Modern Instructional Mindsets, Modern Learning Spaces: When Learning Needs Drive Design Decisions

Friday, Oct. 27th, 2pm

Presenters: Jacqueline Abair, Paul Bianchi, Jessica Marchetti, Lauralyn Stewart, Thomas Witmer

Learning Objectives:

1. To understand some research-based instructional practices to be supported by modern learning spaces
2. To learn how these practices are operationalized in a space
3. To compare the timeline and process of modernizing spaces and modernizing teaching and learning across a district
4. To consider barriers to successful collaborations, and possibilities for improvement

Big Picture

"How can the District ensure that all students think deeply, support their thinking, apply problem-solving skills, and actively participate in their learning as they acquire content knowledge?"

- Education in the 21st century
- Project-based (or active) learning
- Advances in school design, architecture, technology and furniture

Application

Teachers and students are currently utilizing innovative spaces to extend current classroom work to further incorporate:

- Creativity, problem solving, and multi-disciplinary projects
- In-depth inquiry
- Formulating questions and researching
- Task-based self-directed learning
- Communicating work to a variety of audiences
- Assessment and feedback of on-going learning

Innovative spaces empower teachers and students by providing the space, resources and technology to foster collaboration and promote active learning.

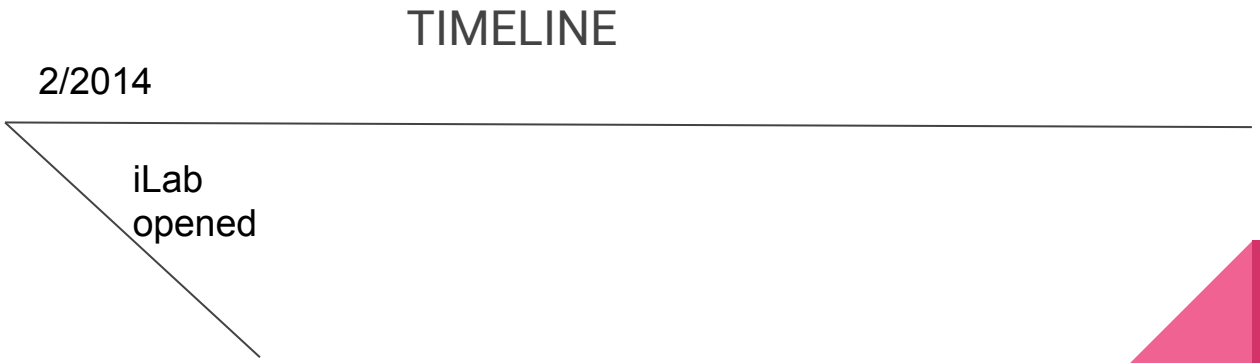
Background

- In the Fall of 2011, the Chappaqua Central School District formed a new committee, the Chappaqua Education for the Future (CEFF).
- CEFF identified 3 core values for the school district in the 21st Century: Creativity, Communication and Collaboration, and Social/Emotional/Physical Health
- In the Spring of 2012, the school district commenced a feasibility study to explore collaborative learning spaces and hired architecture firm.

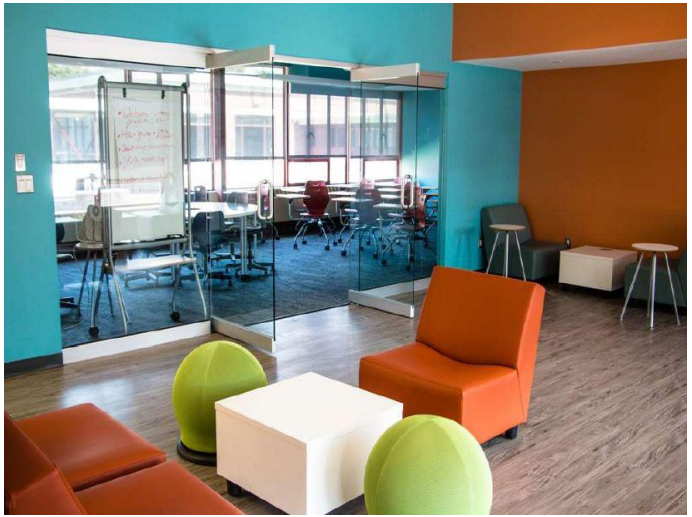
- Excerpted from INNOVATIVE, INSPIRING SPACES FOR 21ST CENTURY LEARNING, Presentation by Eric Byrne, Ed.D for the **2nd International Ohalo Conference for Innovative Education.**

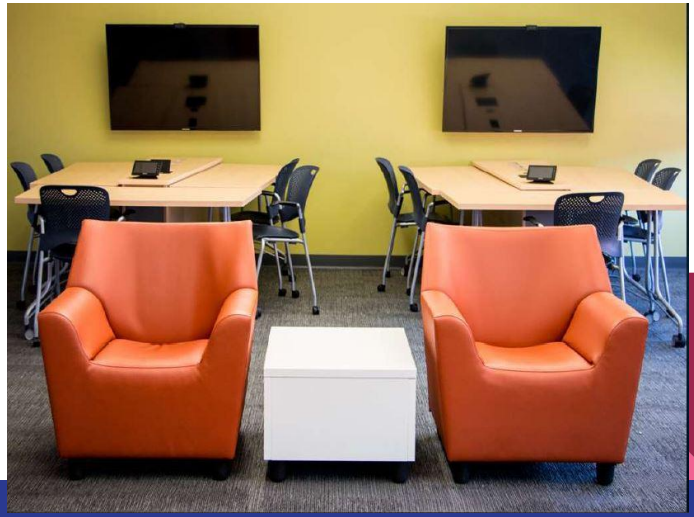
iLab

- iLab first piloted in February 2014
  - Supported through Chappaqua Innovation Fellows
  - Focused on exploring the use of time, flexible space and technology – through Project-based learning, interdisciplinary connections, collaboration, and feedback
  - Spread school wide



iLab at Horace Greeley Guiding Principles





Classroom Community

Actionable Feedback

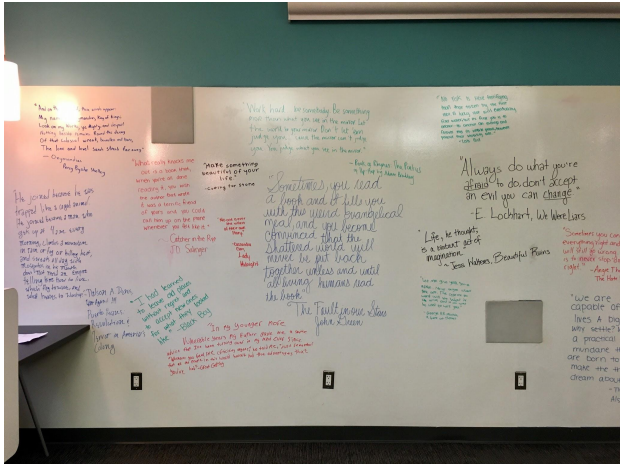
Authentic Audience

Big Night Celebration

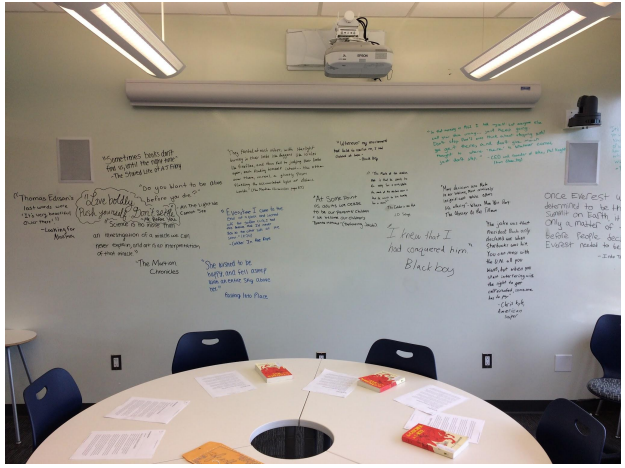
Some of Our Favorite
Choice Books

Welcome
Families

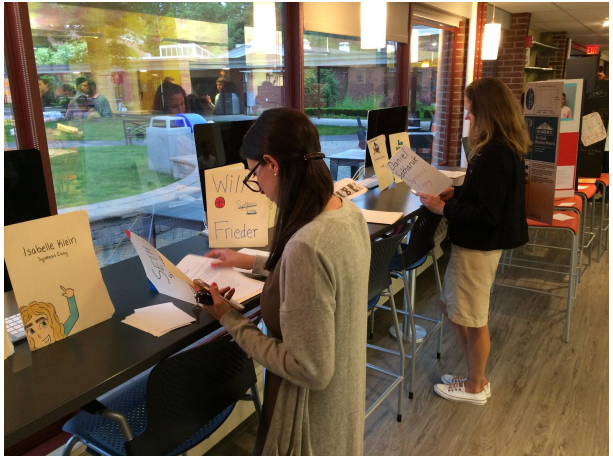
Feedback
Jake
Colby



Olivia
Sophia

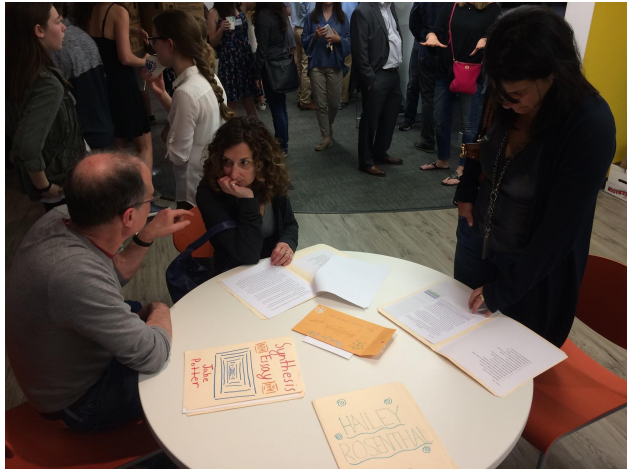

I knew that I had conquered him
Black boy

HIGH SCHOOL MEMORIES


Will
Frieder
Isabelle Klein

KATE S

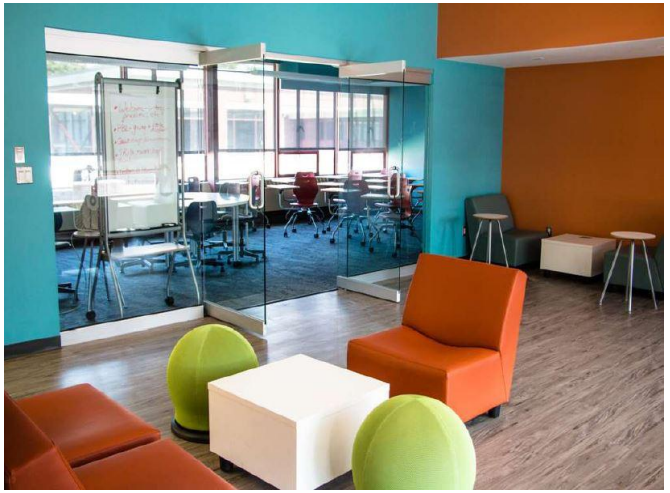
Connor Bingham
Synthesis Essay

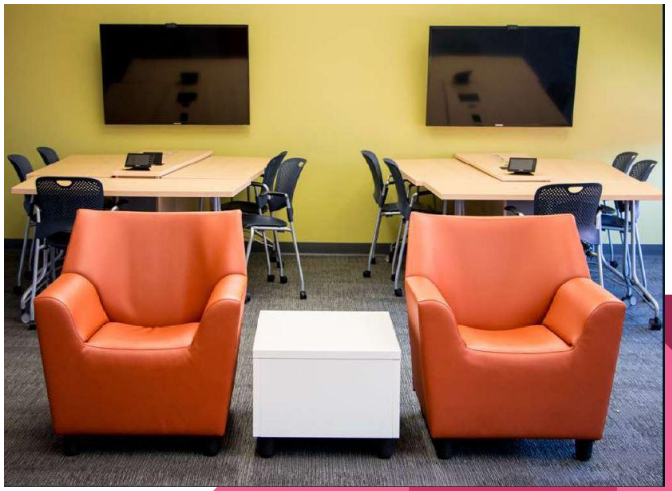

Synthesis Essay
Jake Father
HALEY ROSENTHAL

JORDAN and HAILEY
ALL ABOUT US

iLab at Horace Greeley

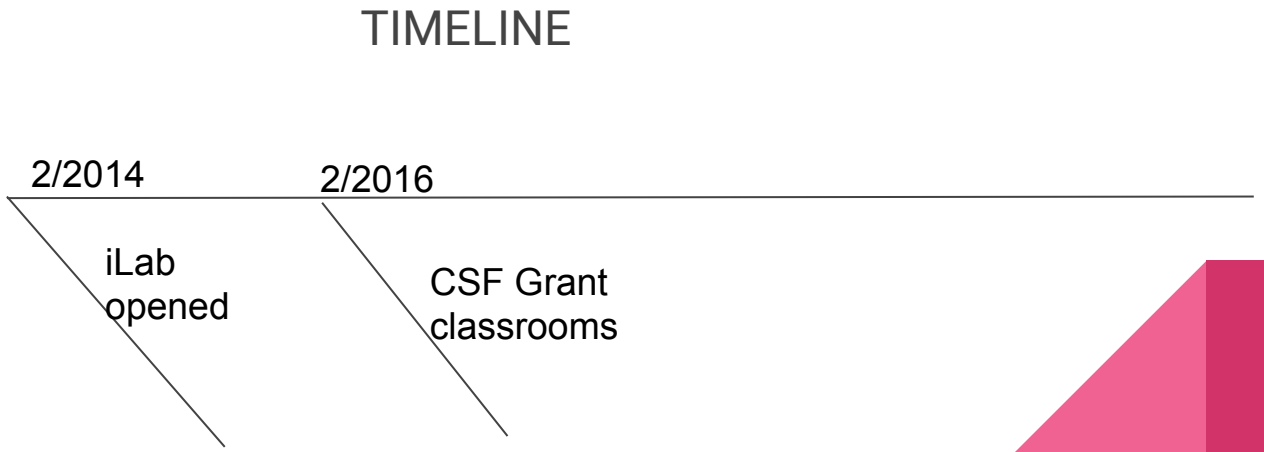
Video Link





CSF Grant Classrooms

- Classrooms throughout the district were designed with furniture and other features to mimic the iLab in 2016.



COURSE 4

COURSE 4
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STEAM Spaces in Secondary School

Science teachers have traditionally been keenly aware of lab design:

- students working individually, in groups, doing experiments
- storage and distribution of lab equipment
- access to water, electricity, gas, and safety equipment

Good lab design: lessons learned

- Appropriately sized furniture
- Movable furniture for a flexible space
- Large uncluttered table-tops
- Storage and utilities at the perimeter

The Physics lab classroom

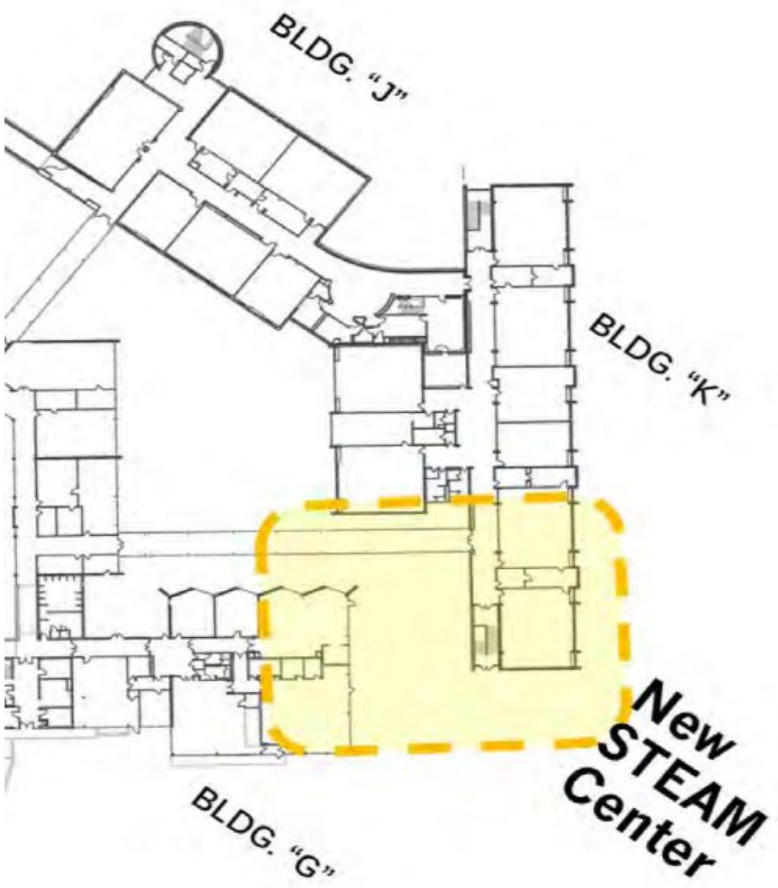
Maker spaces

- An extension of the science lab, similar design priorities
- Greater emphasis on direct student access to equipment, safety
- Storage for materials, student project work

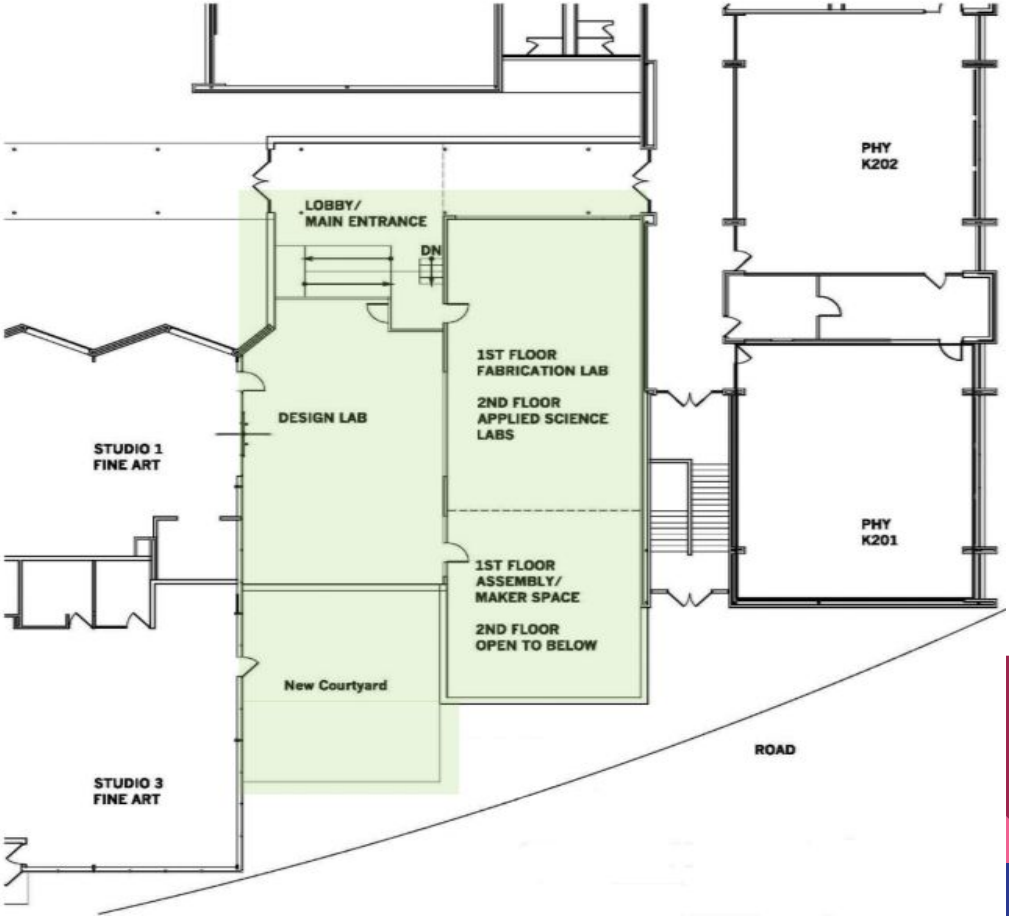
HG Maker Space

STEAM Learning Center -- G/K Buildings

Present

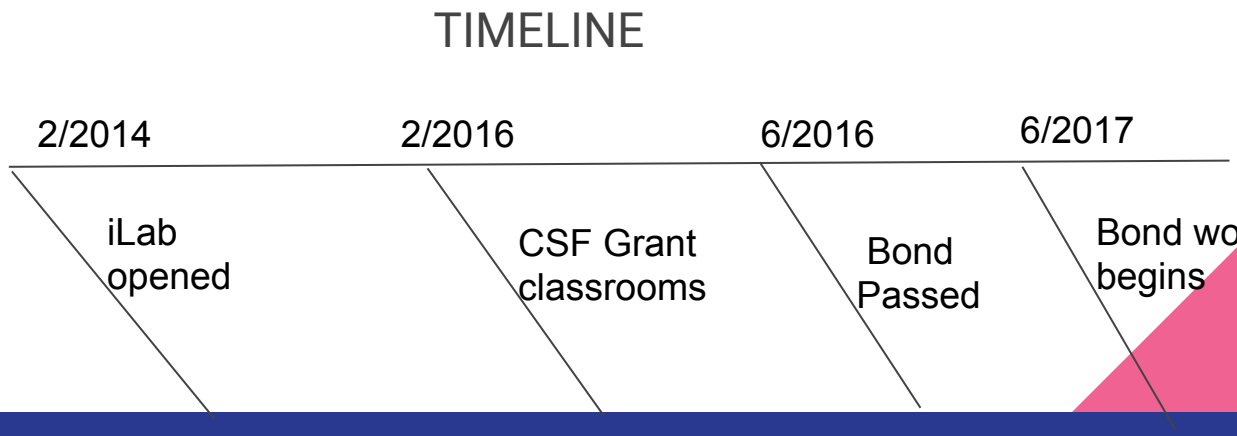


Proposed



Bond

- 42 million dollar bond passed and construction began in 2017
- Global learning communities
- Maker Spaces
- STEAM Labs
- Instructional Centers



Professional Learning

*Changing **PHYSICAL** space and **MENTAL** space.*

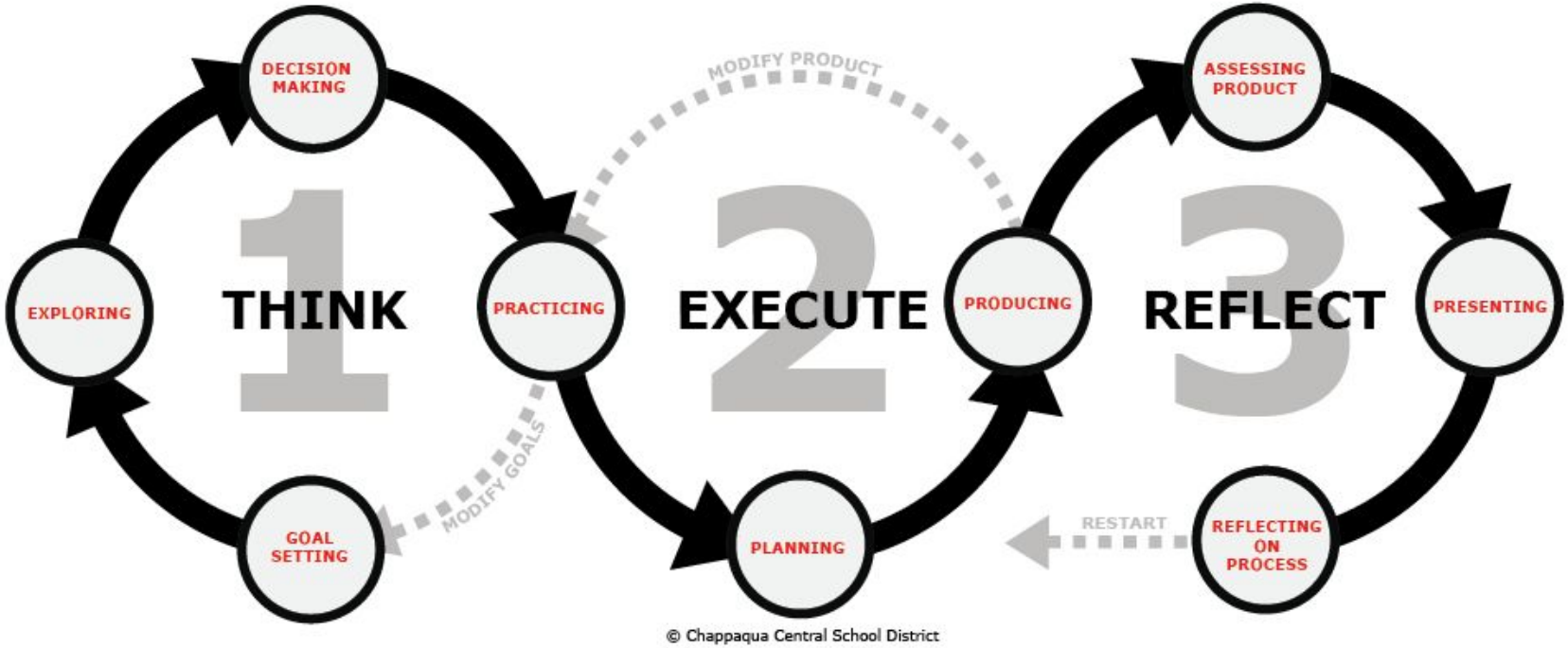
- Just changing the space will not change teaching.
- Time to vision, play, learn, explore

Professional Learning: Collaboration and Inquiry

- Learning Teams, Fellowships, Inquiry Groups
- Student focus groups
- Partnerships with architects and curriculum coaches
- School visits - within and outside the district

CCSD STEAM - PBL Philosophy and Purpose

Principles We believe in learning experiences which are...	**Outcomes** We believe in curriculum that fosters the development of...	**Assessment** We believe in anchoring assessment in the design process, with emphasis on...	**Methods & Practices** We believe in a PBL model of instruction that focuses on...	**Structures & Systems** We believe in facilitating learning for students and staff by incorporating...	**Educational Environment** We believe that spaces should...
• learner led • inclusive • authentic • interdisciplinary • inquiry driven • collaborative • active • rooted in rich content • constructivist • problem based • grounded in the CCSD design process	• design process ski • intrinsically motivated, self-directed and independent thinkers • intellectual empowerment • metacognition • flexibility • confidence and resilience • empathy for people and respect for space • innovative ideas • communication and collaboration skills	• creative problem solving • alignment to project goals • self reflection • feedback • application and transfer of knowledge • communication of ideas • development of new insights and skills • clear connection to curriculum • accuracy and precision • ethical design • form and function	• iterative problem solving • student choice and passion • relevant and rigorous content and application • student or teacher facilitation • exploration and play • growth mindset and intellectual risk-taking • multiple opportunities for communication and presentation • open ended tasks with multiple outcomes or processes • virtual or physical product construction • actionable feedback	• professional development • flexible use of time • interdisciplinary teaching and collaboration • collaborative decision making • equity • community and industry collaboration • K-12 collaboration	• support divergent thinking and processes • allow for dynamic scheduling • support a variety of cognitive processes • support both student and teacher collaboration • allow for exhibition and demonstration • accessible and safe for all • have dedicated areas for design and application • have areas that are reconfigurable


1
THINK
DECISION MAKING
EXPLORING
GOAL SETTING
2
EXECUTE
PRACTICING
PLANNING
PRODUCING
3
REFLECT
ASSESSING PRODUCT
PRESENTING
REFLECTING ON PROCESS
MODIFY PRODUCT
MODIFY GOALS
RESTART
© Chappaqua Central School District

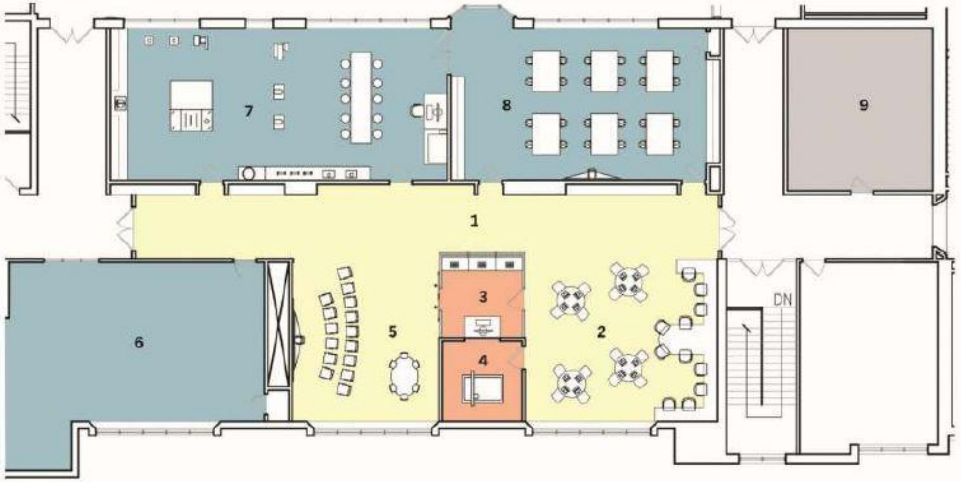
Elementary School Maker Spaces

Middle School Learning Lab

Professional Learning: Community Involvement

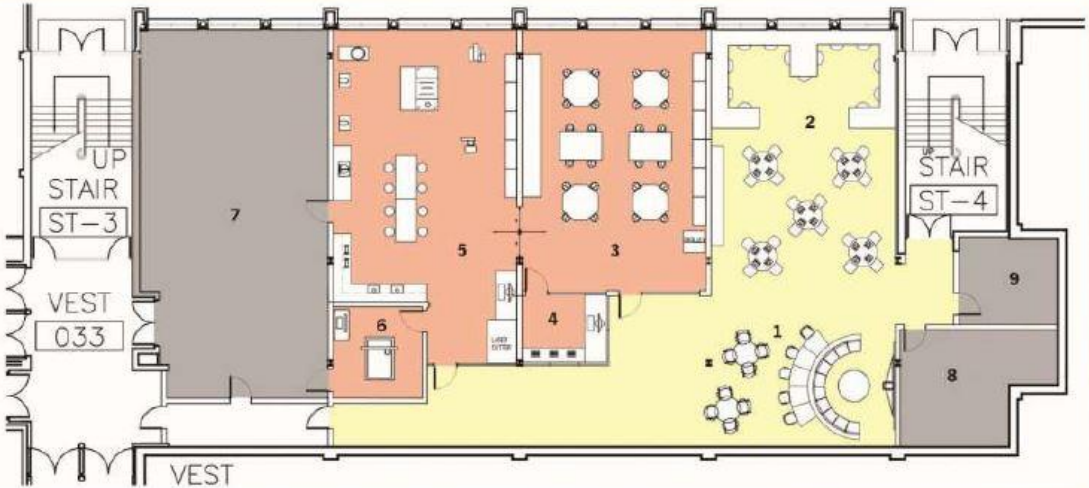
- Board presentations
- Knowledge Cafes
- Learning Symposiums
- Panel presentations with parents
- Faculty proposal reviews
- Small Learning Communities

1) Design Commons
2) Design Studio
3) 3D Lab
4) CNC Room
5) Presentation Area
6) Art Studio
7) Fabrication Lab
8) Maker Space/Robotics Lab
9) Storage

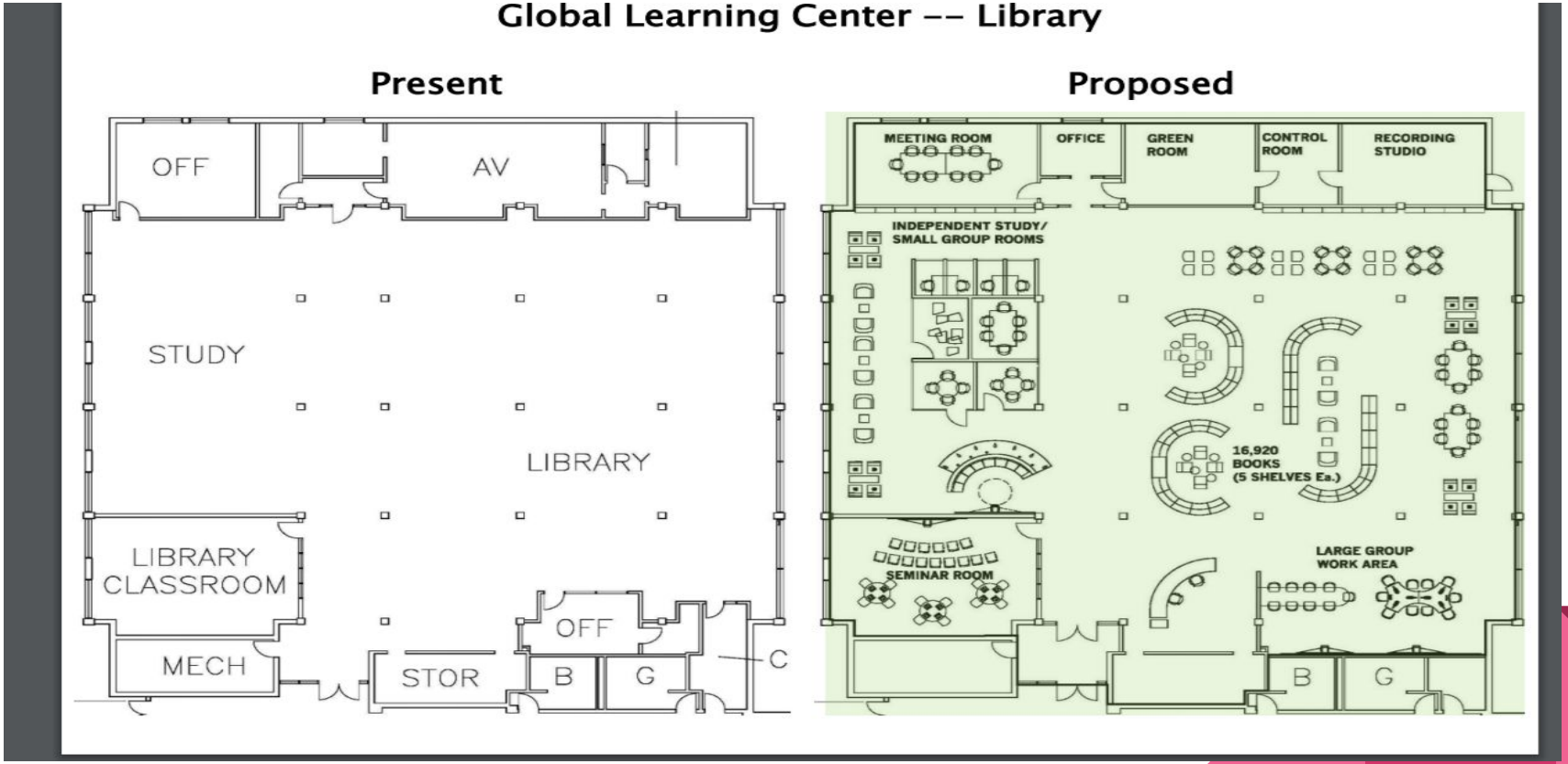


Middle School STEAM Centers

1) Presentation/Critique Space
2) Design Studio
3) Fabrication Lab
4) 3D Lab
5) Fabrication Shop
6) CNC Room
7) Project and Material Storage
8) Electrical/Storage
9) Storage

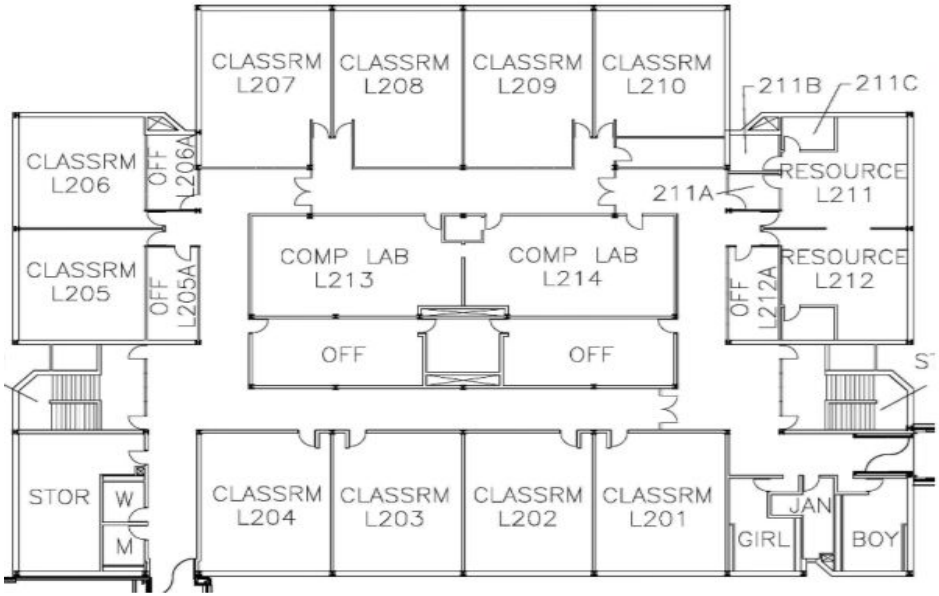
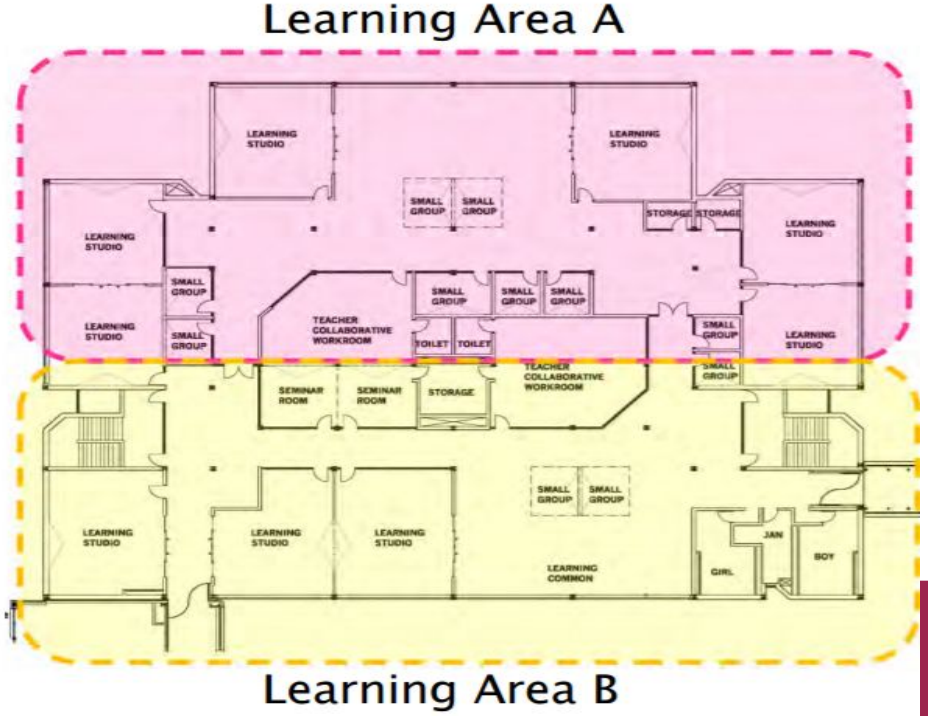


High School


Global Learning Center -- Library
Present
OFF
AV
STUDY
LIBRARY
LIBRARY CLASSROOM
MECH
STOR
OFF
B
G
C
Proposed
MEETING ROOM
OFFICE
GREEN ROOM
CONTROL ROOM
RECORDING STUDIO
INDEPENDENT STUDY/ SMALL GROUP ROOMS
16,920 BOOKS (5 SHELVES Ea.)
SEMINAR ROOM
LARGE GROUP WORK AREA
B
G

Instructional Centers -- L Building (200s)

Present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