossing Factor [Walls, Circulation, Building Systems, etc.]		38%	84,415	Visual Arts	24	4
Main School Building Total		93	306,560	Career & Tech Ed + NJROTC	20	14
				Music & PA	30	4
				Gym / PE	30	9
Outbuildings			Total	Special Needs	8	2
	Baseball Restroom / Concessions / Pressbox Facilities	1	1,200	MAXIMUM CAPACITY		93
	Baseball Dugouts	2	480	Utilization Factor		
	Softball Dugouts	2	400	OPTIMAL CAPACITY		
	Lawn Maintenance Storage	1	400			
	Band Storage	1	300	Core Teaching Spaces [TS]	60	(Includes Foreign Language)
Outbuildings Total			2,780	Special Needs		2
				Electives:		
Natorium Building Option [SF Replicates Existing Facilities]			Total	Visual Arts		4
	Natorium [Pool Enclosure] 25 meter x 6 lanes	1	6,600	C & TE + NJROTC		14
	Spectator Seating [equal to existing]	1	1,050	Music & Performing Arts		4
	Lobby	1	800	Physical Education		9
	Locker Rooms / Restrooms	1	3,300	Total Electives		31
	Pool Equipment	1	750	Total Teaching Spaces		93
Natorium Building Total			12,500	% Core		66%
				% Elective		34%

9.0 SPATIAL ORGANIZATION



9.3 Learning Community Organizational Models

1.0	Learning Communities x 12
1.01	Learning Studio
1.02	Learning Lab [Science, M&HSP]
1.03	Experiential Lab [TS counted in C&TE]
1.04	Lab Storage
1.05	Collab [Breakout]
1.06	Pod
1.07	Learning Commons [Flex Space]
1.08	Toolbox [included in Learning Commons]
1.09	Genius Bar [included in Learning Commons]
1.10	Pod [included in Learning Commons]
1.11	Student Storage [included in Learning Commons]
Net Space Subtotal	
Number of Learning Communities	
Learning Communities Net Area Subtotal	

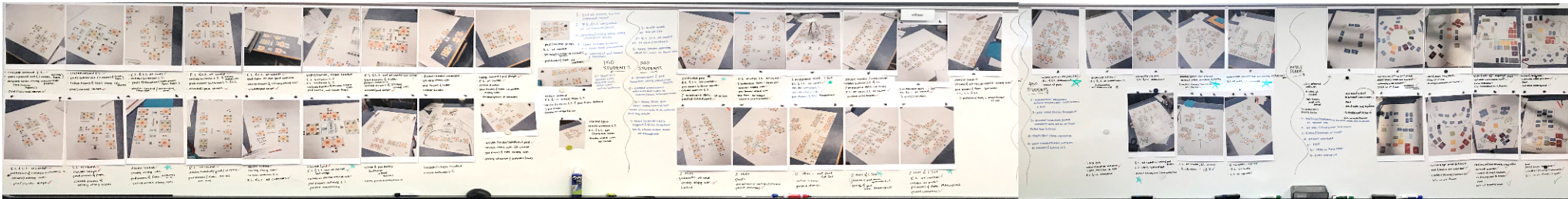
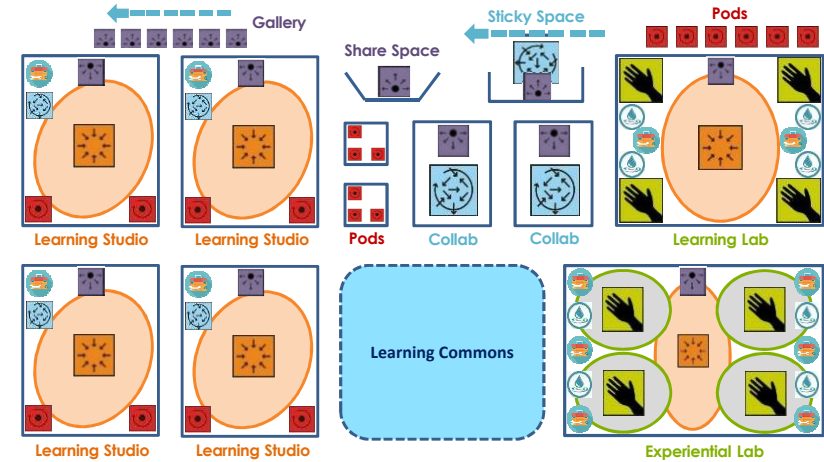
Recommended 1889 Student Program				
Quantity	TS	SF	Total	
4	4	750	3,000	
1	1	1,125	1,125	
1	0	1,500	1,500	
2		200	400	
2		250	500	
2		75	150	
1		825	825	
1		0	0	
1		0	0	
6		0	0	
1		0	0	
5			7,500	
			x	12
60				90,000

2.0	Support Communities x 6
2.01	Flex Resource Room [Remediation, Special Needs]
2.02	Conference Room
2.03	Admin Office [Decentralized]
2.04	Teacher Planning Space
2.05	Instructional Material Storage
2.06	Work/ Copy
2.07	Staff Restrooms
2.08	Student Restroom [Male / Female]
Net Space Subtotal	
Number of Support Community Connectors	
Support Communities Net Area Subtotal	

Recommended 1889 Student Program				
2		375	750	
1		250	250	
1		150	150	
1		750	750	
1		150	150	
1		300	300	
2		50	100	
2		200	400	
2,850				
			x	6
17,100				

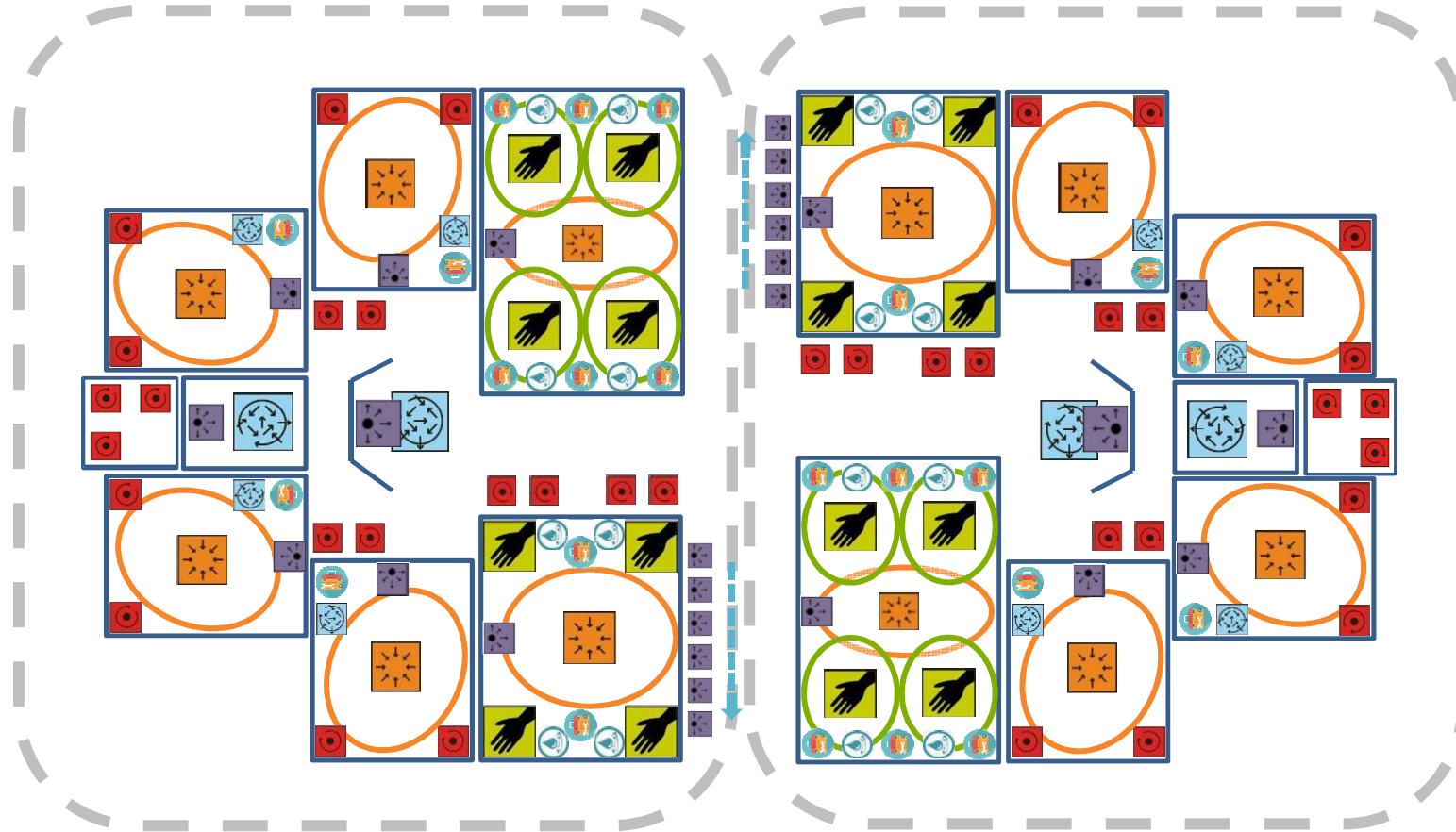
Applicable Prototype Spaces

One 140 Student Learning Community =



9.3 Learning Community Organizational Models

LC
140
Students



LC
140
Students

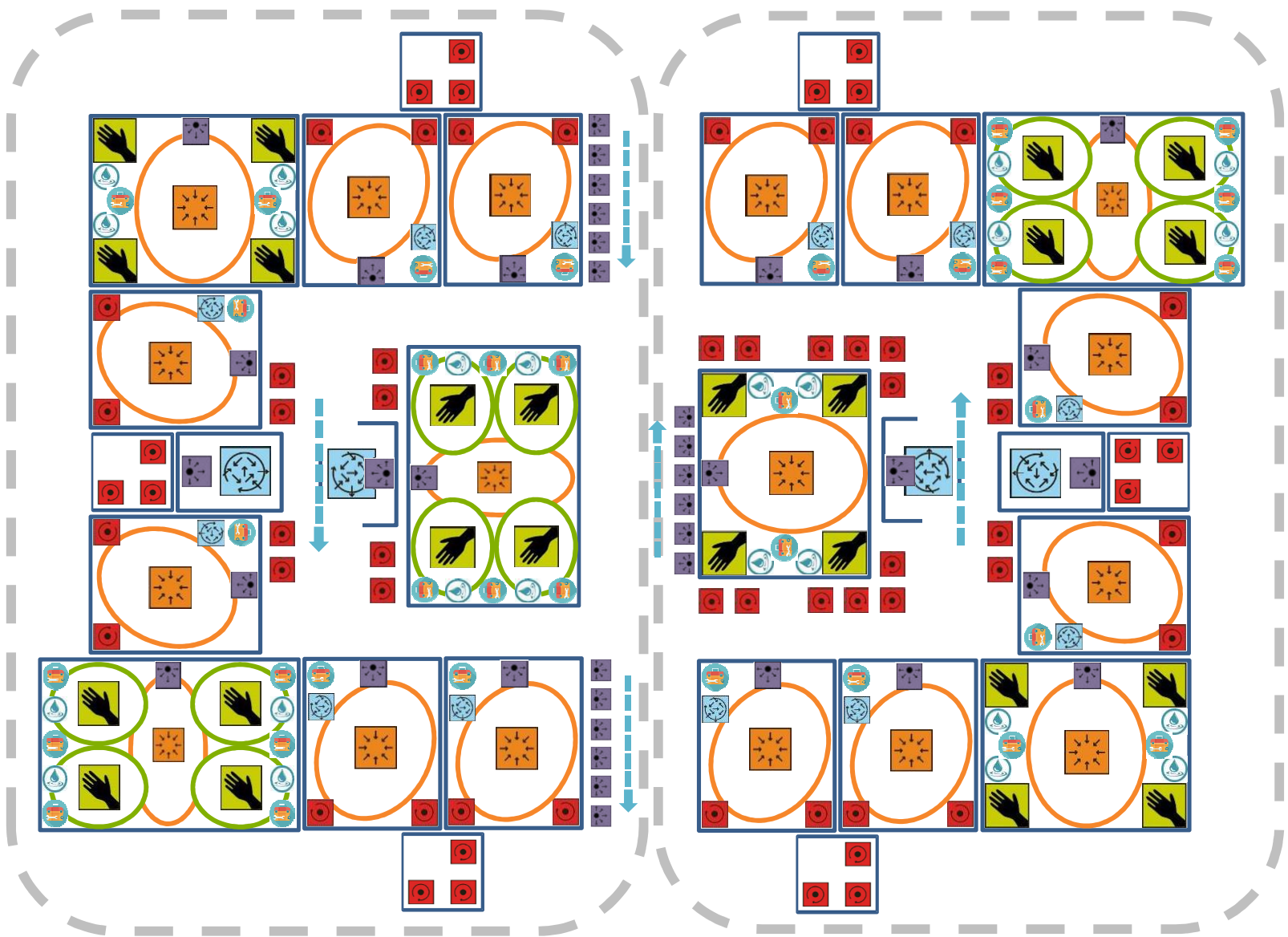
LC 140 x 2 = 280 Students

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

9.3 Learning Community Organizational Models

LC
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

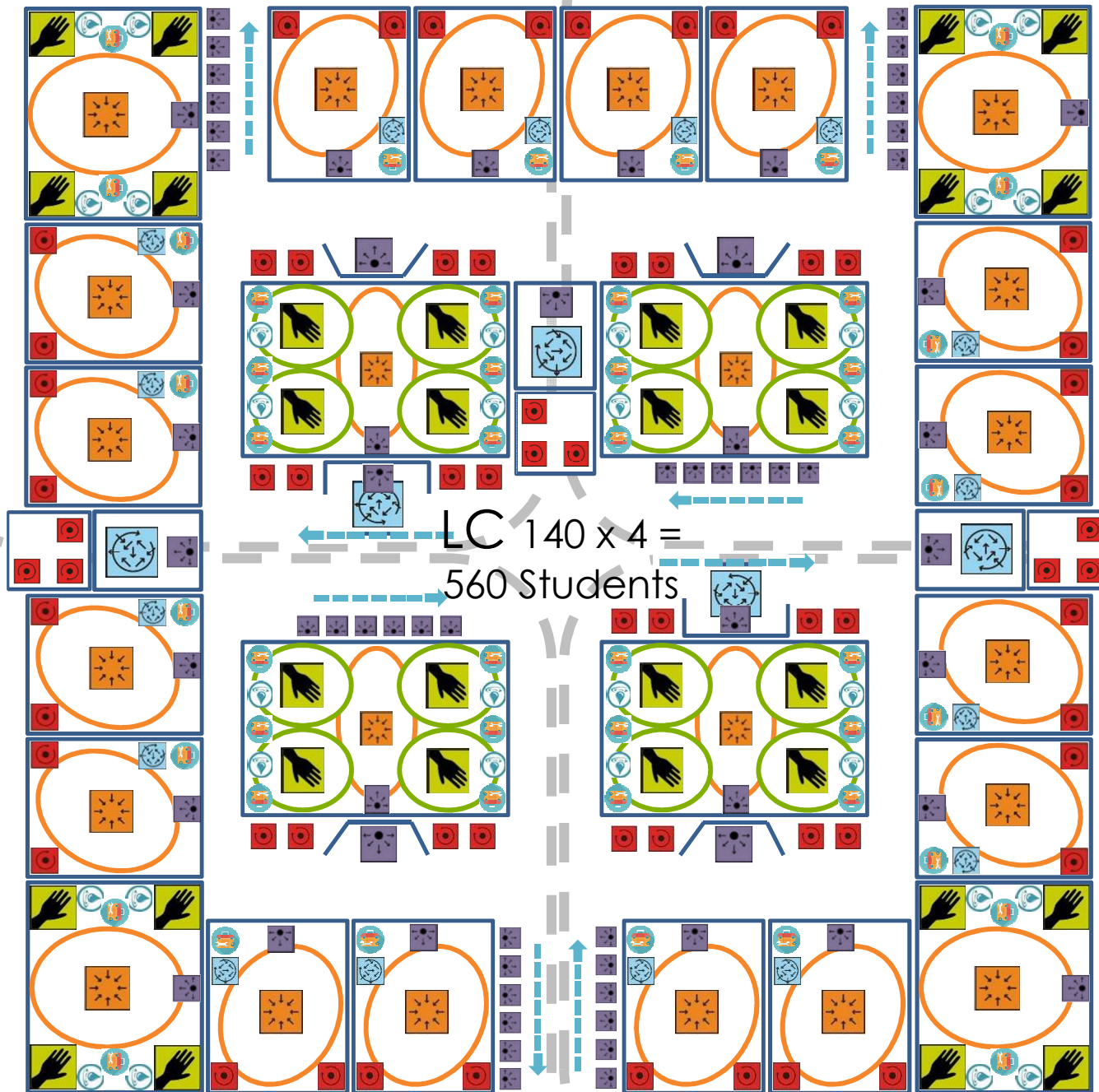
LC
140
Students

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

LC
140
Students

LC
140
Students

LC
140
Students



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

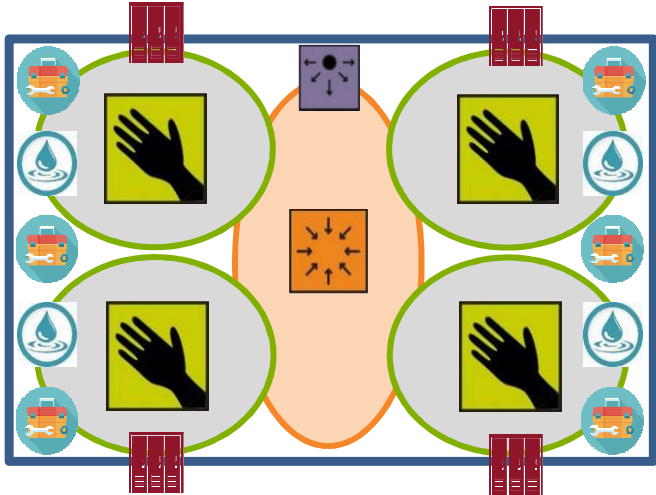


Source: Future of Jobs Report, World Economic Forum

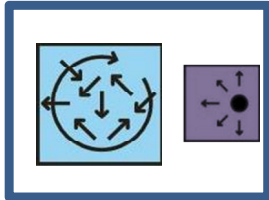
Applicable Prototype Spaces

Experiential Lab

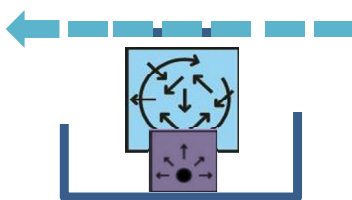
of people **20-24**



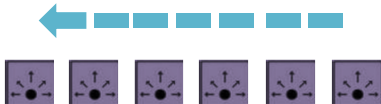
Collab



Sticky Space



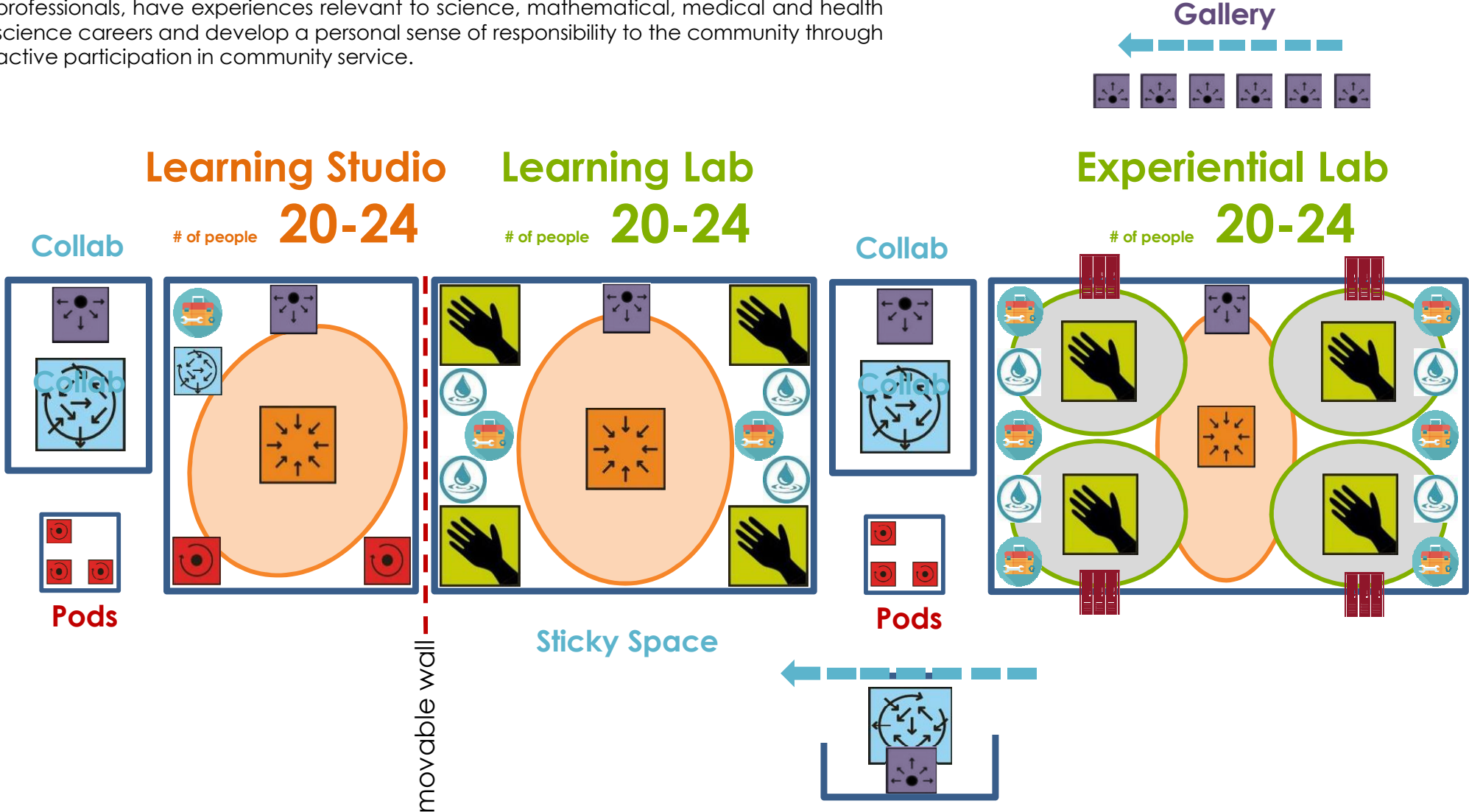
Gallery



9.6 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.

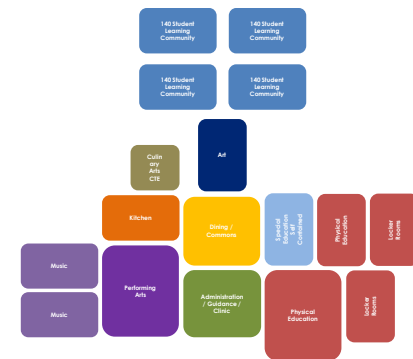
Applicable Prototype Spaces



9.14 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 2nd 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
- 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



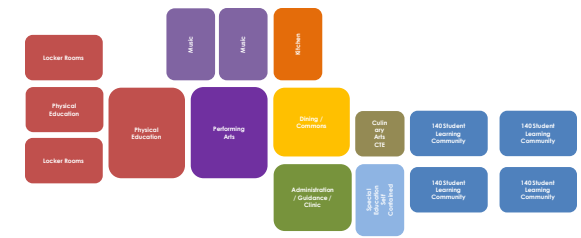
A



B



C



D

Re-Imagine Maury High School



An Educational Specifications Process



**ARCHITECTURE
INTERIOR DESIGN**

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Re-Imagine Maury High School



An Educational
Specifications Process

Additional Slides from
D.L.T. Presentation

May 22, 2018

4.1 Design Principles for Learning

Exemplary Learning at Maury High School is...

STUDENT-CENTERED



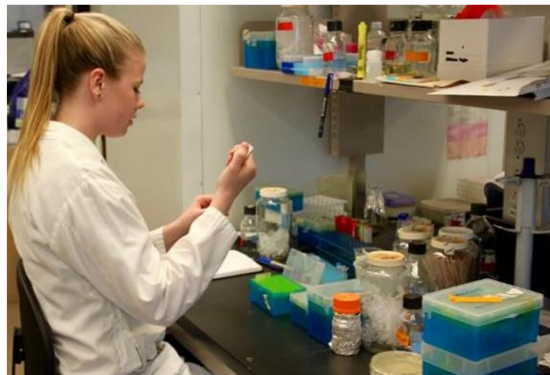
We believe that exemplary learning is, as much as possible, designed by the learner and led by the learner.

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.

4.2 Design Principles for Learning Environments

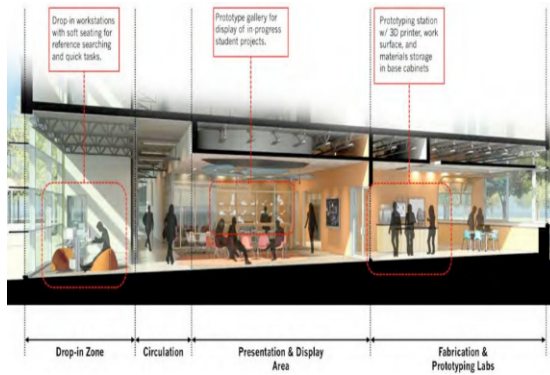
Our Re-Imagined Maury High School will...

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.

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



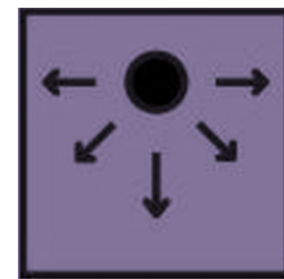
watering-hole



cave



life



mountain-top

Metaphors for Learning Resources:



toolbox



genius bar



water



student storage

5.1 Metaphors for Primordial Learning Environments

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



campfire

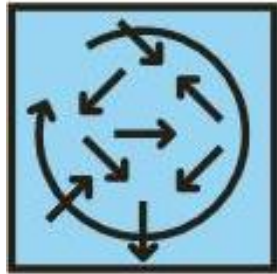
learning from: experts / storytellers

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



5.1 Metaphors for Primordial Learning Environments

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



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 various sizes and times, and where you might bump into someone



5.1 Metaphors for Primordial Learning Environments

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



cave

learning
from: 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



5.1 Metaphors for Primordial Learning Environments

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



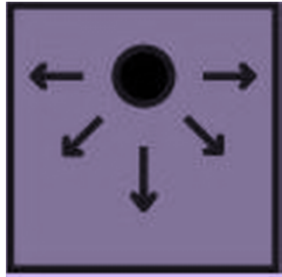
life

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:

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



5.2 Metaphors for Learning Resources

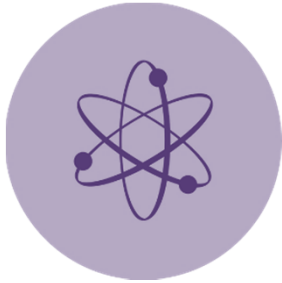


toolbox

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



5.2 Metaphors for Learning Resources



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



5.2 Metaphors for Learning Resources

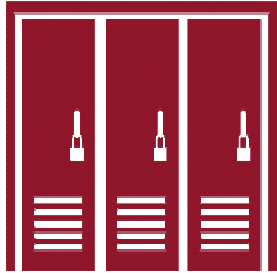


water

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



5.2 Metaphors for Learning Resources





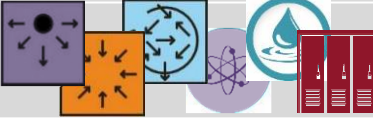


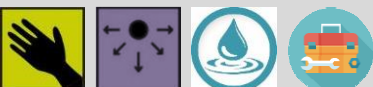



student
storage

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



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	

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	
Net Space Subtotal			5		7,500	
Number of Learning Communities				x	12	
Learning Communities Net Area Subtotal			60		90,000	

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	
Net Space Subtotal					2,850	
Number of Support Community Connectors				x	6	
Support Communities Net Area Subtotal					17,100	

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						

8.5 Space Technology Systems Summary

Key

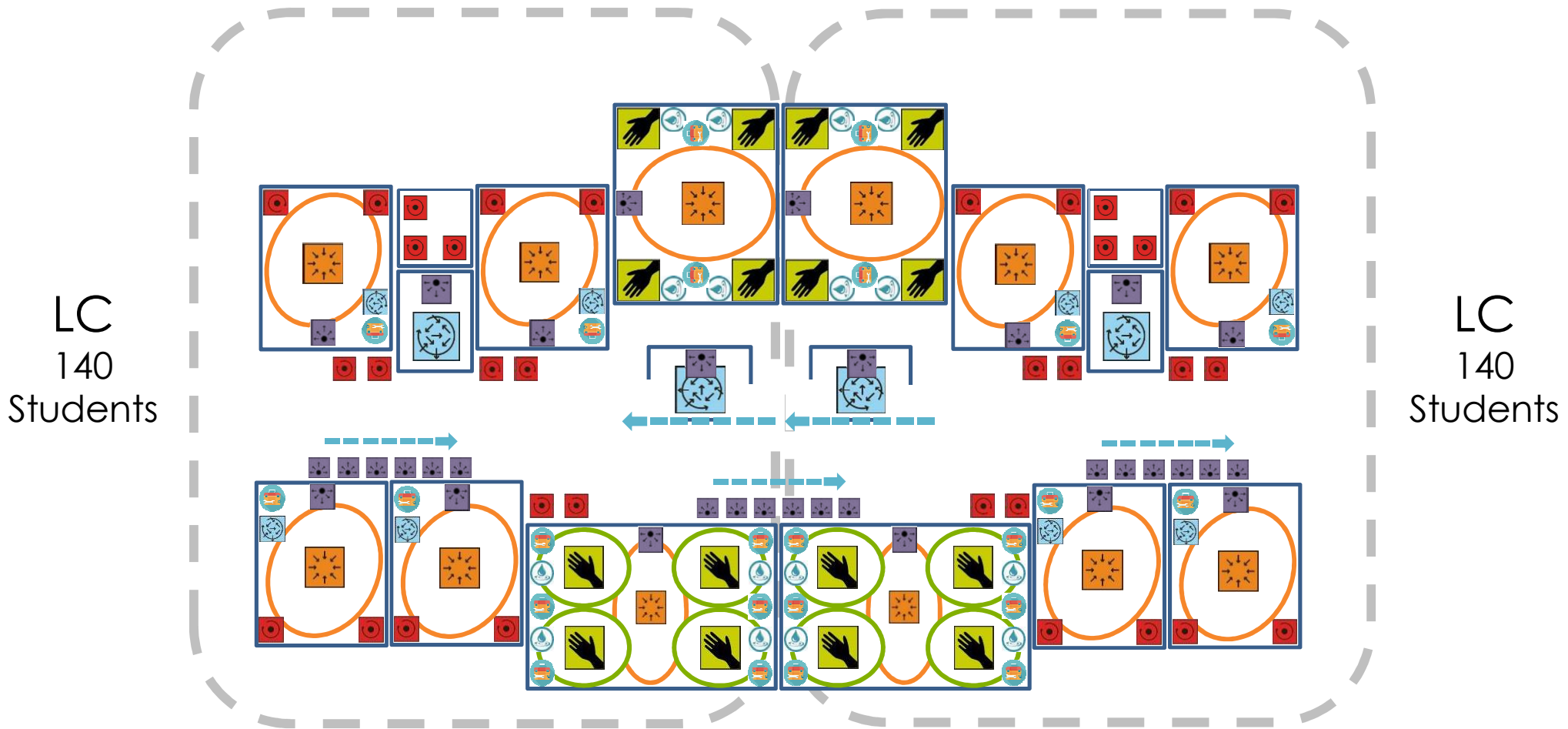
<input checked="" type="checkbox"/>	Include within Space
<input type="checkbox"/>	Indirect Access from Space

White Marker Board Surfaces	Wi-Fi with High Bandwidth
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

1.0	Learning Communities x 12	Qty.	Display	Technology Systems
1.01	Learning Studio	4	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
1.02	Learning Lab [Science, M&HSP]	1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
1.03	Experiential Lab [TS counted in C&TE]	1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
1.04	Lab Storage	2	<input type="checkbox"/>	<input type="checkbox"/>
1.05	Collab [Breakout]	2	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
1.06	Pod	2	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
1.07	Learning Commons [Flex Space]	1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
1.08	Toolbox [included in Learning Commons]	1	<input type="checkbox"/>	<input type="checkbox"/>
1.09	Genius Bar [included in Learning Commons]	1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
1.10	Pod [included in Learning Commons]	6	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
1.11	Student Storage [included in Learning Commons]	1	<input type="checkbox"/>	<input type="checkbox"/>

2.0	Support Communities x 6	Qty.	Display	Technology Systems
2.01	Flex Resource Room [Remediation, Special Needs]	2	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
2.02	Conference Room	1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
2.03	Admin Office [Decentralized]	1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
2.04	Teacher Planning Space	1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
2.05	Instructional Material Storage	1	<input type="checkbox"/>	<input type="checkbox"/>
2.06	Work/ Copy	1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
2.07	Staff Restrooms	2	<input type="checkbox"/>	<input type="checkbox"/>
2.08	Student Restroom [Male / Female]	2	<input type="checkbox"/>	<input type="checkbox"/>

9.3 Learning Community Organizational Models



LC 140 x 2 = 280 Students

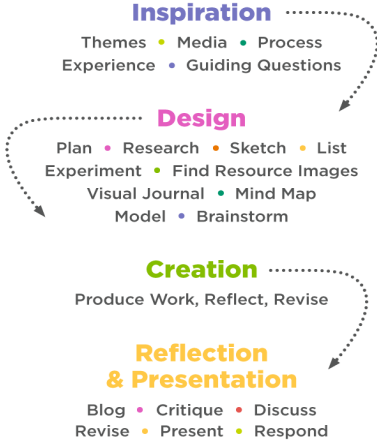
12 LC 140s or 6 LC 280s = 1,680 Students x .85 = 1,428 Optimal Student Capacity

9.5 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
Career & Technical Education Net Area Subtotal			14		5,100

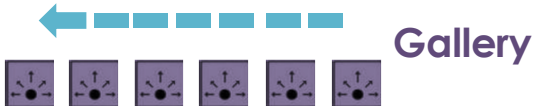
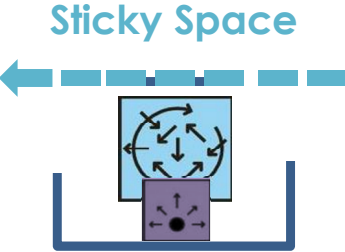
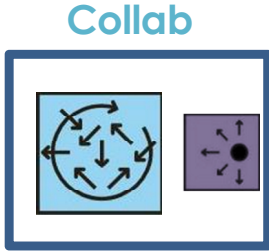
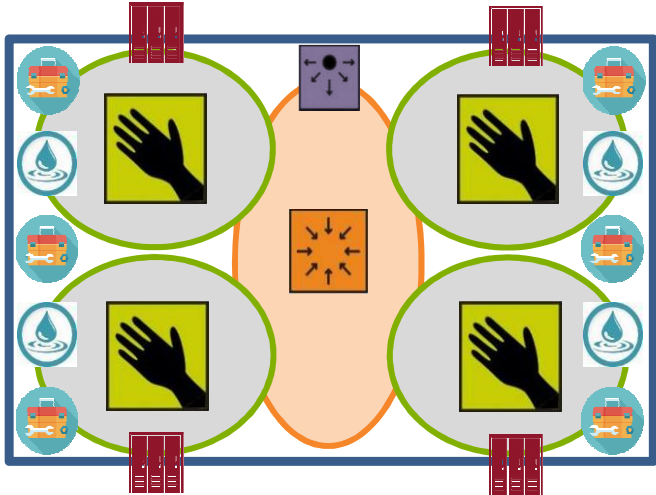
DESIGN PROCESS THINKING



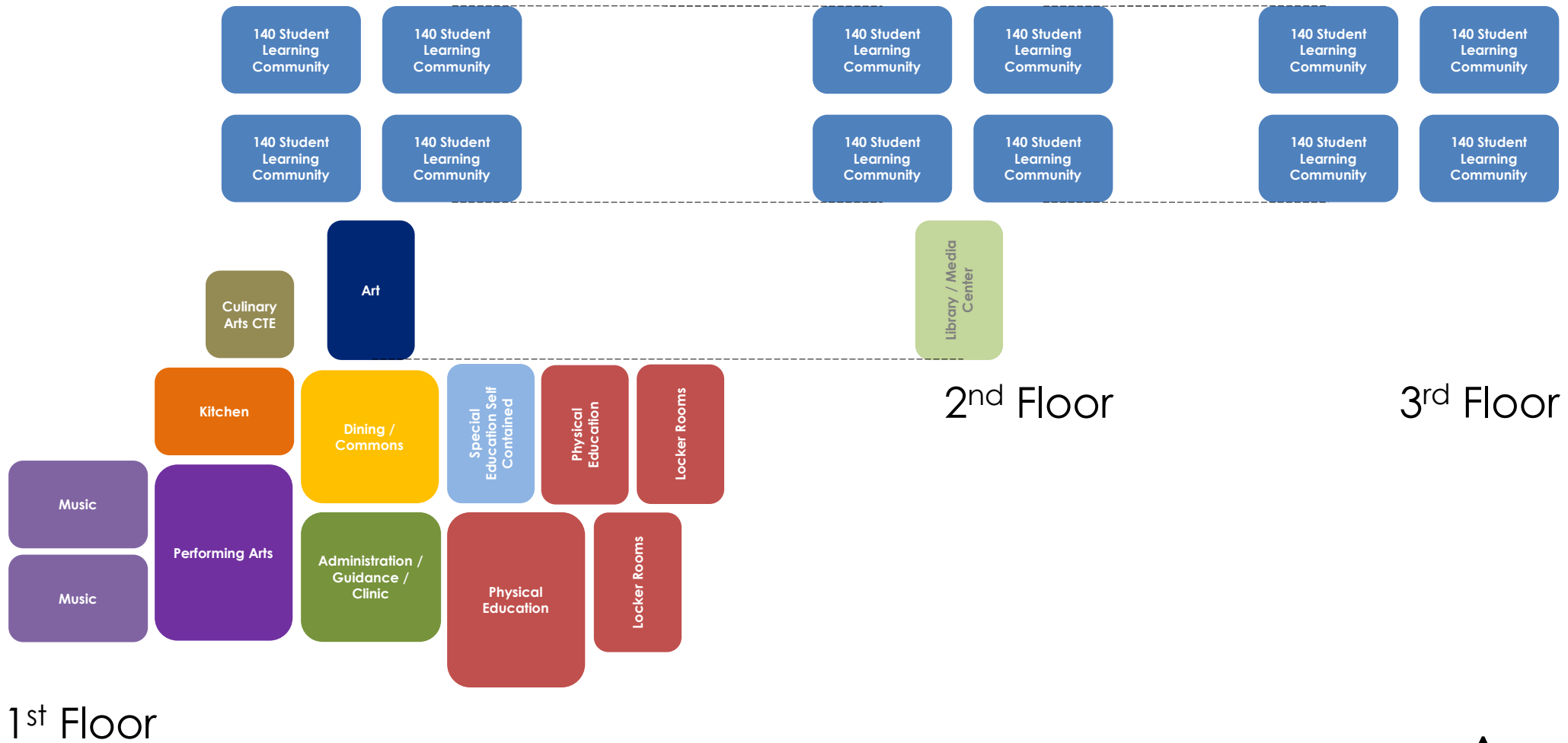
Applicable Prototype Spaces

Experiential Lab

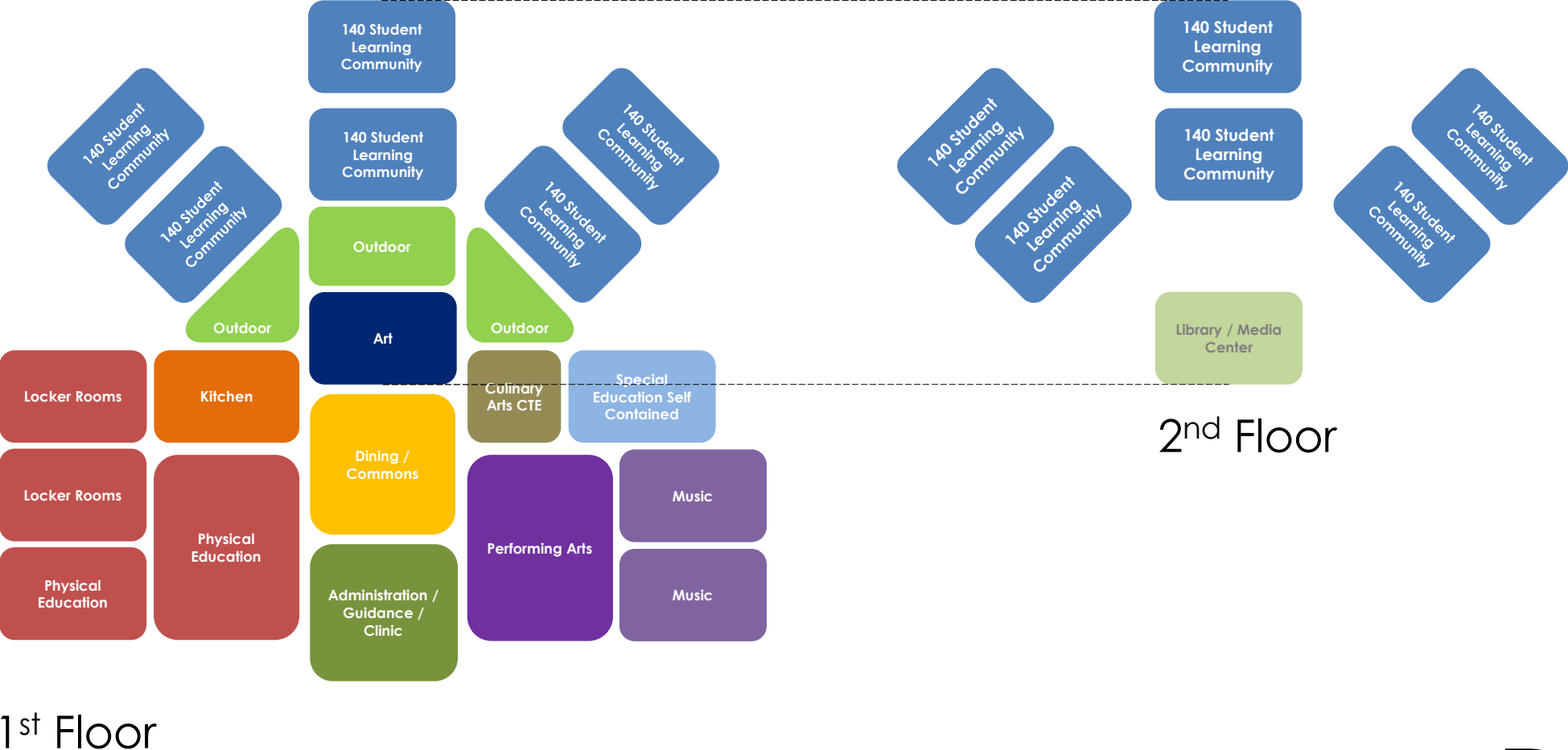
of people **20-24**



9.14 Building Organization Models

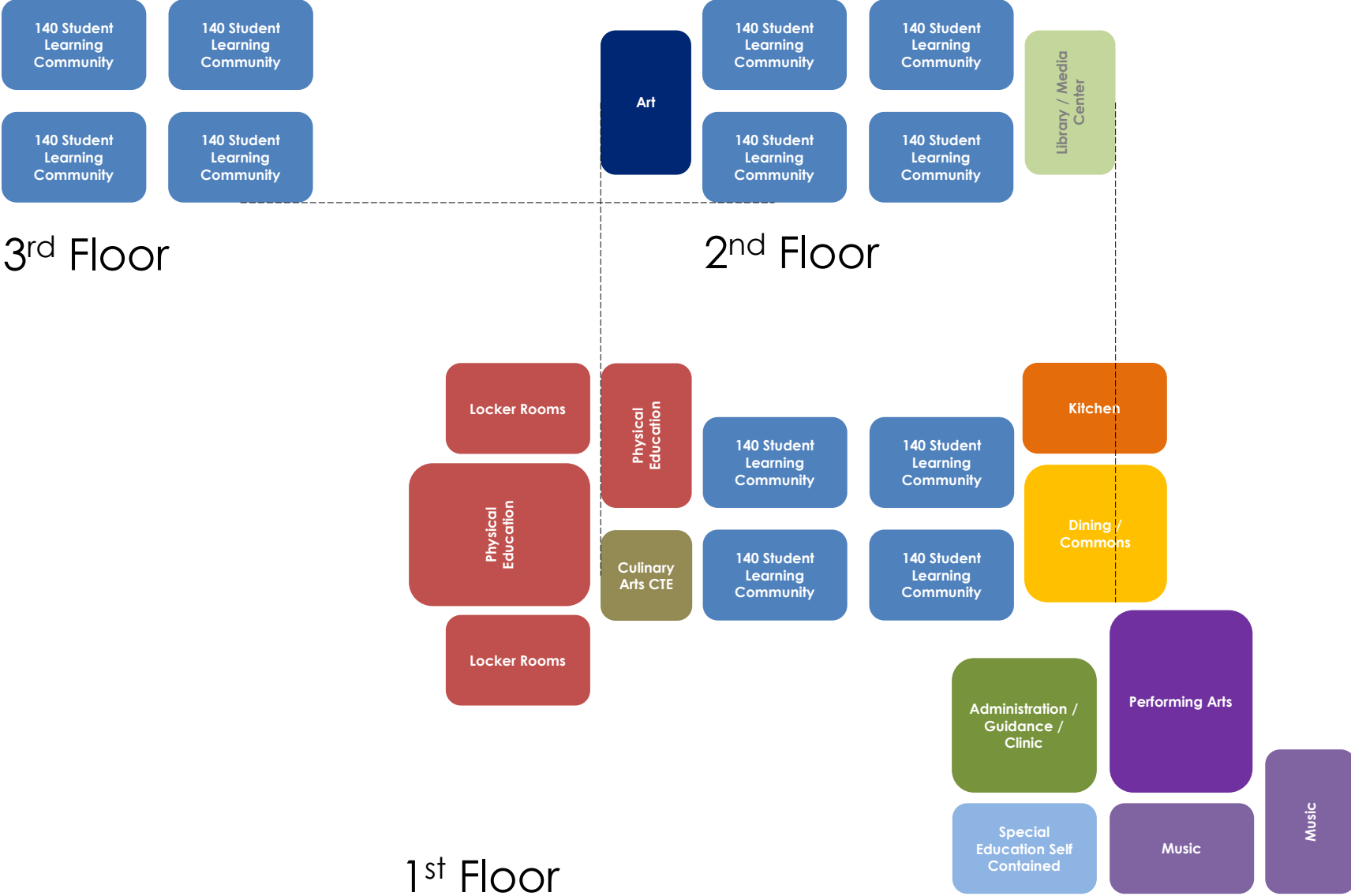


9.14 Building Organization Models

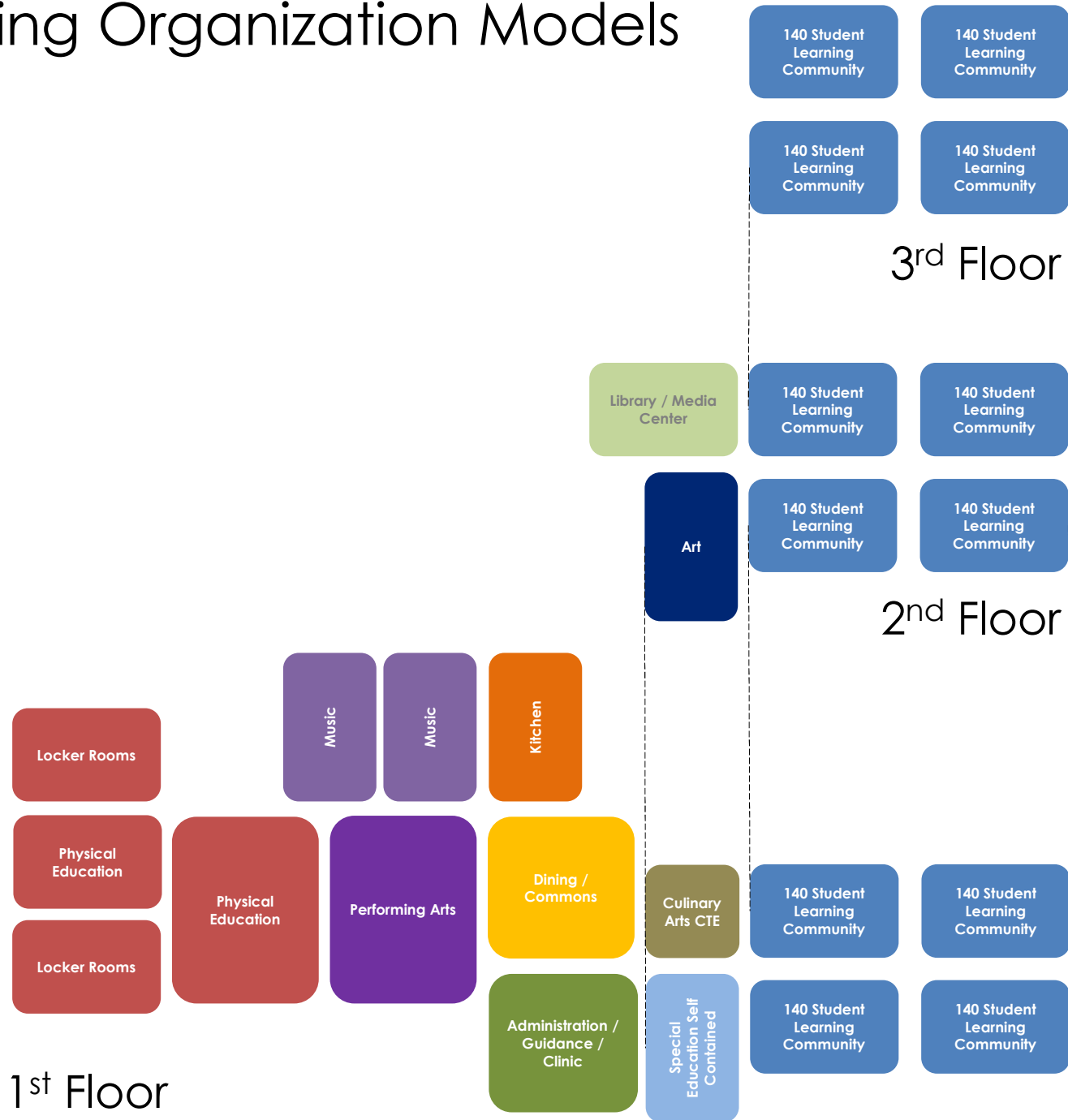


B

9.14 Building Organization Models



9.14 Building Organization Models



D