



CHAPPAQUA
Central School District

New Spaces Update

GLCs  STEAM  Upper-L

Mr. Josh Culwell-Block

Director of Technology, Innovation & Mathematics

Dr. Adam Pease

Assistant Superintendent for Curriculum & Instruction

Space Overview:

- STEAM Continuum
 - Elementary GLCs
 - Middle School STEAM Centers
 - Greeley STEAM Building
- Greeley GLC
- Greeley Upper-L





STEAM Continuum



STEAM Philosophy

Principles

We believe in learning experiences which are..

- learner led
- inclusive
- authentic
- interdisciplinary
- inquiry driven
- collaborative
- active
- rooted in rich content
- constructivist
- problem based
- grounded in the CCSD design process





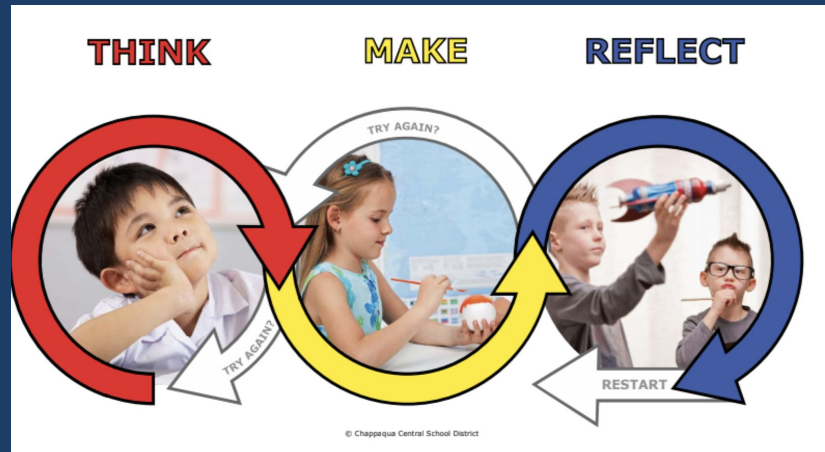
CHAPPAQUA
Central School District

STEAM Mission

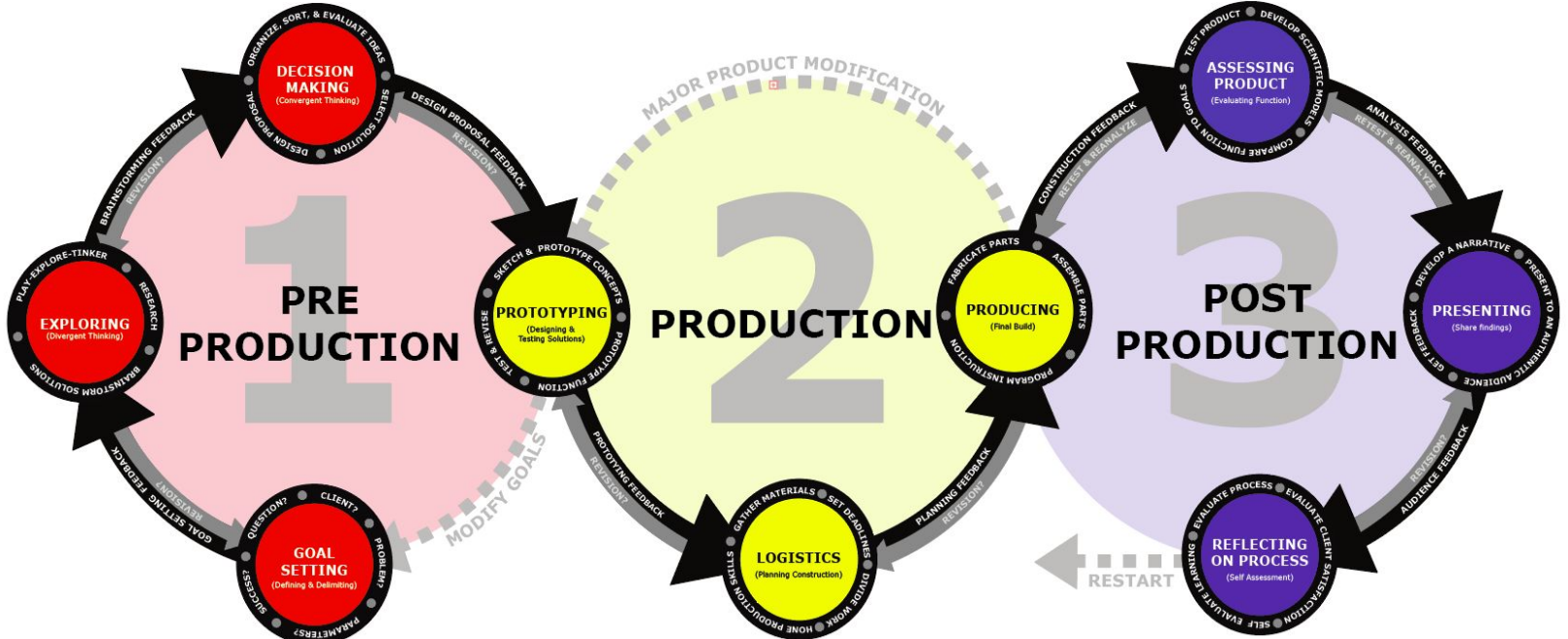


CHAPPAQUA
Central School District

Our mission is to provide a cohesive K-12 [STEAM] experience; students actively and collaboratively engage in a cyclical design process that includes brainstorming, production and reflection.



CCSD Design Process

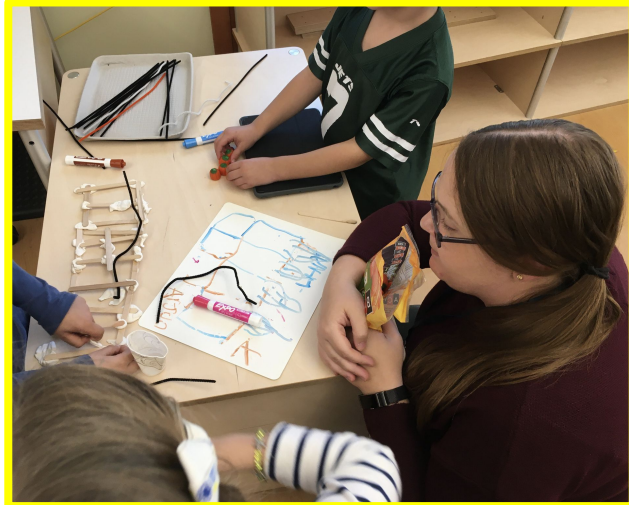


© Chappaqua Central School District



Elementary School Global Learning Centers

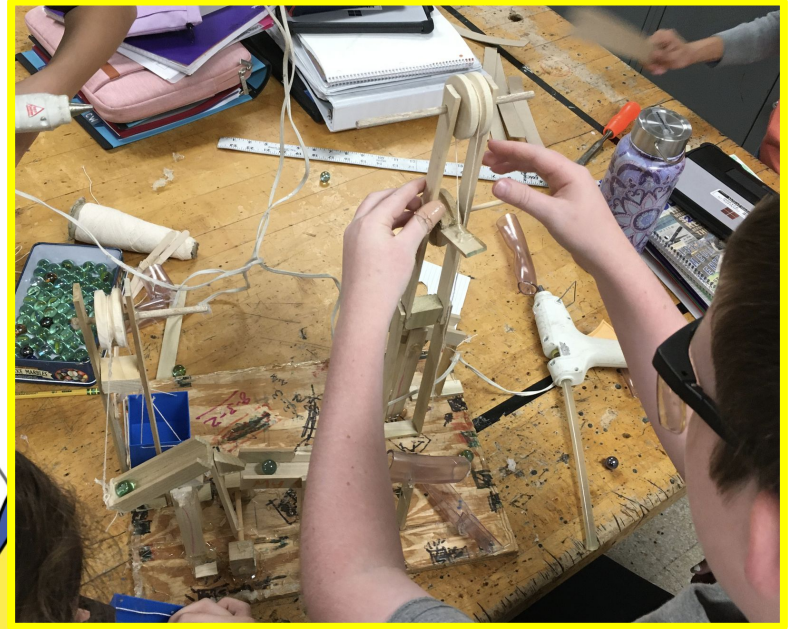
Maker - STEAM Continuum



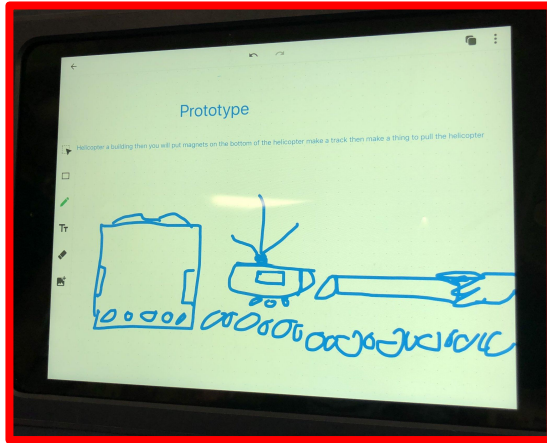
MAKE



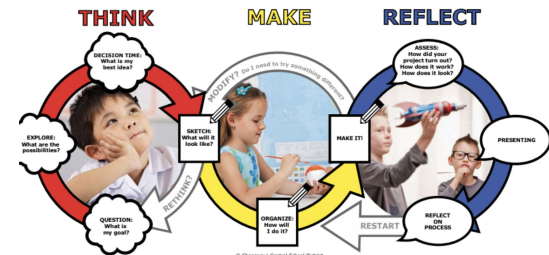
K & 1 PBL



Elementary School Makerspaces



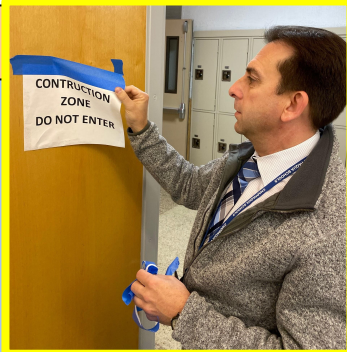
3rd Grade PBL



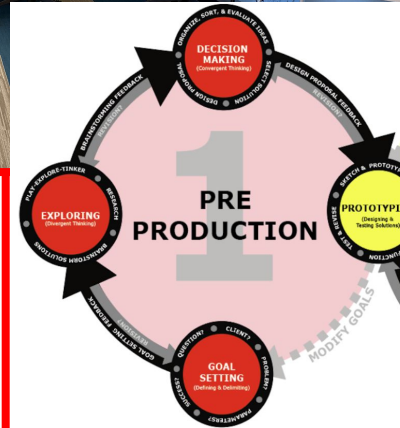


Middle & High School STEAM

Construction Timeline

2019	Bell School	Seven Bridges
Summer		Open for PD
September		Open For Students A/V and Technology Install Complete
October	Open For Students	Final Setup
November	A/V and Technology Install Complete Final Setup	

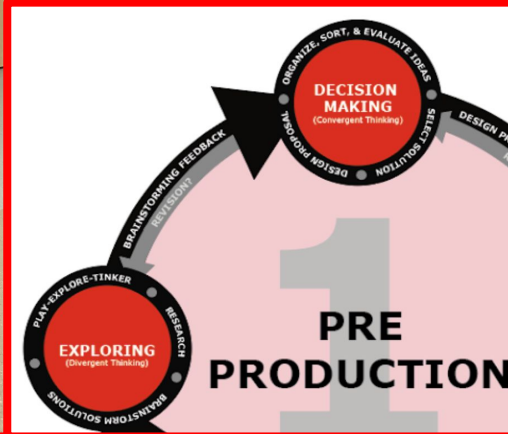
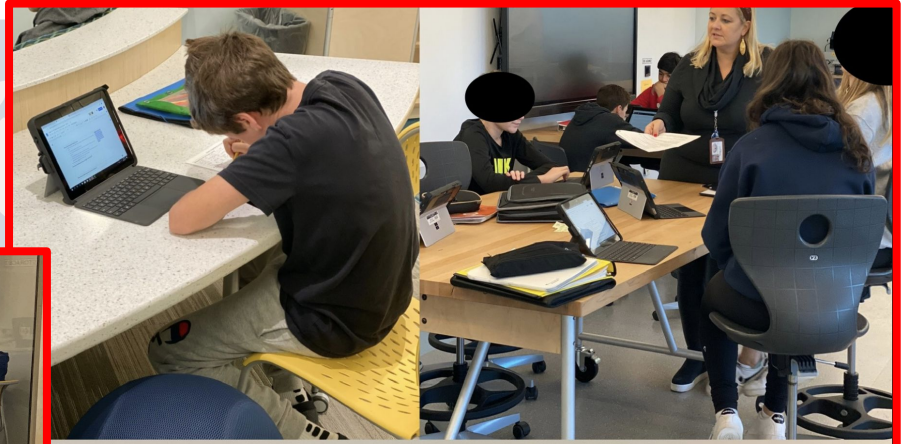
Design Commons



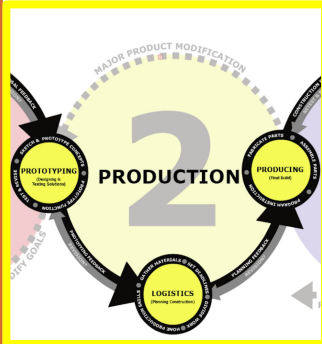
Design Commons



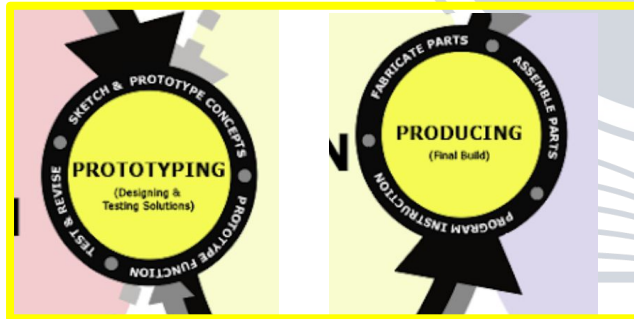
Design Commons



Fabrication Shop



Digital Production

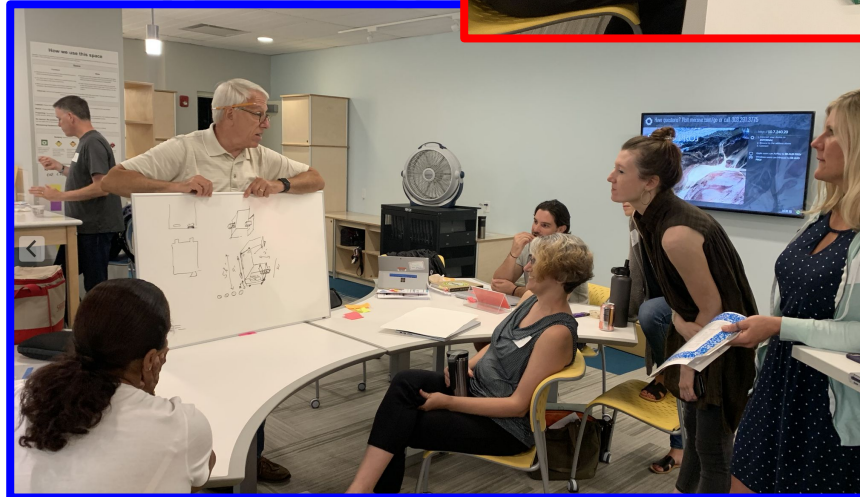
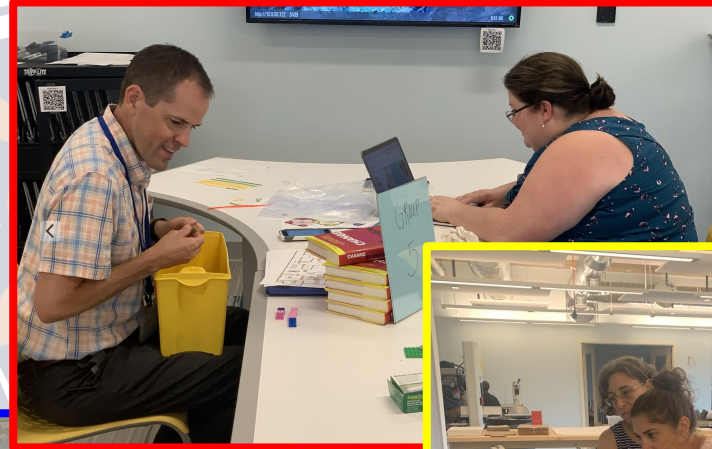


The photograph shows a workshop environment. On the left, a large 'STEAM' sign is mounted on a blue wall. Below it, a table displays various cardboard prototypes, including a small table and chairs, a circular structure, and a large box labeled 'Full size prototype'. On the right, a circular diagram illustrates the 'PRE PRODUCTION' phase, showing steps like 'GOAL SETTING', 'PROTOTYPING', and 'EXPLORING'.



Professional Development

- STEAM.Welcome
- STEAM.Build



Tracking Use and Skill Development

<p>28 8:00-10:00 Whole Space (Chinn & Egan) Civil Rights Monument</p> <p>9:00-11:00 Fabrication (Kelly K.) Foreground, midground, background - 7th</p> <p>10:38-11:36 Whole Space (Chinn & Egan) Civil Rights Monument</p> <p>12:34-1:32 Whole Space (Chinn & Egan) Civil Rights Monument</p>	<p>29 8:00-10:00 Whole Space (Chinn & Egan) Civil Rights Monument</p> <p>9:00-11:00 Fabrication (Kelly K.) Foreground, midground, background - 7th</p> <p>10:38-11:36 Whole Space (Chinn & Egan) Civil Rights Monument</p> <p>12:34-1:32 Whole Space (Chinn & Egan) Civil Rights Monument</p>	<p>30 8:00-10:00 Whole Space (Chinn & Egan) Civil Rights Monument</p> <p>9:00-11:00 Fabrication (Kelly K.) Foreground, midground, background - 7th</p> <p>10:38-11:36 Whole Space (Chinn & Egan) Civil Rights Monument</p> <p>12:34-1:32 Whole Space (Chinn & Egan) Civil Rights Monument</p>	<p>31 8:00-9:00 - Whole space (Heather & Laurie) Plot & Characters</p> <p>9:00-11:00 Fabrication (Kelly K.) Foreground, midground, background - 7th</p> <p>9:02 - 9:57 - Whole space (Hoda & Beth) Math</p> <p>10:00 - 10:55 - Whole space (Hoda & Beth) Math</p> <p>11:00-1:00 - Whole space (Heather & Laurie) Plot & Characters</p> <p>11:39 - 12:34 - Whole space (Hoda & Beth) Math</p> <p>1:30-2:30 - Whole space (Heather & Laurie) Plot & Characters</p> <p>1:35 - 2:30 - Whole space (Hoda & Beth) Math</p>
---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

11:00-12:00 Fabrication (Skye) Gumdrops Challenge

1:30-2:30 Design Lab & Assembly (Diane & Shana)

Fabrication (Skye) Gumdrops Challenge

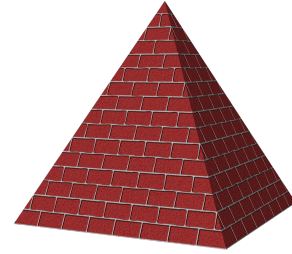
SB STEAM Center - Entry Planner/Project Tracker (Responses)				
File Edit View Insert Format Data Tools Form Add-ons Help All changes				
fx Skye Albert-Hall				
	C	D	E	F
1	Teacher(s) name	Grade Level	Subject	Instructional Goals (What will students know and what will they be able to do?)
8	Skye Albert-Hall	5th Grade	Math	Know the Design ProcessStudents Collaborative Problem Solving Testing & Analyzing Measurement & Calculaion

Project idea	Challenge Statement
<p>1. DESIGN a gumdrop/toothpick structure using geometric shapes</p> <p>2. MEASURE the parts</p> <p>3. BUILD the structures</p> <p>4. TEST & CALCULATE how much different shapes hold up</p> <p>5. ANALYZE Which shape is the strongest</p> <p>6. POST a picture and results to a Canvas discussion</p> <p>7. DISCUSS Agree or Disagree</p>	<p>Parameters: angles, shapes, max size (max area) Bonus: fewer materials = more weight - Span</p>

Grade 5 Activities

Math/Science: Building 3D geometric structures to measure strength, angles, volume, and surface area

Science: Measuring the size and rate of chemical reactions with Alka-Seltzer



Grade 6 Activities

Science: Design, build and test airplanes for aerodynamics and mass



SS: Using the design process, answer the question: “Is it possible for all the countries to live in peace?”

SS/Math/Spanish: Collect experimental data and then analyze it using the skills learned in math class. During the entire activity, the students will be speaking in spanish



Grade 7 Activities

English: Students will extract character traits out of a text and take on the perspective of that character in first-person correspondence. Students will be able to identify conflicts in a story and understand how characters grow and change over time.



Math: Students will be using Scratch and digital design to code mathematical concepts.



Grade 8 Activities

Art: Lasercut shadow boxes that include coding with LittleBits to learn about perspective drawing.

SS: Research, design and build civil rights monuments.

Science/Math/FACS: Use food science and algebraic thinking to create new recipes, and video-record the process.



High School STEAM Center



MS & HS Next Steps



- ***Faculty and student*** machinery and safety training.
- Database activities: **All students have at least two meaningful experiences** in the STEAM.
- ***Continue to build excitement, innovation, and integrate the design process for STEAM skill development.***





Greeley GLC

High School Global Learning Center

- Library
 - Classroom
 - Science
 - Research
 - Flexible
 - Furniture
 - Breakout Spaces
 - Multi-media
- Center- Fall 2020





Upper L-Building

#LBuildingLife

L-Vision: Where are we going?

We will create learning communities that are:

- Open
- Engaged
- Inspired

L-Mission: What we do

Our mission is to foster innovation, inquiry and collaboration among students, teachers, and disciplines.



Professional Learning

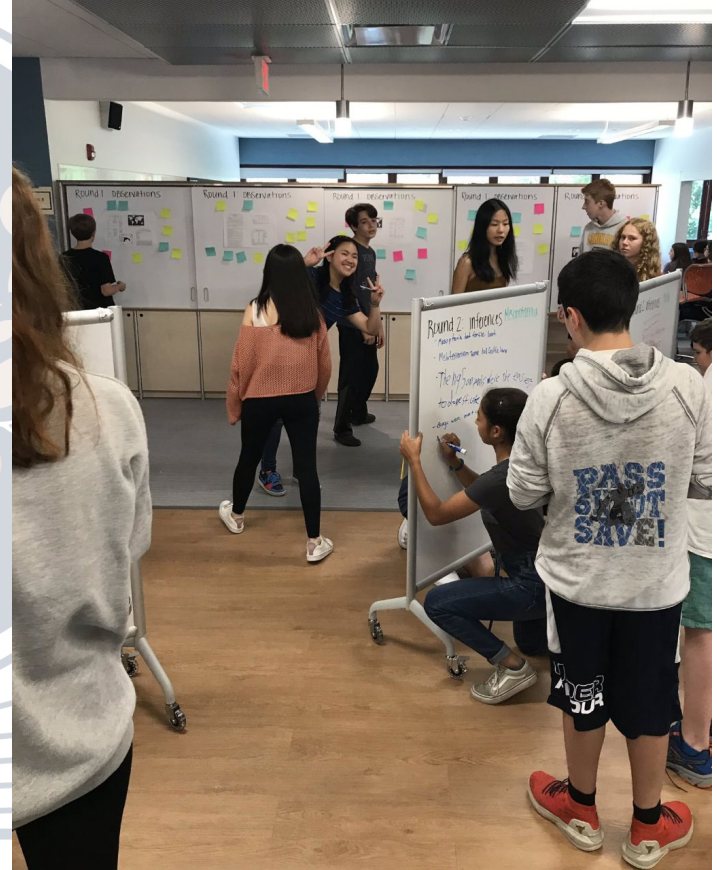
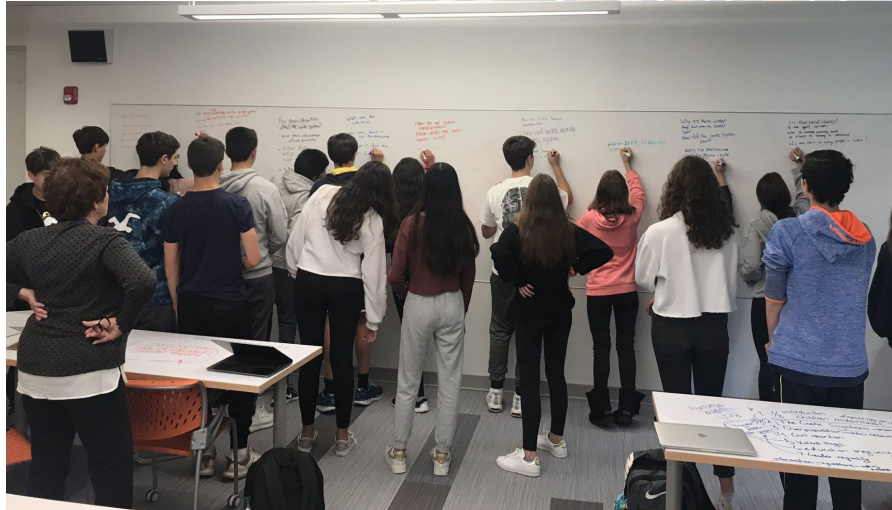
- i-Lab as a springboard
- L-Professional Development Arc
- Lesson design & space exploration
- Focus Groups



Upper-L



Upper-L





Thank You

#WeAreChappaqua