Re-Imagine Maury High School

An Educational Specifications Process

School Board Presentation of Draft Report

June 6, 2018

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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
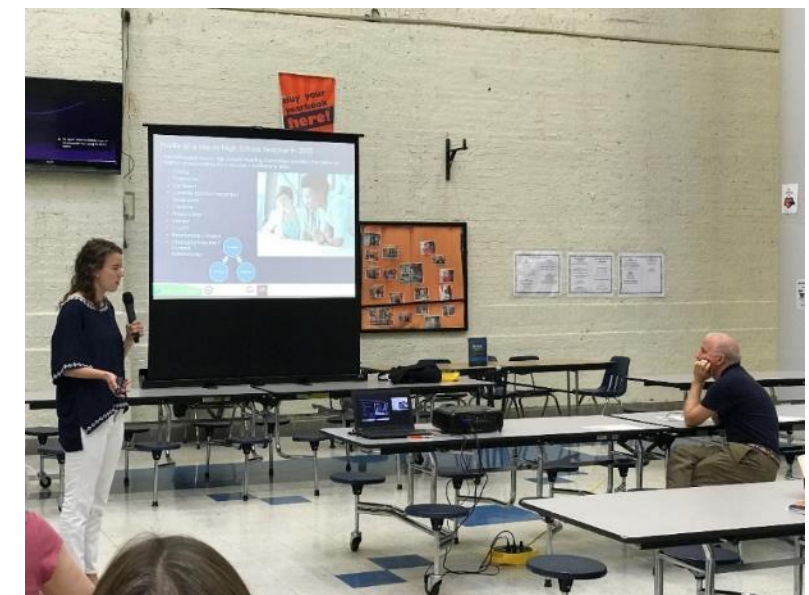

Community Meeting #2, April 12th, 2018

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

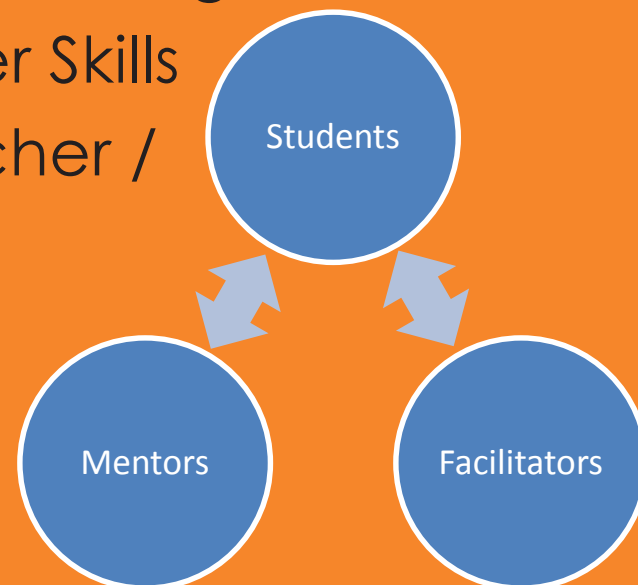Presentation to School Board, June 6th, 2018

2.0 CONTEXT

Original Construction 1911

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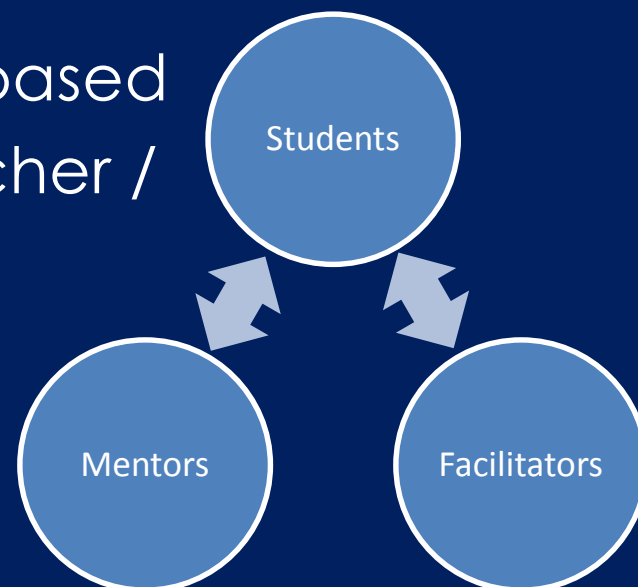
- Self-directed Learning
- Learning How to Learn
- Learning Anytime-Anywhere
- Learning Resiliency
- Learning Social & Emotional Skills
- Learning Communication Skills
- Learning Collaboration Skills & Teamwork
- Dual Enrollment w/ Higher Ed.
- Learning Career Skills
- Changing Teacher / Student Relationships

Students

Mentors

Facilitators

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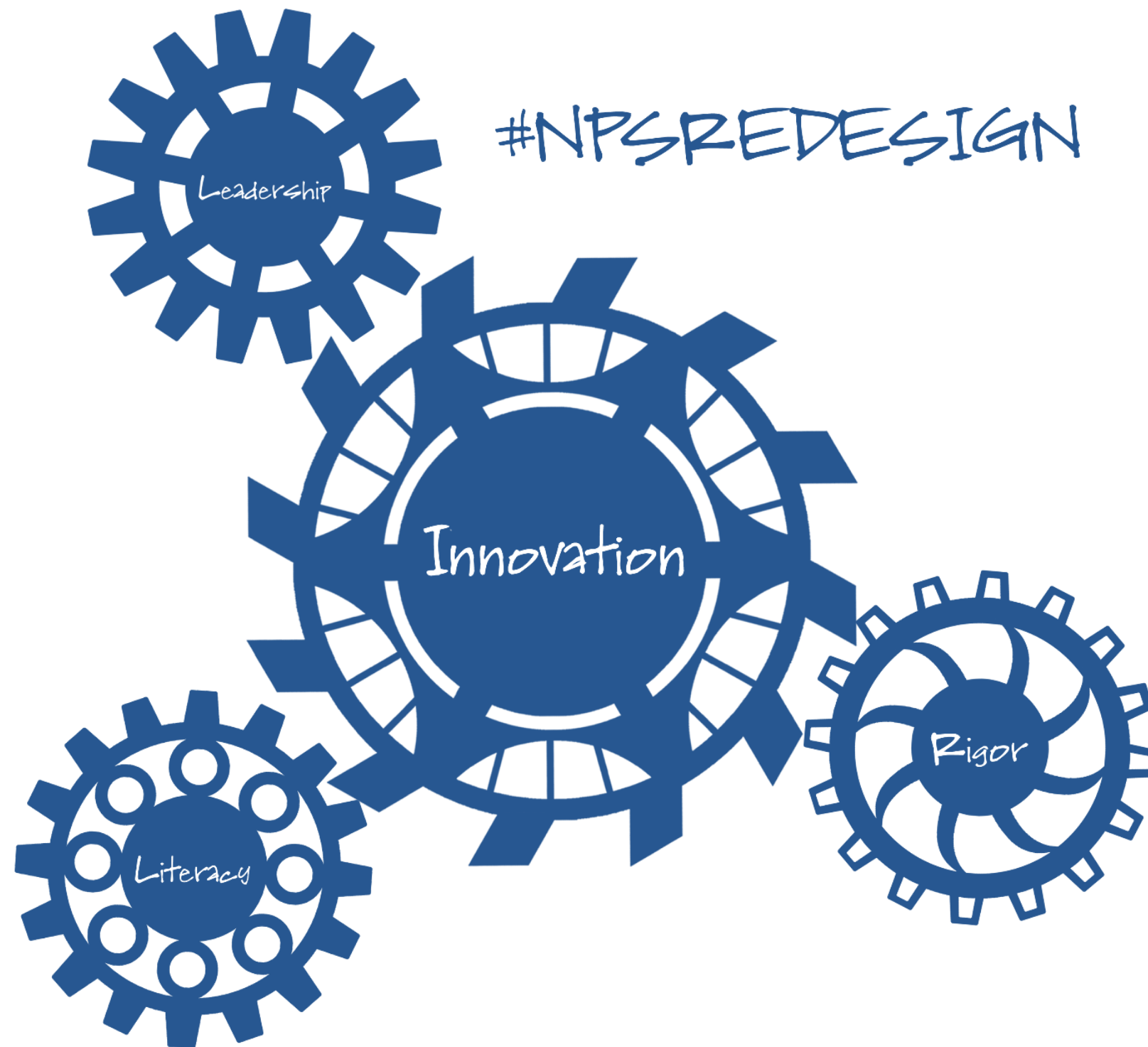THE CORNERSTONE OF A PROUDLY DIVERSE COMMUNITY

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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

Students

Mentors

Facilitators

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#NPSREDESIGN

Leadership

Innovation

Rigor

Literacy

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

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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
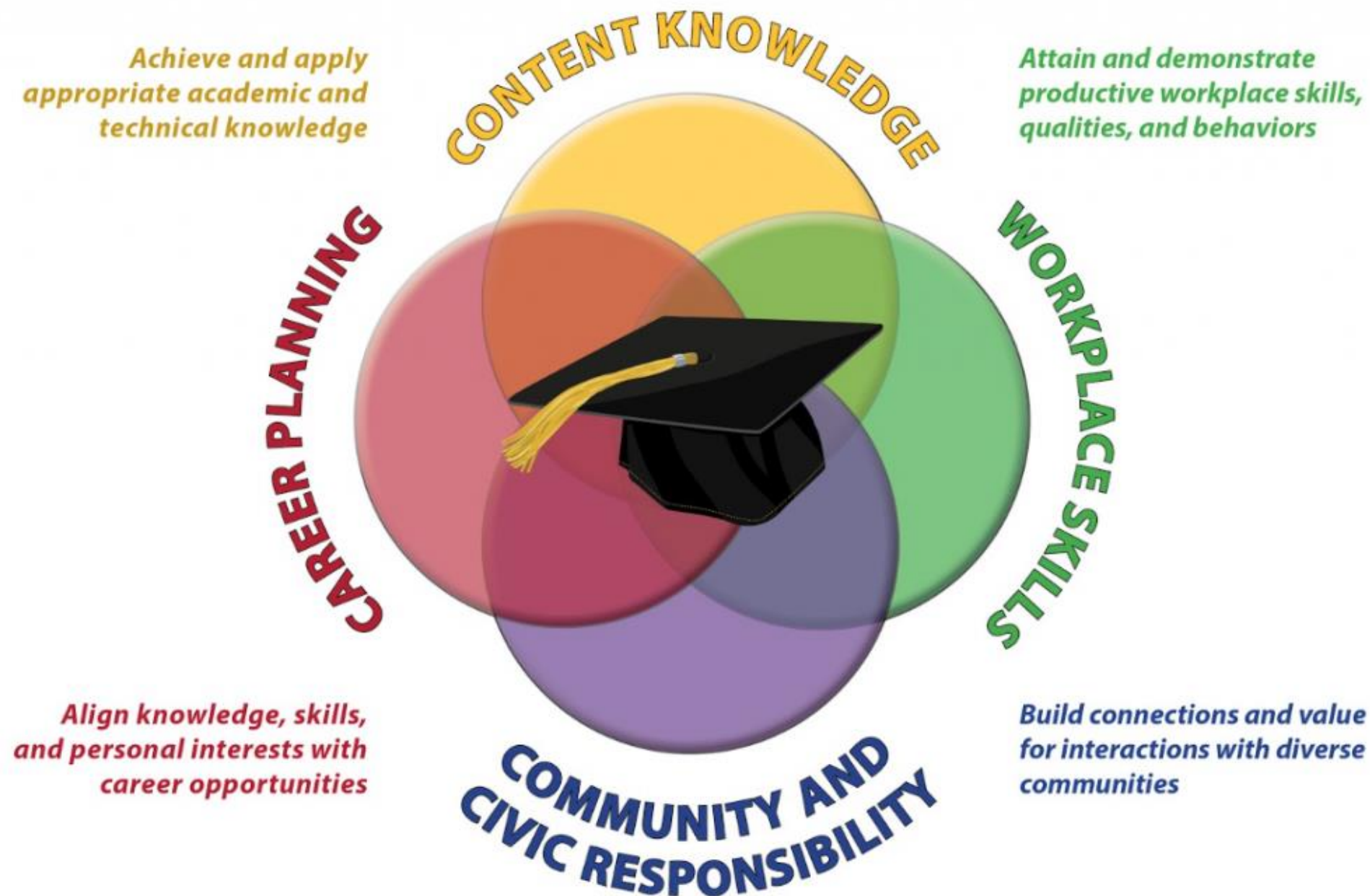- mentoring
- teaching
- leading

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:

Achieve and apply appropriate academic and technical knowledge

Attain and demonstrate productive workplace skills, qualities, and behaviors

CONTENT KNOWLEDGE

CAREER PLANNING

WORKPLACE SKILLS

COMMUNITY AND CIVIC RESPONSIBILITY

Align knowledge, skills, and personal interests with career opportunities

Build connections and value for interactions with diverse communities

3.4 Profiles of Learners

What are the 21st-century skills that every student needs?

Source: World Economic Forum, 2016
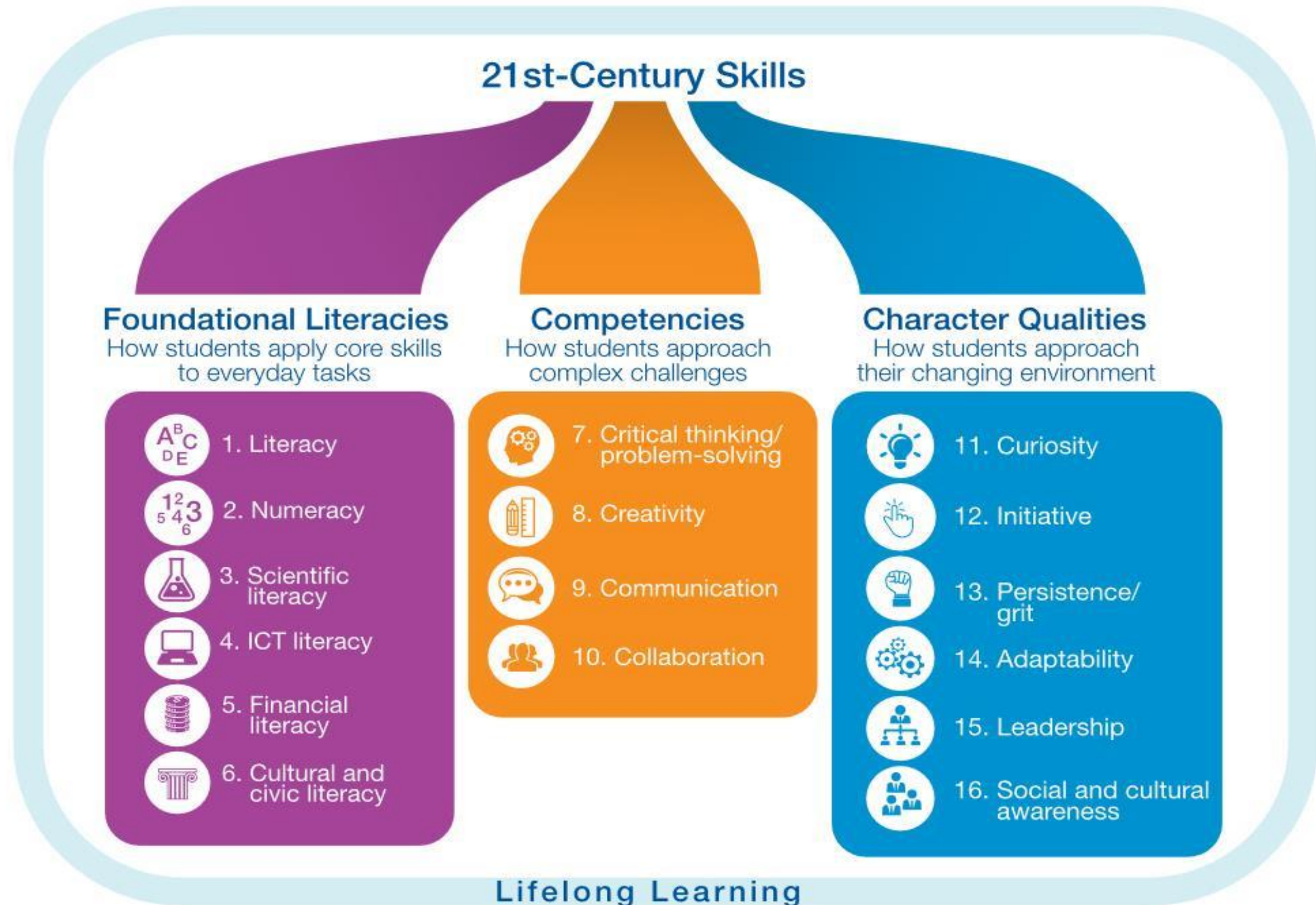
3.5   Community Meeting No. 2 :: SWOP Results

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)

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4.0 DESIGN PRINCIPLES

4.1 Design Principles for Learning

Learning is...

- STUDENT - CENTERED
- ACCESSIBLE to ALL
- INQUIRY - BASED
- INTERDISCIPLINARY
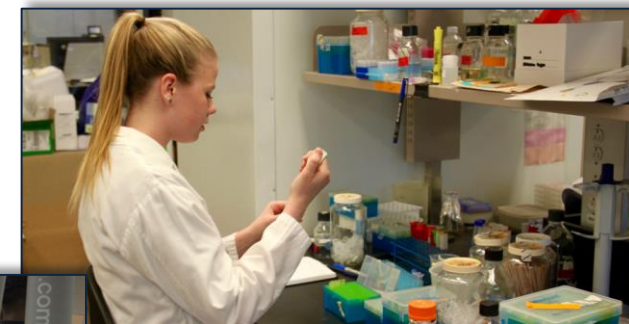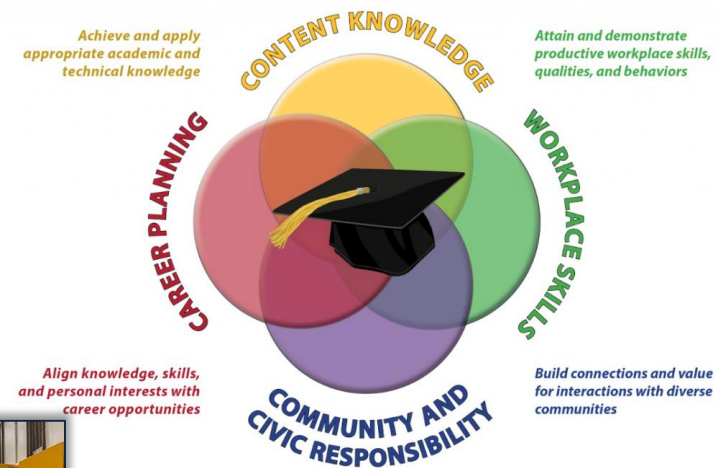- COLLABORATIVE
- RELATIONAL
- AUTHENTIC / EXPERIENTIAL
- WHOLE - LIFE / LIFE - LONG
- COMMUNITY - ORIENTED

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

Achieve and apply appropriate academic and technical knowledge

Attain and demonstrate productive workplace skills, qualities, and behaviors

CONTENT KNOWLEDGE

CAREER PLANNING

WORKPLACE SKILLS

Align knowledge, skills, and personal interests with career opportunities

Build connections and value for interactions with diverse communities

COMMUNITY AND CIVIC RESPONSIBILITY

4.2 Design Principles for Learning Environments

Our Reimagined Maury High School will...

- BUILD on TRADITION

- BE TIMELESS /
  FOCUS on the FUTURE

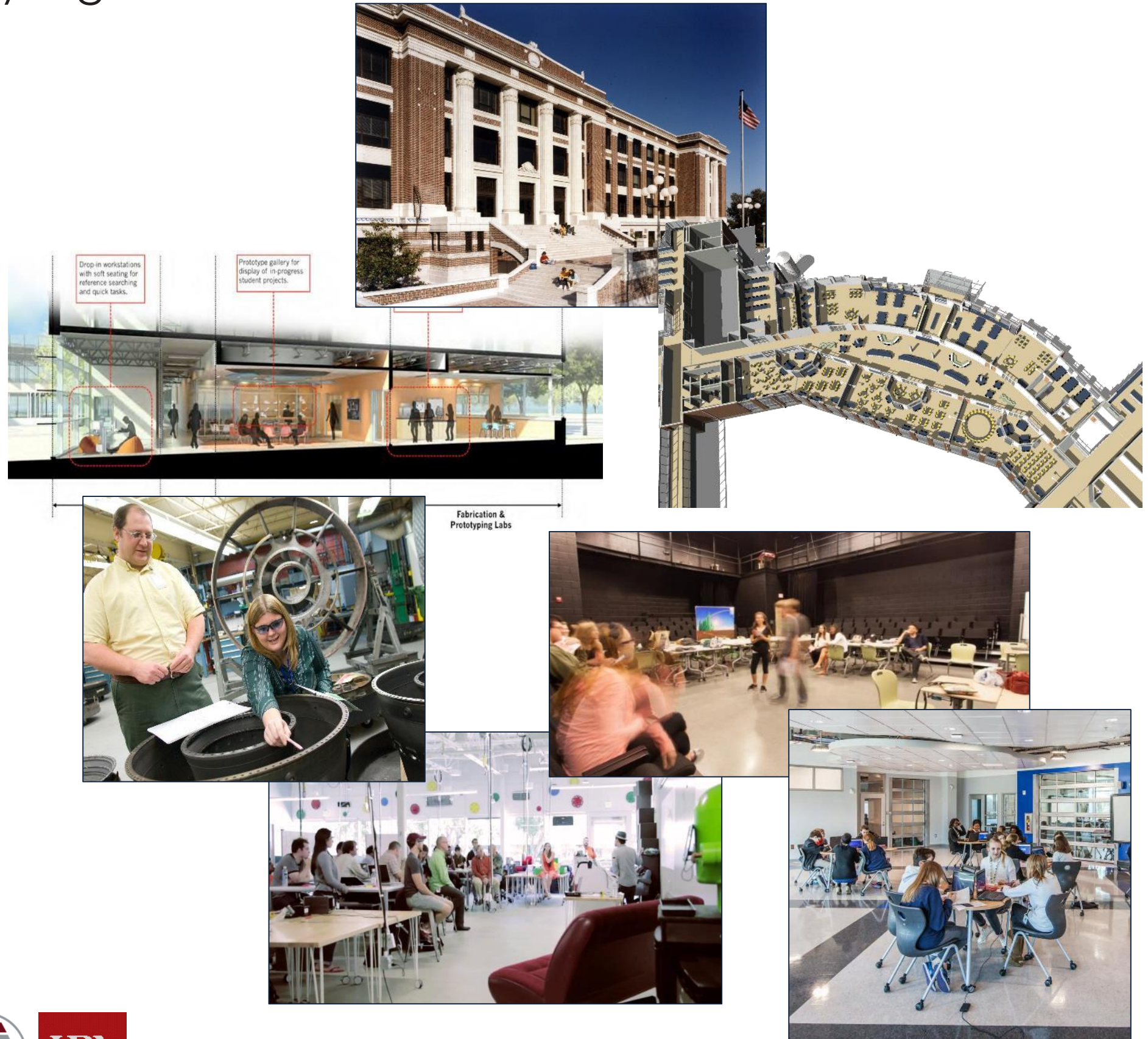- PROVIDE LEARNING
  COMMUNITIES

- 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
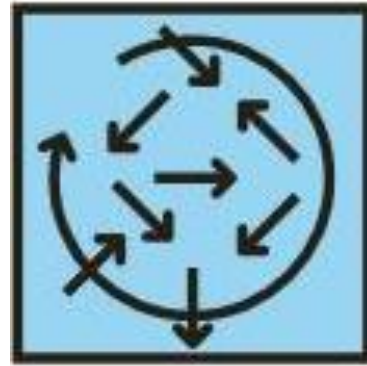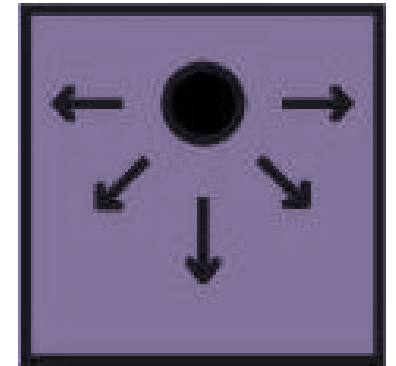
| learning from:	campfire	watering-hole	cave	life	mountain-top
	experts / storytellers	peers	oneself	real world	showing & sharing
	a place characterized by communication flowing from one to many, where everyone can focus on the person(s) talking or presenting	a place for exchanging communication, typically 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
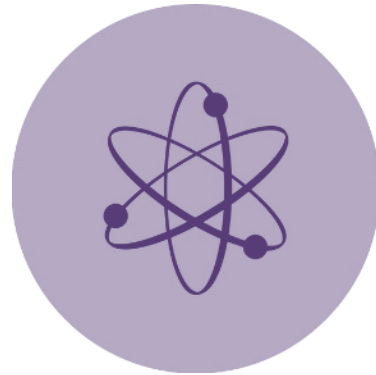
genius bar

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
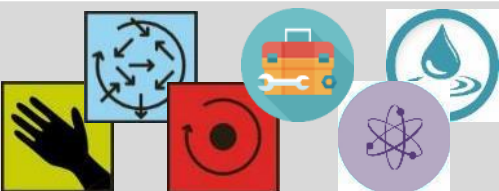
student storage

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	

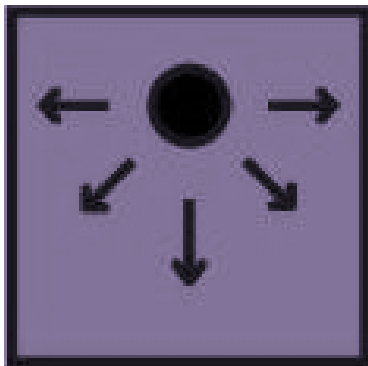# 6.1   Planning for Learning Communities
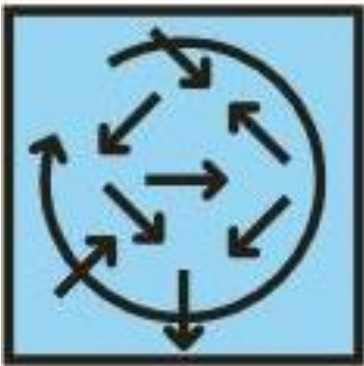
|	campfire	watering-hole	cave	life	mountain-top
learning from:	experts / storytellers	peers	oneself	real world	showing & sharing
e x a m p l e s	classroom lecture room **learning studio** Theater **learning lab** schola	conference breakout **collab** café / coffee project room small group area **sticky space** 3rd 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	present space pitch platform shark tank **gallery** display **share space**

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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]**

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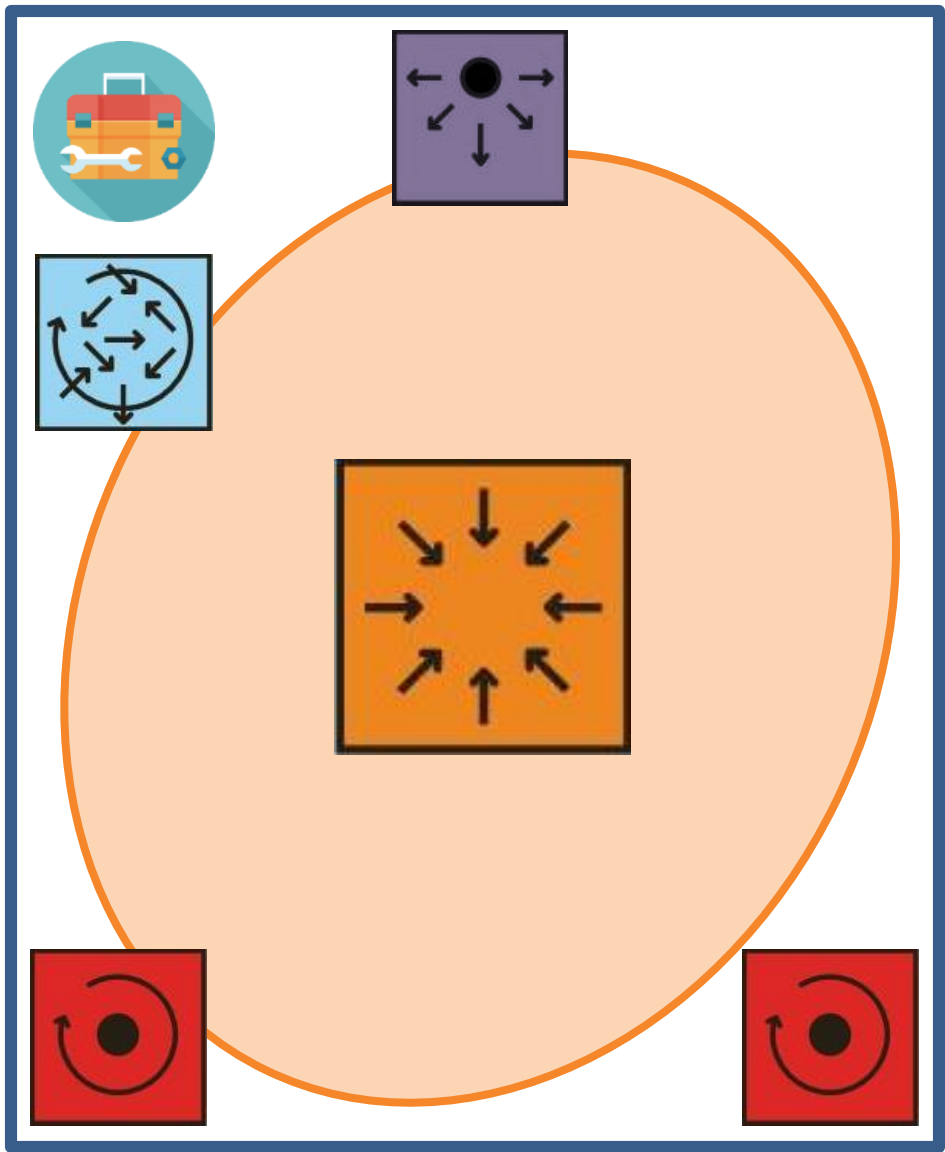
6.1 Planning for Learning Communities

Learning Lab

20-24

# of people

| Core Learning | Experiential Learning |

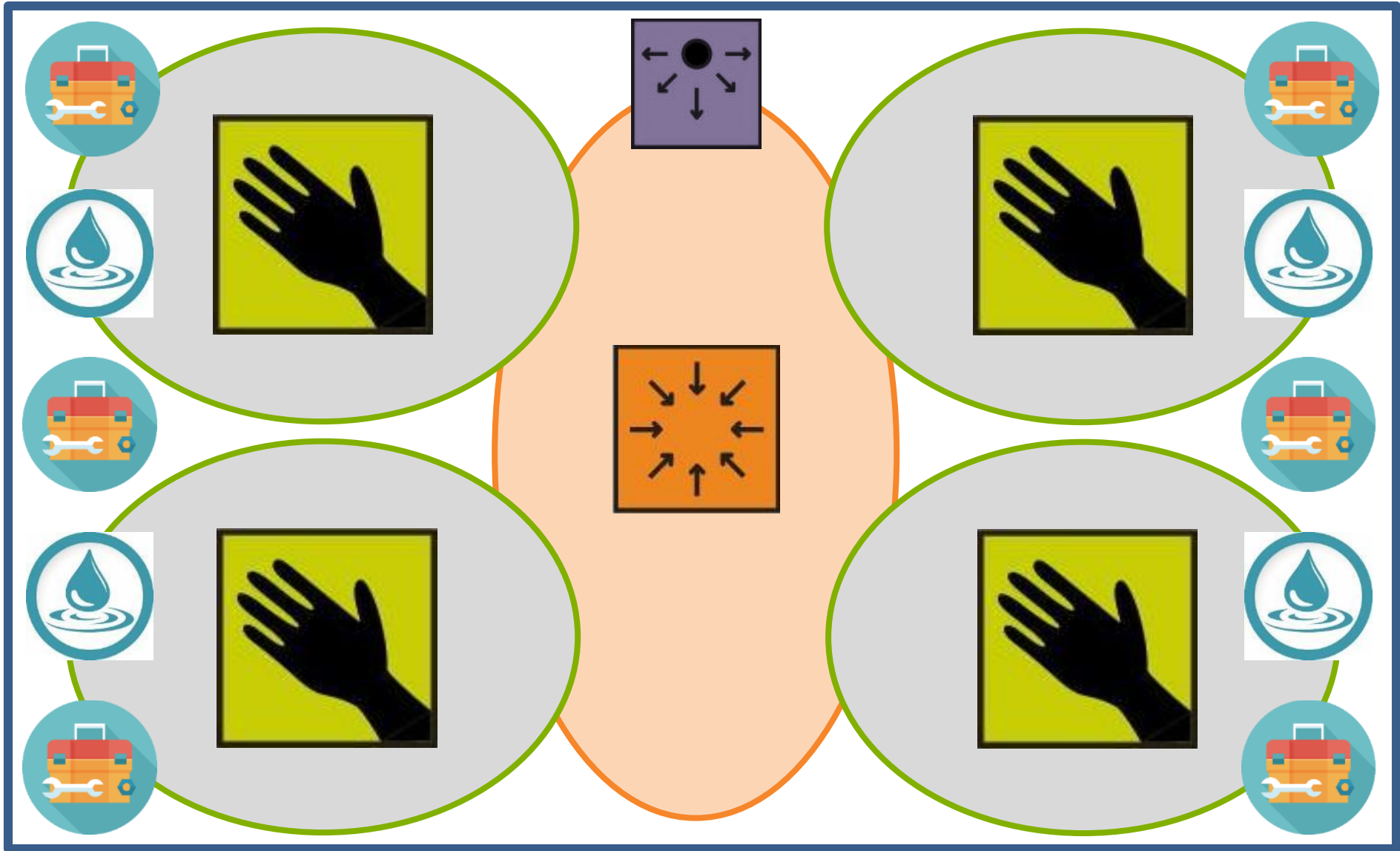| FUNCTION | core learning
experiential |
ACTIVITY LEVELS	passive to moderate
FLEXIBILITY	medium
FURNISHINGS	movable tables movable chairs movable storage fixed storage
TECHNOLOGY	white boards WiFi display w/casting
LEARNING RESOURCES	toolbox [fixed] water

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Experiential Lab

Experiential Learning

# of people **20-24**

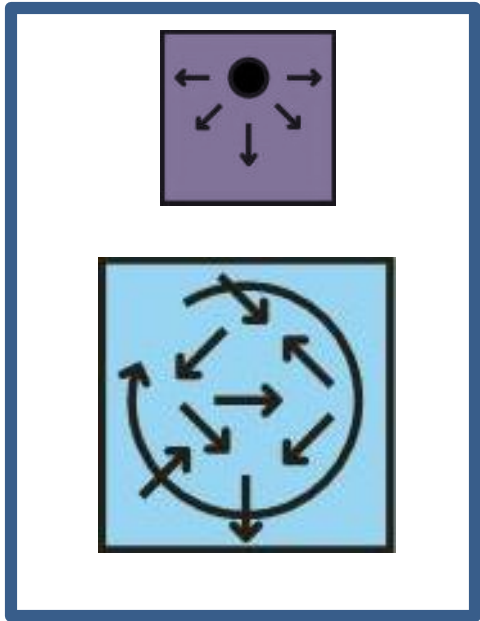|	
FUNCTION	**exploratory experiential**
ACTIVITY LEVELS	**moderate to high**
FLEXIBILITY	**medium**
FURNISHINGS	**movable tables fixed tables movable chairs movable storage fixed storage**
TECHNOLOGY	**white boards WiFi display w/casting**
LEARNING RESOURCES	**toolbox [fixed] toolbox [mobile] water**

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6.1 Planning for Learning Communities

Collab

6-8

# of people

|	
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

6-12

# of people

Collaboration

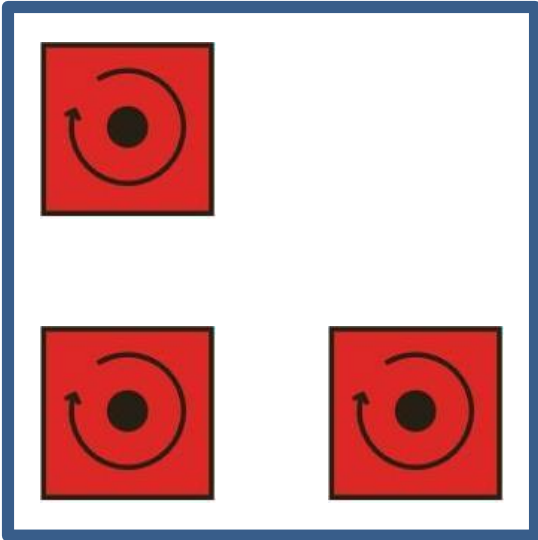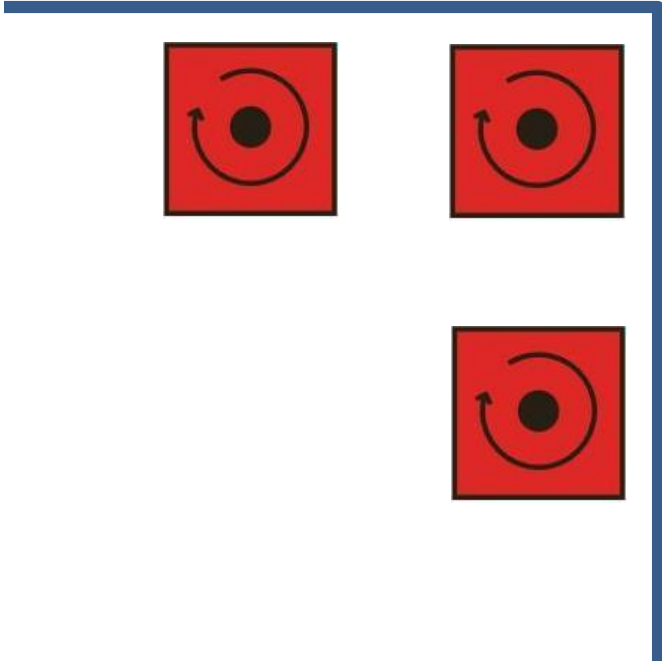|	
FUNCTION	collaboration group project demonstration
ACTIVITY LEVELS	moderate
FLEXIBILITY	medium
FURNISHINGS	movable tables movable chairs fixed storage
TECHNOLOGY	white boards WiFi display w/casting
LEARNING RESOURCES	toolbox [mobile]
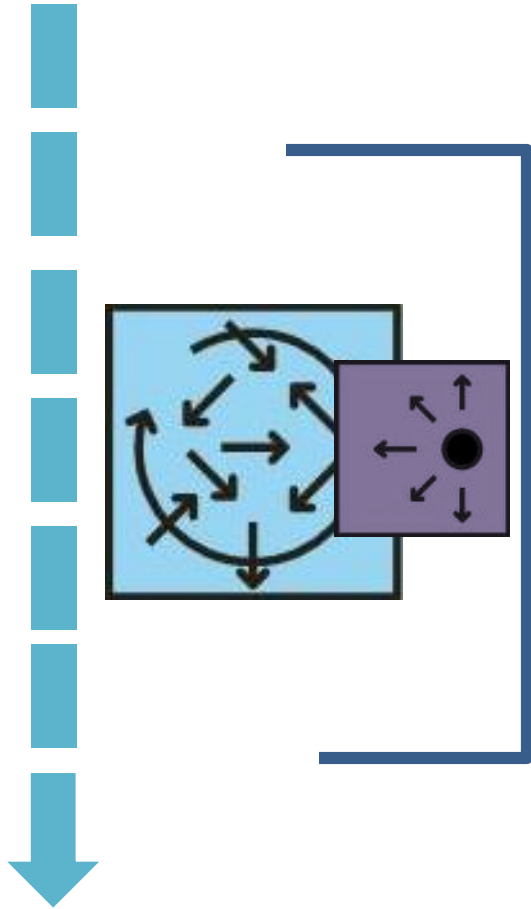
6.1 Planning for Learning Communities

Pod

# 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	

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6.1 Planning for Learning Communities

Share Space

Showing / Sharing

# of people **4-30**

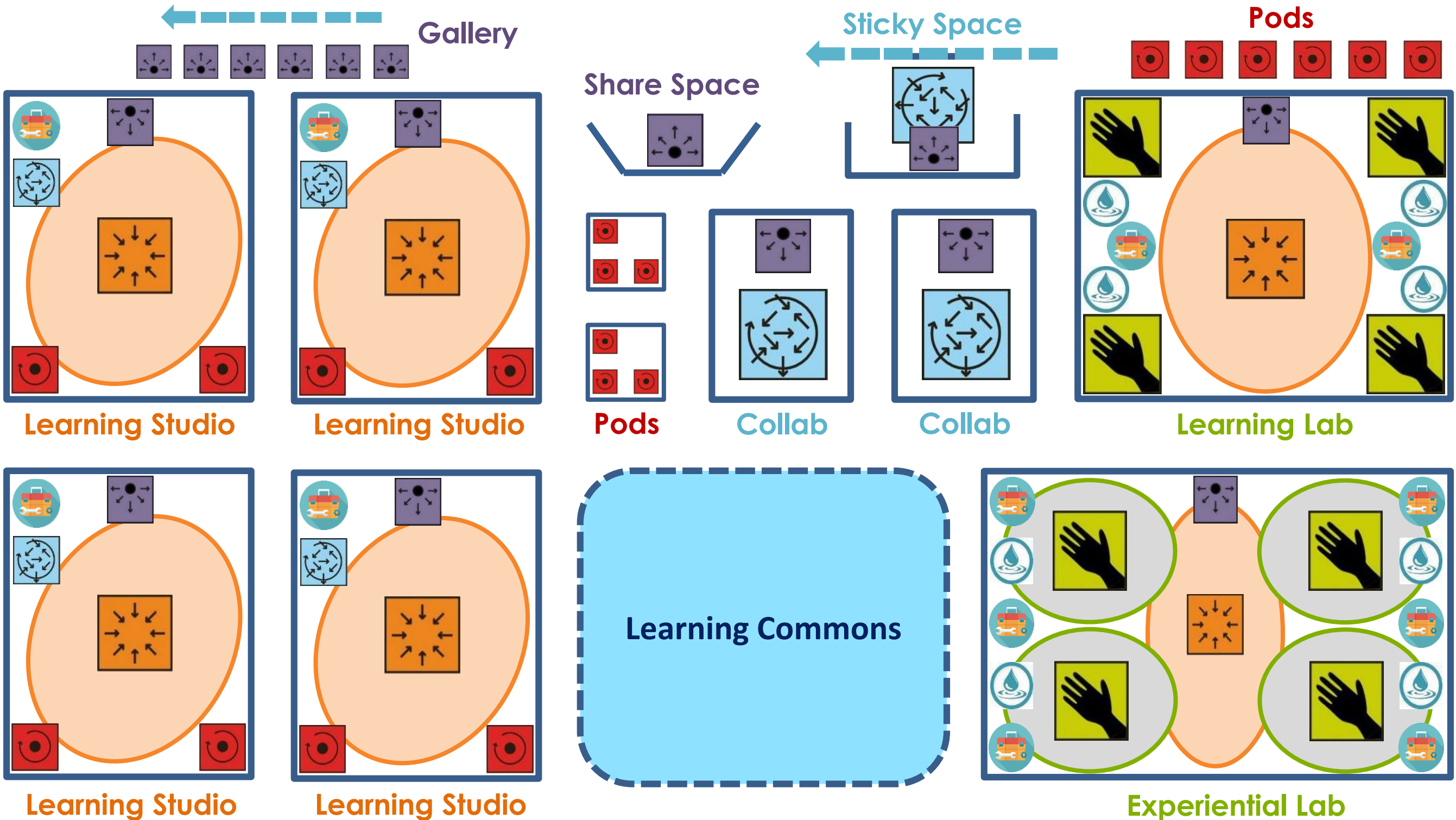|	
FUNCTION	demonstration presentation
ACTIVITY LEVELS	low to moderate
FLEXIBILITY	medium
FURNISHINGS	movable tables movable chairs movable storage
TECHNOLOGY	white boards WiFi display w/casting
LEARNING RESOURCES	
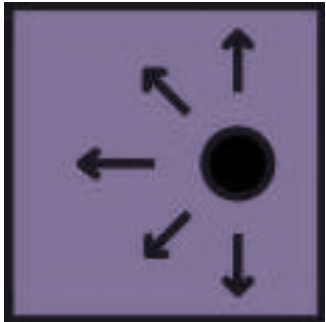
Gallery

of people **unlimited**

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

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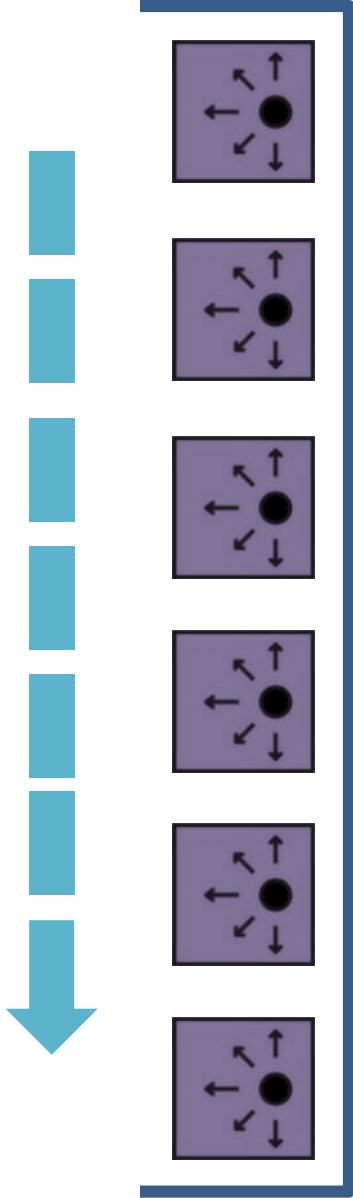
6.1 Planning for Learning Communities

One 140 Student Learning Community =

Gallery

Share Space

Sticky Space

Pods

Learning Studio

Learning Studio

Pods

Collab

Collab

Learning Lab

Learning Studio

Learning Studio

Learning Commons

Experiential Lab

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8.0   SPACE REQUIREMENTS

8.2 Building Area, Teaching Space & Capacity Summary

	Space Type	# TS	Total SF
	Main School Building		
1.0	Learning Communities [12] [Core Teaching Spaces]	60	90,000
2.0	Support Communities [6]		17,100
3.0	Special Needs	2	3,590
4.0	Career & Technical Education [SF In Learning Communities]	12	5,100
4.0	NJROTC [SF In Learning Communities]	2	0
5.0	Visual Arts	4	5,650
6.0	Music / Performing Arts	4	24,850
7.0	Gym / Physical Education	9	45,750
8.0	Library / Media Center / Learning Commons		5,050
9.0	Welcome Center/Administration		6,405
10.0	Commons / Dining / Food Services		15,300
11.0	Custodial / Building Services		3,350
	Net Subtotal Programmed Areas		**222,145**
	Grossing Factor [Walls, Circulation, Building Systems, etc.]	38%	84,415
	Main School Building Total	**93**	**306,560**
	Outbuildings		**Total**
	Baseball Restroom / Concessions / Pressbox Facilities	1	1,200
	Baseball Dugouts	2	480
	Softball Dugouts	2	400
	Lawn Maintenance Storage	1	400
	Band Storage	1	300
	Outbuildings Total		**2,780**
	Natatorium Building Option [SF Replicates Existing Facilities]		**Total**
	Natatorium [Pool Enclosure] 25 meter x 6 lanes	1	6,600
	Spectator Seating [equal to existing]	1	1,050
	Lobby	1	800
	Locker Rooms / Restrooms	1	3,300
	Pool Equipment	1	750
	Natatorium Building Total		**12,500**

Learning Community Model [12 Learning Communities]

# students in school	Total SF	SF/student
1,889	306,560	162.31

Potential Types of Learning Communities

A. Inter-Disciplinary
B. Traditional Departmental
C. Thematic School within a School
D. Career / Tech Focused School within a School
E. Combination of Approaches

CAPACITY CALCULATIONS

	Students per TS	Proposed # TS	Blocks Available [TS x 8]	Current # of Blocks	Block Utilization	Max. # Students
Language Arts, Math, Soc. Studies	24	48	384	261	68%	1,152
Science	24	12	96	75	78%	288
Visual Arts	24	4	32	20	63%	96
Career & Tech Ed + NJROTC	20	14	112	90	80%	280
Music & PA	30	4	32	17	53%	120
Gym / PE	30	9	72	49	68%	270
Special Needs	8	2	16	??	NA	16
MAXIMUM CAPACITY		93				2,222
Utilization Factor						85%
OPTIMAL CAPACITY						**1,889**

Core Teaching Spaces [TS]	**60** (Includes Foreign Language)
Special Needs	**2**
Electives:	
Visual Arts	4
C & TE + NJROTC	14
Music & Performing Arts	4
Physical Education	9
Total Electives	**31**
Total Teaching Spaces	**93**
% Core	66%
% Elective	34%

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
	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			
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

Applicable Prototype Spaces

One 140 Student Learning Community =
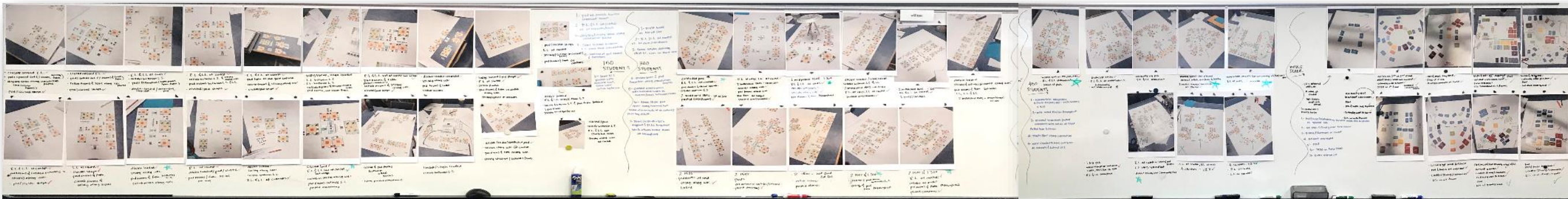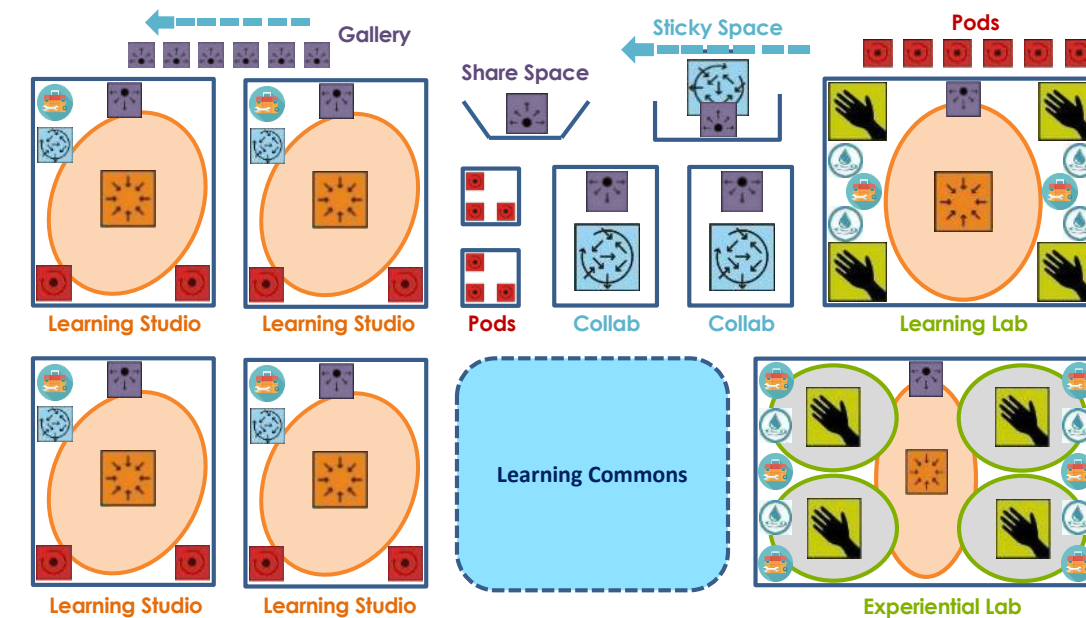
9.3 Learning Community Organizational Models
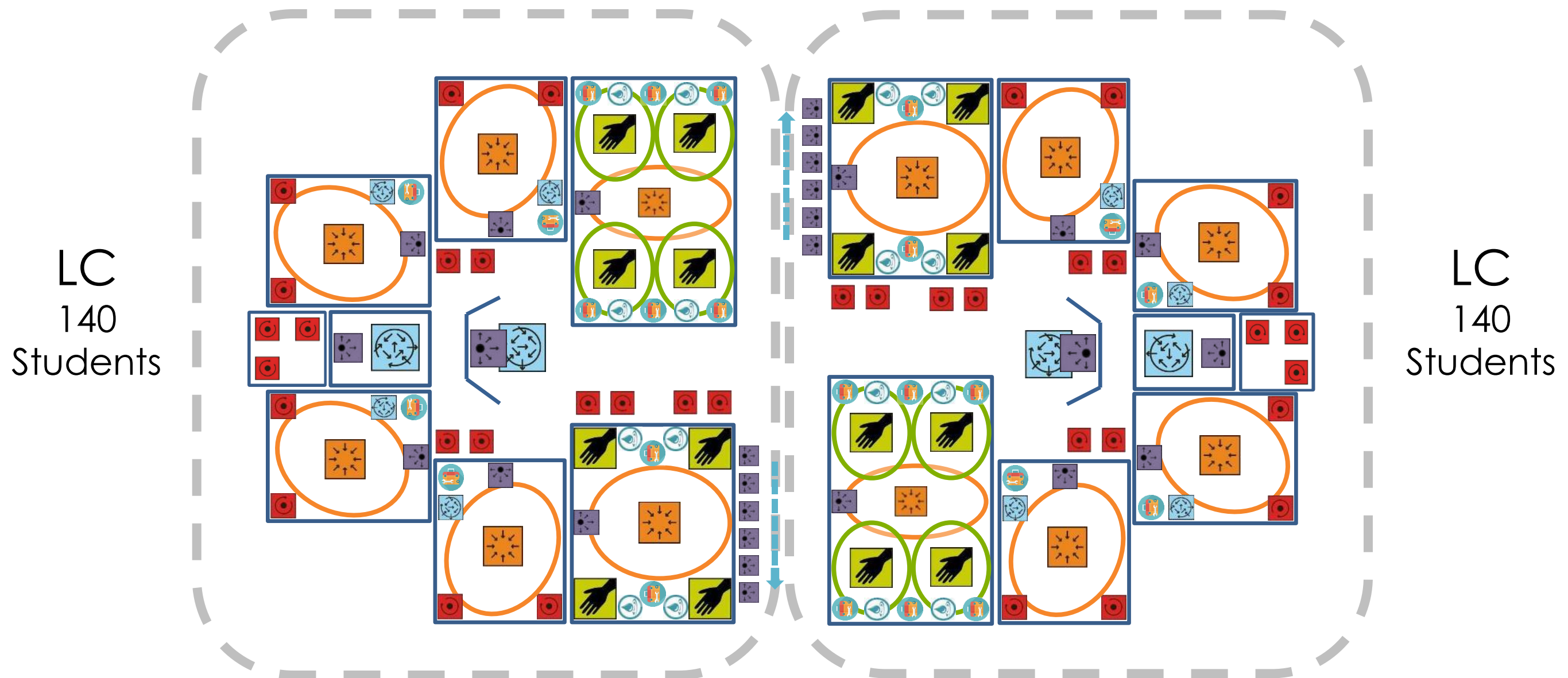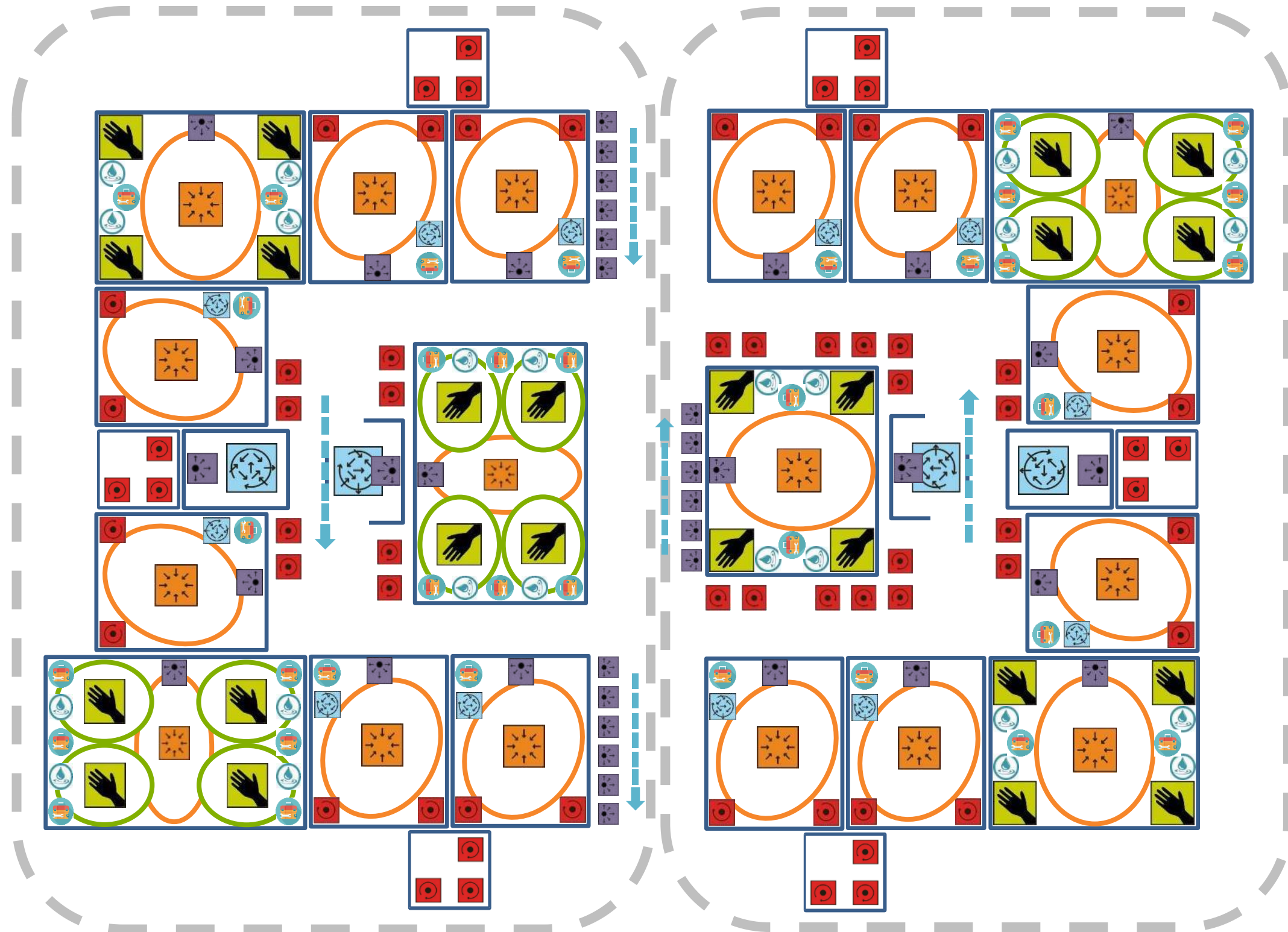

LC
140
Students

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

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9.3   Learning Community Organizational Models

LC
140
Students

LC
140
Students

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

LC 140 x 4 =
560 Students

LC
140
Students

LC
140
Students

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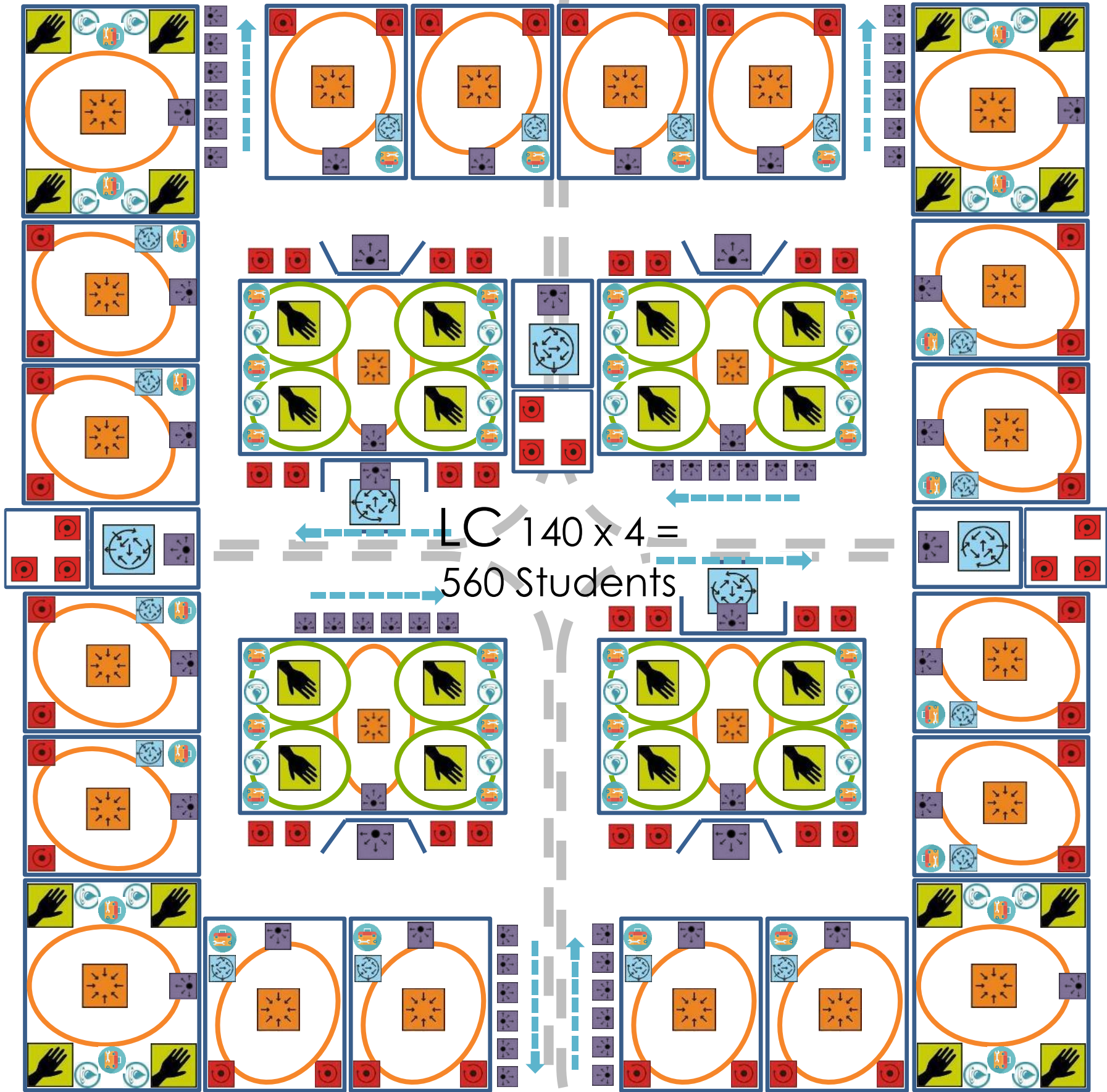
9.5   Career & Technical Education

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:

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OF THE WORLD

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
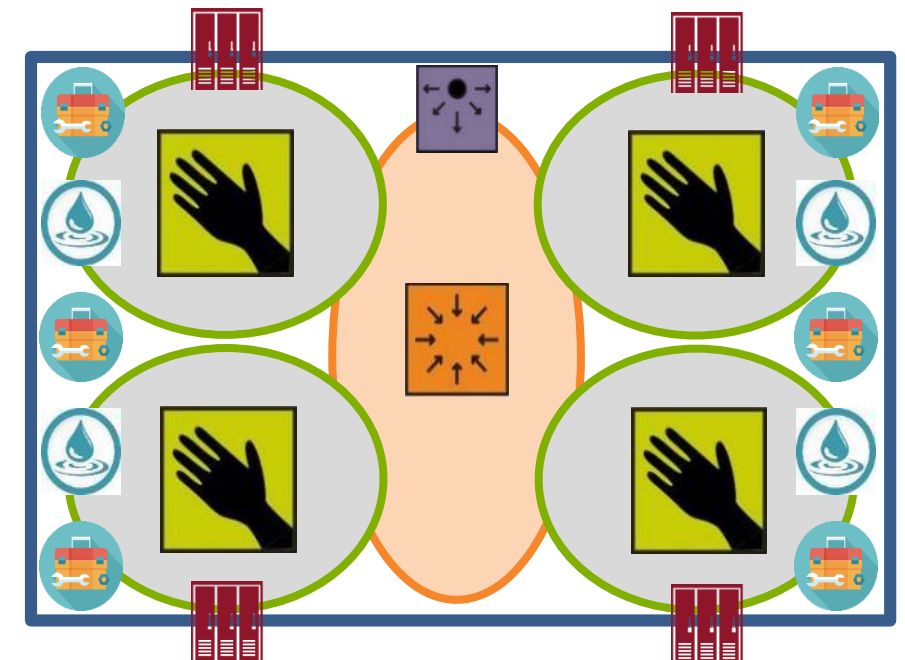9. Active Listening
10. Creativity
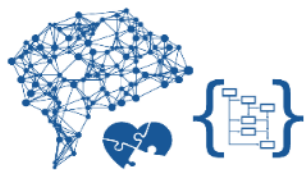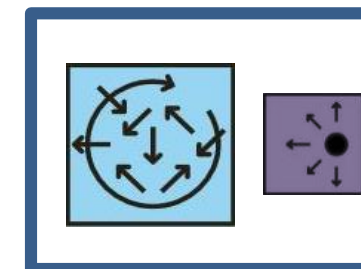
Source: Future of Jobs Report, World Economic Forum

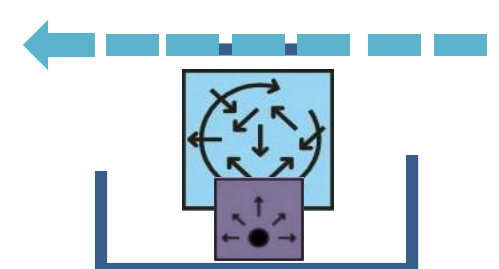## Experiential Lab
20-24
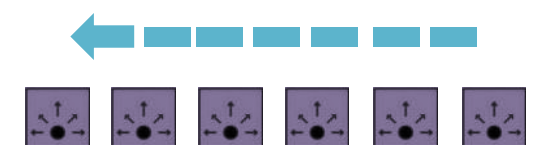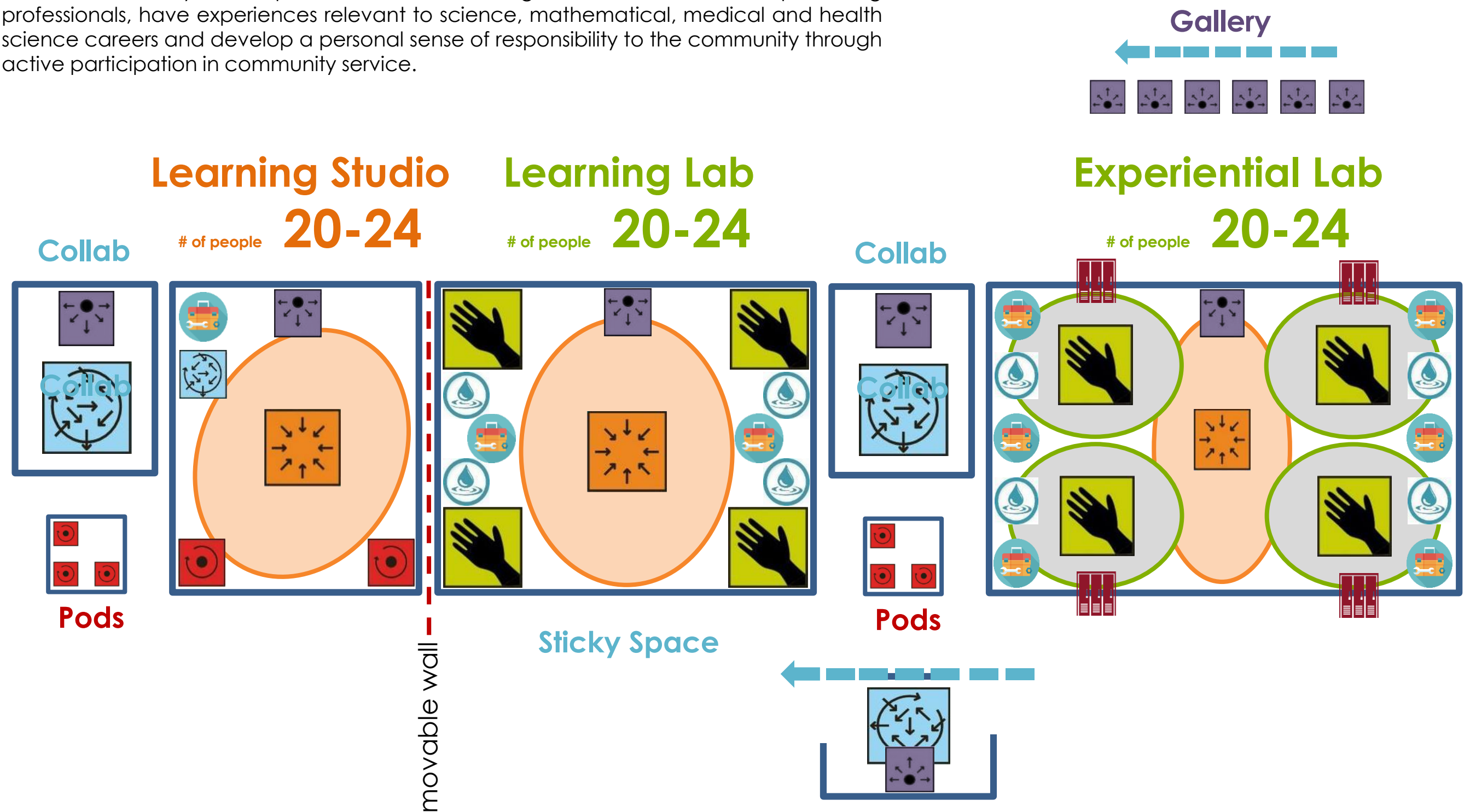# of people

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

Gallery

Learning Studio **20-24**

Learning Lab **20-24**

Experiential Lab **20-24**

Collab

# of people

# of people

# of people

Collab

Pods

movable wall

Sticky Space

Pods

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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
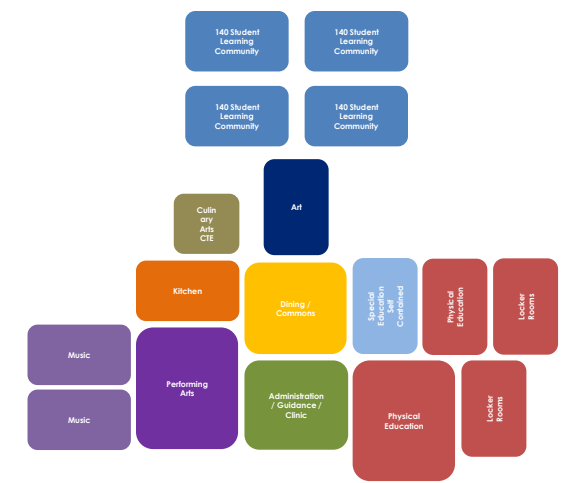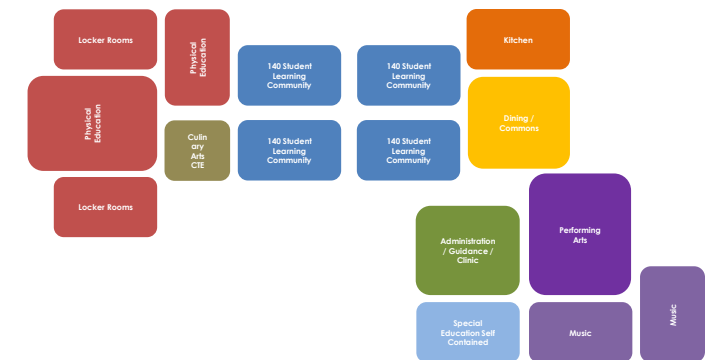
Re-Imagine Maury High School

An Educational Specifications Process

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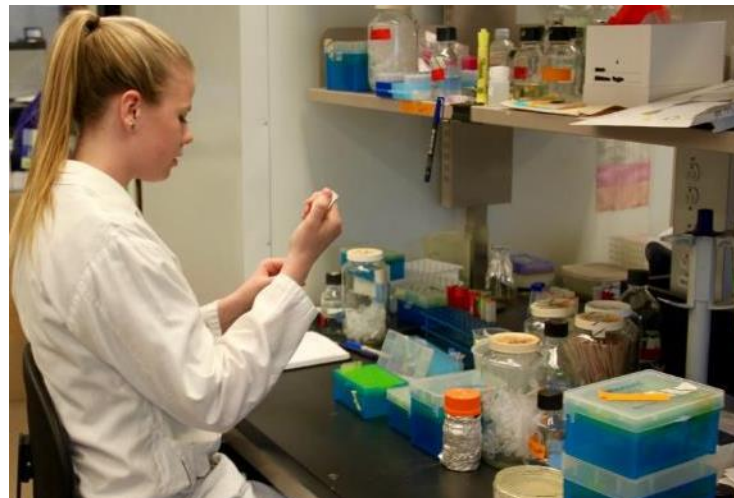
Inquiry-based learning starts by posing questions, problems or scenarios – rather than simply presenting established facts or portraying a smooth path to knowledge. Inquirers, assisted by a facilitator, identify and research issues and questions to develop their knowledge or solutions.

4.1   Design Principles for Learning

Exemplary Learning at Maury High School is...

<div style="background-color:orange;">INTERDISCIPLINARY</div>

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.

<div style="background-color:orange;">COLLABORATIVE</div>

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.

<div style="background-color:orange;">RELATIONAL</div>

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.

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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.
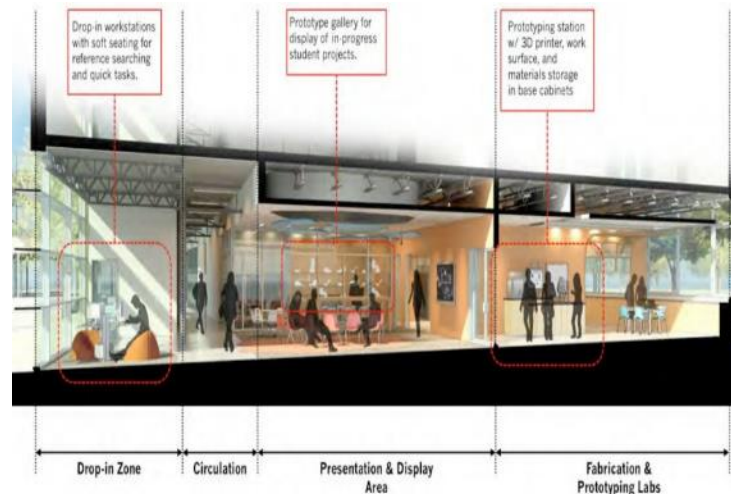
4.2 Design Principles for Learning Environments

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

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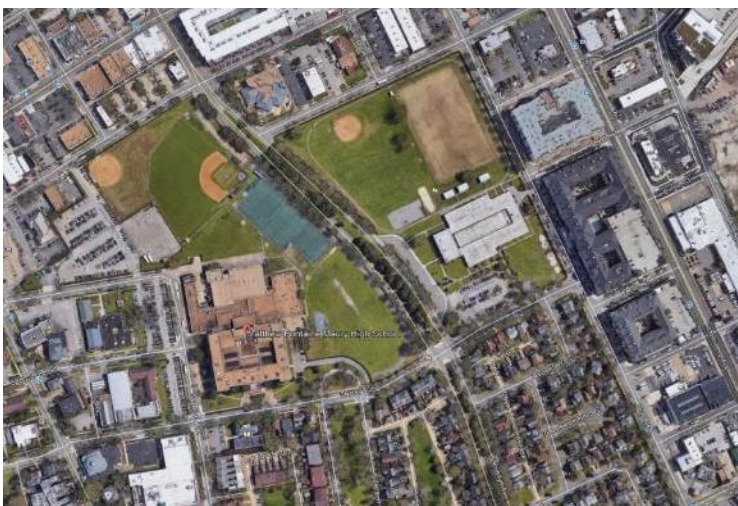
Reinforce and engage the urban scale and mixed-use diversity of surrounding neighborhoods while creating a facility that maintains Maury High School's standing as the iconic center of the community.

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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:
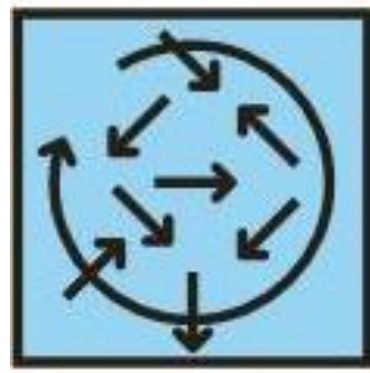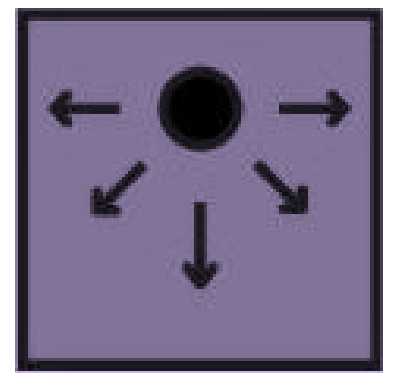
campfire	watering-hole	cave	life	mountain-top

Metaphors for Learning Resources:

toolbox	genius bar	water	student storage

5.1   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

learning from: 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
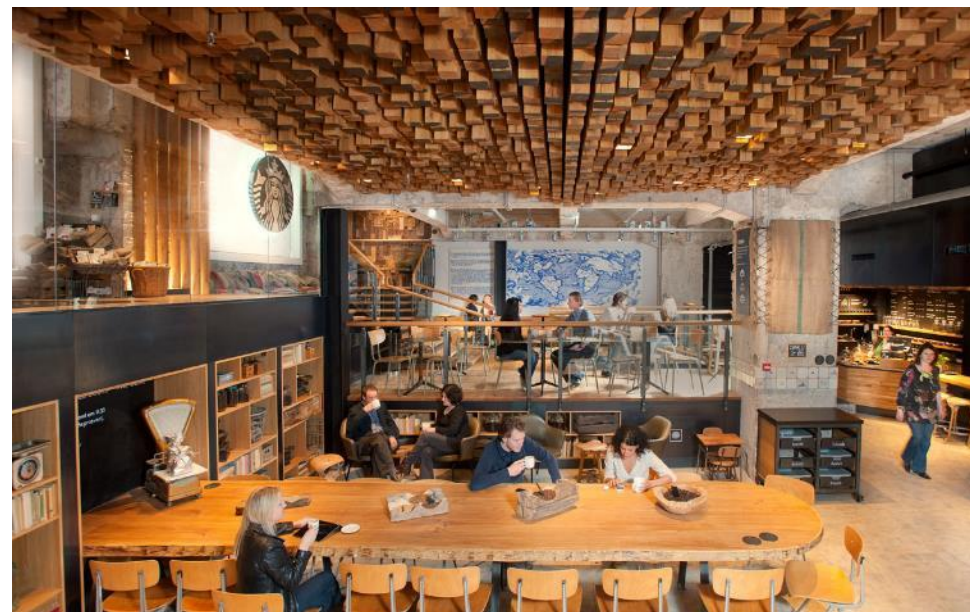
5.1   Metaphors for Primordial Learning Environments

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

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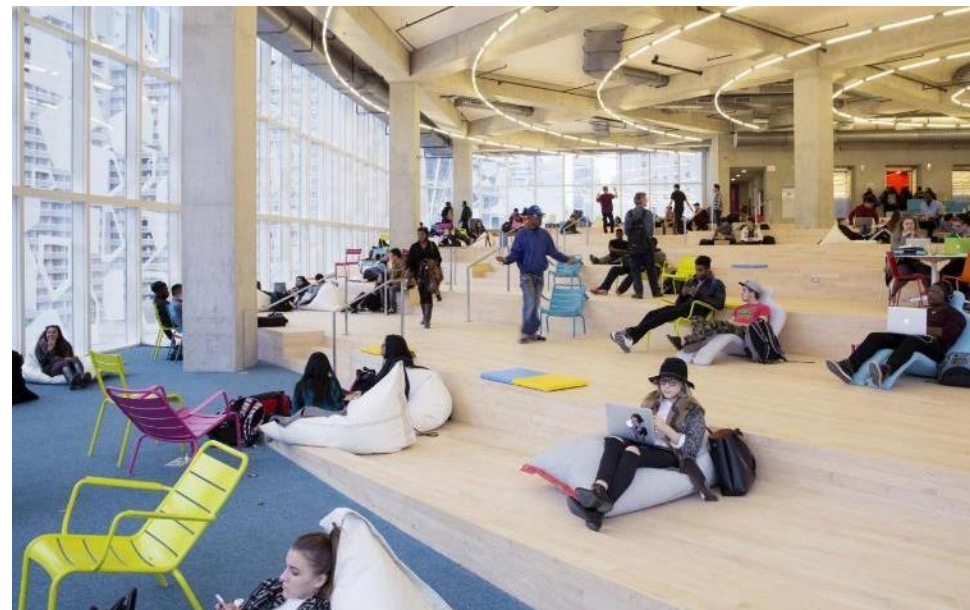
5.1 Metaphors for Primordial Learning Environments

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

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5.1 Metaphors for Primordial Learning Environments
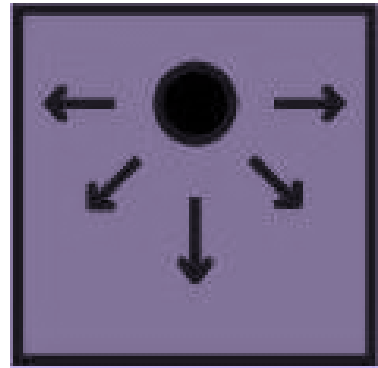
mountain-top

learning from:

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

5.2   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
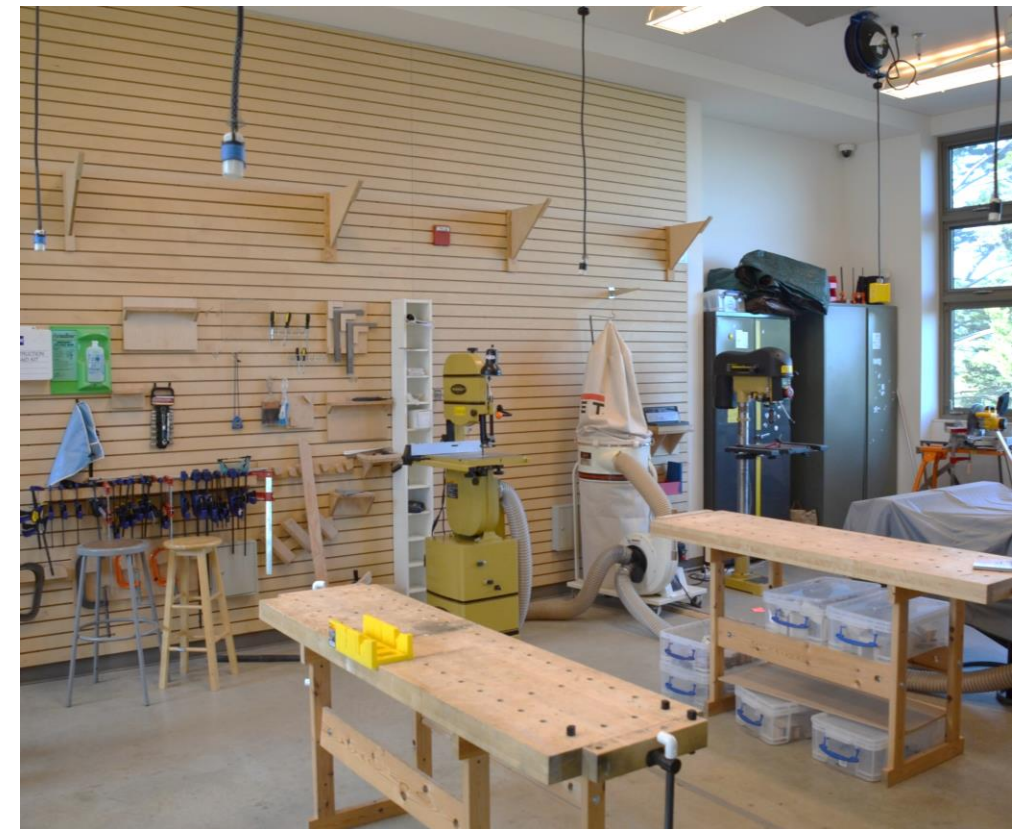
5.2 Metaphors for Learning Resources
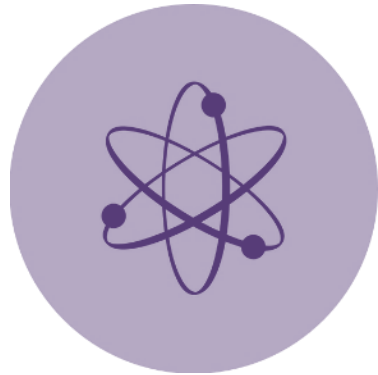
genius bar

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
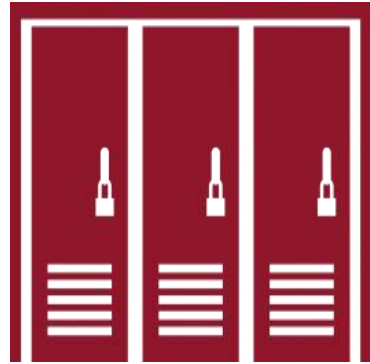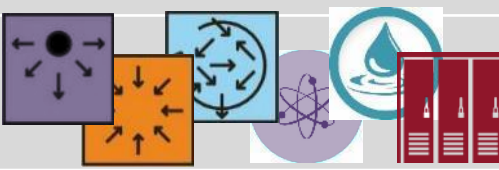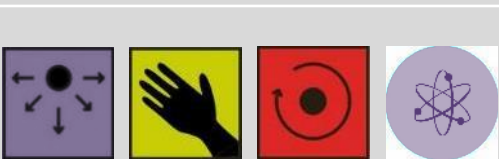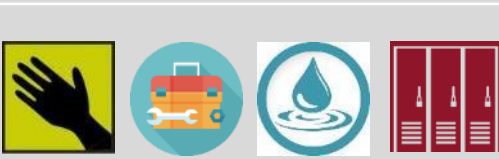
student storage

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**
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

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8.3 Space Allocation Summary

1.0	Learning Communities x 12	Quantity	TS	SF	Total	Remarks
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					Remarks
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
- (blank) None

1.0 Learning Communities x 12

Ref	Space	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			
1.01	Learning Studio	4	○	●	●	●	●	●					●							●			●					●		●	●	◐	◐	◐		◐		
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

Ref	Space	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			
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						◐		●											◐	◐	●						●		●				●	●	●	

MHS Educational Specifications | Space Requirements

8.5 Space Technology Systems Summary

Key
- ● Include within Space
- ○ Indirect Access from Space

No.	Learning Communities x 12	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									
1.01	Learning Studio	4	●	●		●	●	●	●				●		●
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			●	○									

No.	Support Communities x 6	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									
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													

LC
140
Students
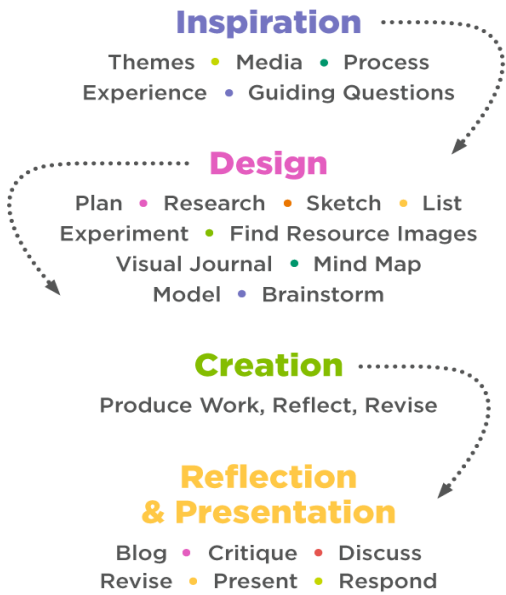
LC
140
Students

LC 140 x 2 = 280 Students

12 LC 140s or 6 LC 280s = 1,680 Students x .85 = 1,428 Optimal Student Capacity
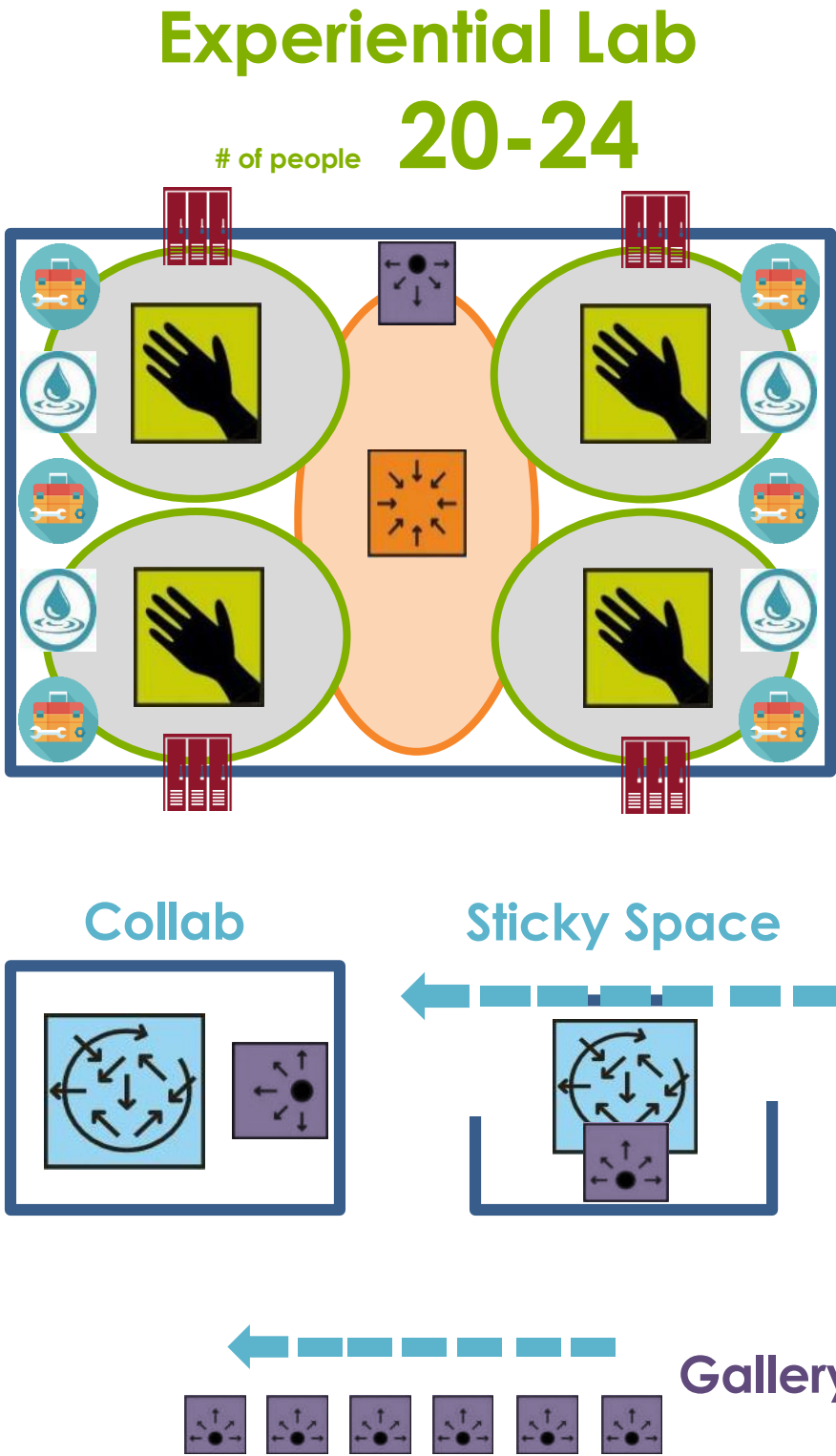
9.5   Career & Technical Education

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**

Inspiration
Themes • Media • Process
Experience • Guiding Questions

Design
Plan • Research • Sketch • List
Experiment • Find Resource Images
Visual Journal • Mind Map
Model • Brainstorm

Creation
Produce Work, Reflect, Revise

Reflection & Presentation
Blog • Critique • Discuss
Revise • Present • Respond

Applicable Prototype Spaces

Experiential Lab
of people   **20-24**

Collab   **Sticky Space**

Gallery

Norfolk Public Schools
THE CORNERSTONE OF A PROUDLY DIVERSE COMMUNITY

HBA

9.14 Building Organization Models

140 Student Learning Community
140 Student Learning Community
140 Student Learning Community
140 Student Learning Community
140 Student Learning Community
140 Student Learning Community

140 Student Learning Community
140 Student Learning Community
140 Student Learning Community
140 Student Learning Community
140 Student Learning Community
140 Student Learning Community

Art

Culinary Arts CTE

Library / Media Center

2nd Floor

3rd Floor

Kitchen

Dining / Commons

Special Education Self Contained

Physical Education

Locker Rooms

Music

Performing Arts

Administration / Guidance / Clinic

Physical Education

Locker Rooms

Music

1st Floor

A

9.14   Building Organization Models

1st Floor

2nd Floor

B

9.14 Building Organization Models

3rd Floor

2nd Floor

1st Floor

C

9.14   Building Organization Models