



Pocantico Hills School



January 24, 2019

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Integrate ISTE Standards across curricula and grade levels, grow instructional practices to support inquiry-based learning

2017-2018

Focus: Aligning and Implementing Computer Science and STREAM

- Develop STREAM curriculum and support inquiry based learning, 5-8
- Create a vertically aligned computer science scope and sequence
- Develop and implement a coding curriculum K-4
- Identify needs for 5-8 computer science
- Implement a digital citizenship curriculum
- Awareness building of ISTE Standards
- Build teacher capacity through a co-planning and co-teaching model around computer science
- Collaborate with BOCES and local organizations to create inquiry-based units at the middle school level
- Develop a vision for school-based active learning centers

2018-2019

Focus: Expanding Computer Science and Inquiry

- Continue K-4 computer science sequence
- Implement plan for 5-8 computer science sequence
- Build internal capacity around computer science and productivity tools, the ISTE Standards, and their integration into the Inquiry Model
- Expand inquiry-based and technology-supported curriculum units across K-8 social studies utilizing applicable literacy workshop units, PNWBOCES Integrated Social Studies units, and C3 Inquiries as launching points
- Build connections between inquiry and global citizenship initiatives
- Implement the vision for school-based active learning centers

2019-2020

Focus: Sustaining Implementation of Computer Science and Inquiry Curricula

- Continue computer science and digital citizenship curricula implementation
- Refine and continue development of inquiry-based social studies units connected to global citizenship, cultural awareness, and world issues
- Expand and further develop active learning centers

SUMMER 2020

THREE-YEAR
BENCHMARK DATA
POINT

Large scale review of
progress toward long
term goals

Adjustment &
refinement of
priorities



GOALS OF THE MAKERSPACE PROGRAM

- Provide students with a unique and flexible learning environment that enhances innovative thinking, collaboration and communication, and creative expression
- Explore enriching hands-on projects that:
 - Are linked to grade level curricula and build connections across content areas
 - Are co-designed with teachers or guided by student interests
 - Offer inquiry-based opportunities that build and deepen student understanding and nurture an inventor's mindset
 - Integrate technology, multi-media, and computational thinking when appropriate
 - Are aligned with District initiatives and standards across disciplines
- Create a space that fosters ongoing instructional experimentation

CURRICULUM DEVELOPMENT AND SPACE DESIGN WITH CONSULTANT, GERALD ARDITO

Assistant Professor, STEM-D Education
Program Coordinator, Education Technology
Pace University School of Education

- Curriculum work began in Summer 2018, developing initial units for grades 1-4 based on spring brainstorming sessions with teacher teams
- Space designed and furnished to be flexible and responsive to emerging needs
- Funding through District budget and Foundation grant
- Curriculum work ongoing through 2018-2019

THE COLLABORATIVE MODEL

MAKERSPACE

- Projects are curriculum driven and planned collaboratively
- Classes meet once per cycle in the Makerspace with the classroom teacher

ADDITIONAL CURRICULUM & TECHNOLOGY

- Push-in once per cycle to support math instruction in each elementary class
- Push-in twice per cycle to support 7th grade STREAM curriculum
- Technology integration support to teachers and students as needed

CURRENT AND FUTURE CURRICULUM CONNECTIONS

- Reading and Writing Workshop
- Math Centers
- Social Studies
- Science 21 and Engineering
- Garden and Sustainability
- Middle School STREAM
- Global Dimensions
- Technology and Media

Students recognize the rights, responsibilities and opportunities of living, learning and working in an interconnected digital world.

Students take an active role in choosing, achieving and demonstrating competency in their learning goals.

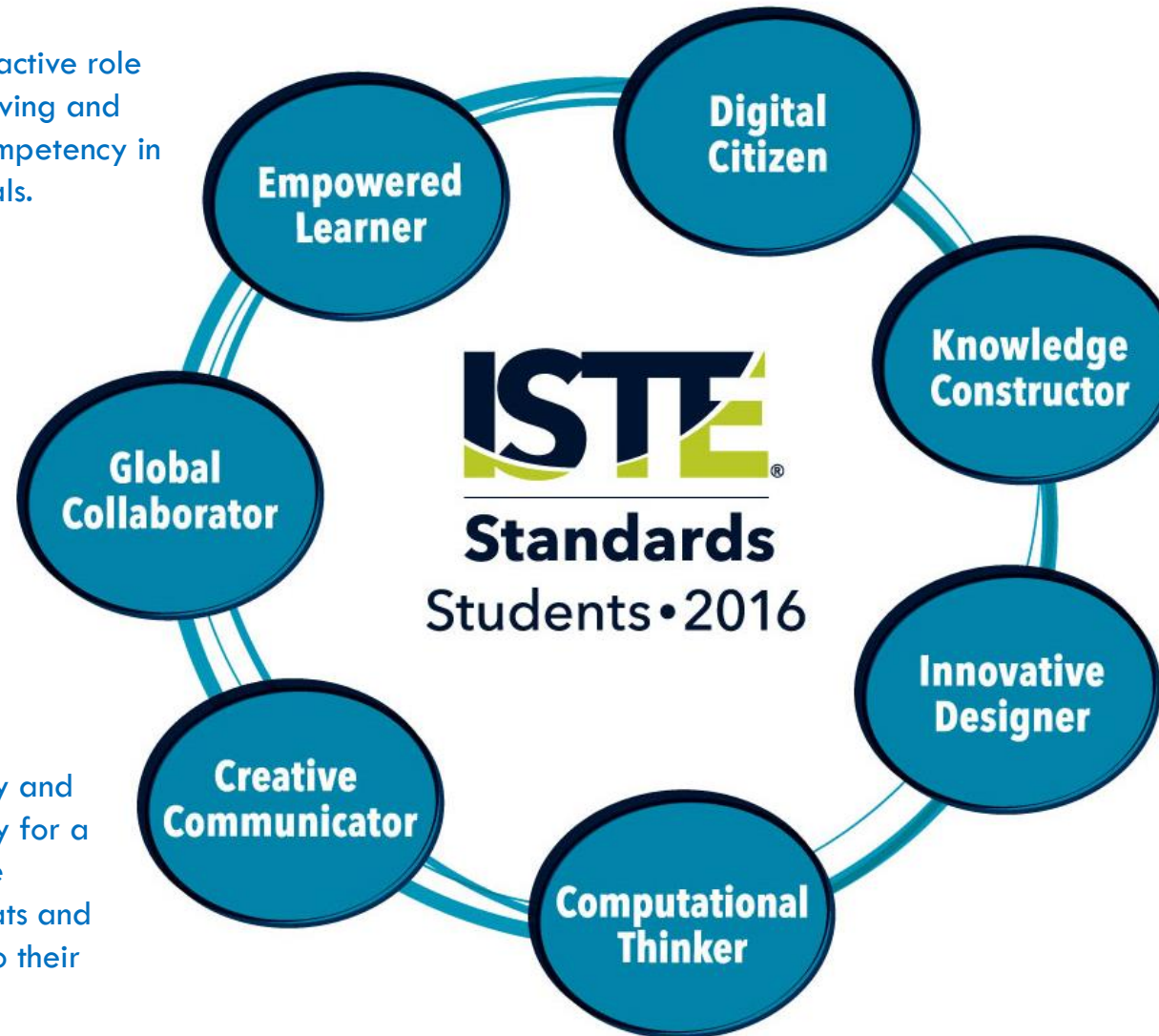
Students use digital tools to broaden their perspectives and enrich their learning by collaborating with others and working effectively in teams locally and globally.

Students communicate clearly and express themselves creatively for a variety of purposes using the platforms, tools, styles, formats and digital media appropriate to their goals.

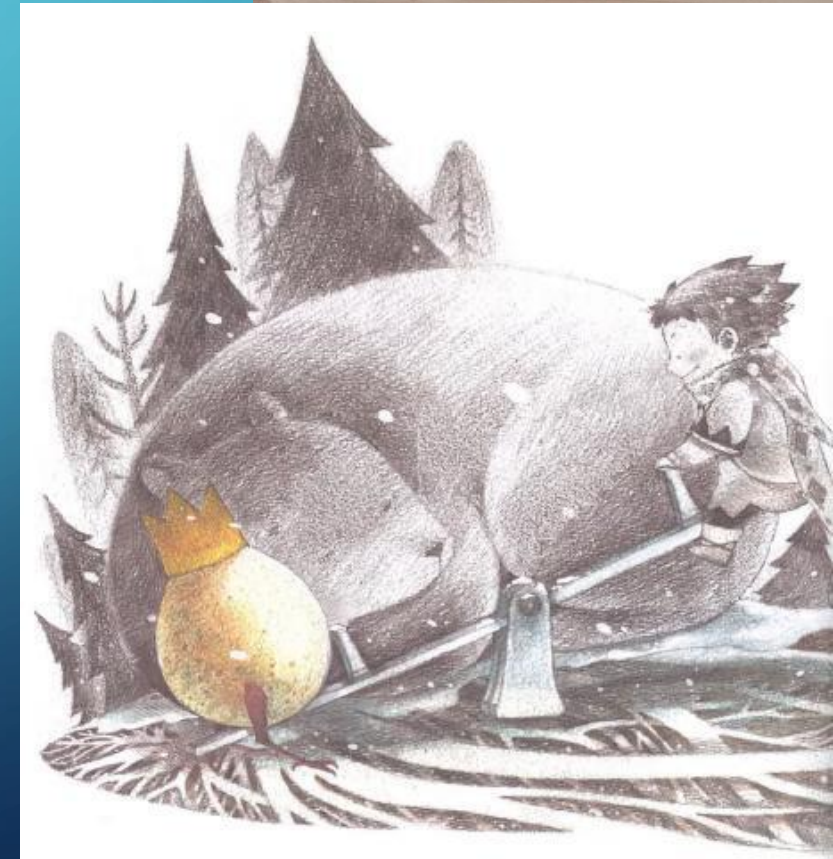
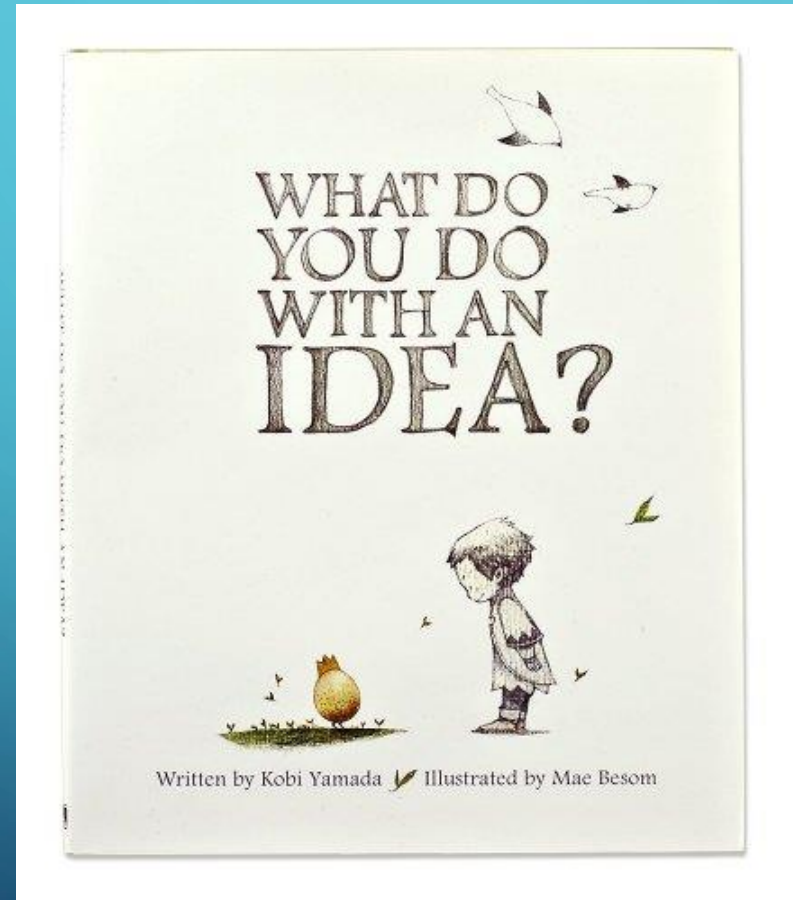
Students develop and employ strategies for understanding and solving problems in ways that leverage the power of technological methods to develop and test solutions.

Students critically curate a variety of resources to construct knowledge, produce creative artifacts and make meaningful learning experiences for themselves and others.

Students use a variety of technologies within a design process to identify and solve problems by creating new, useful or imaginative solutions.

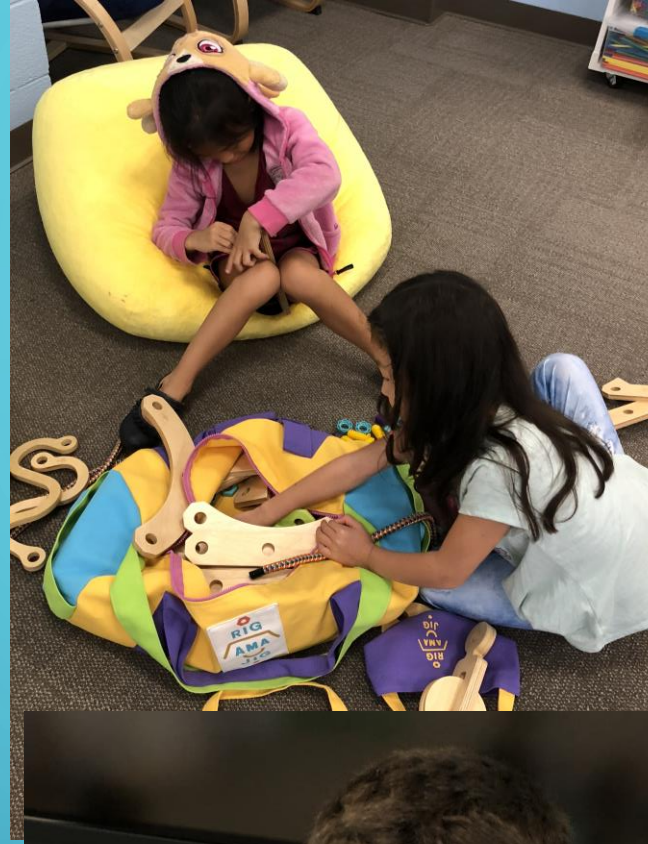
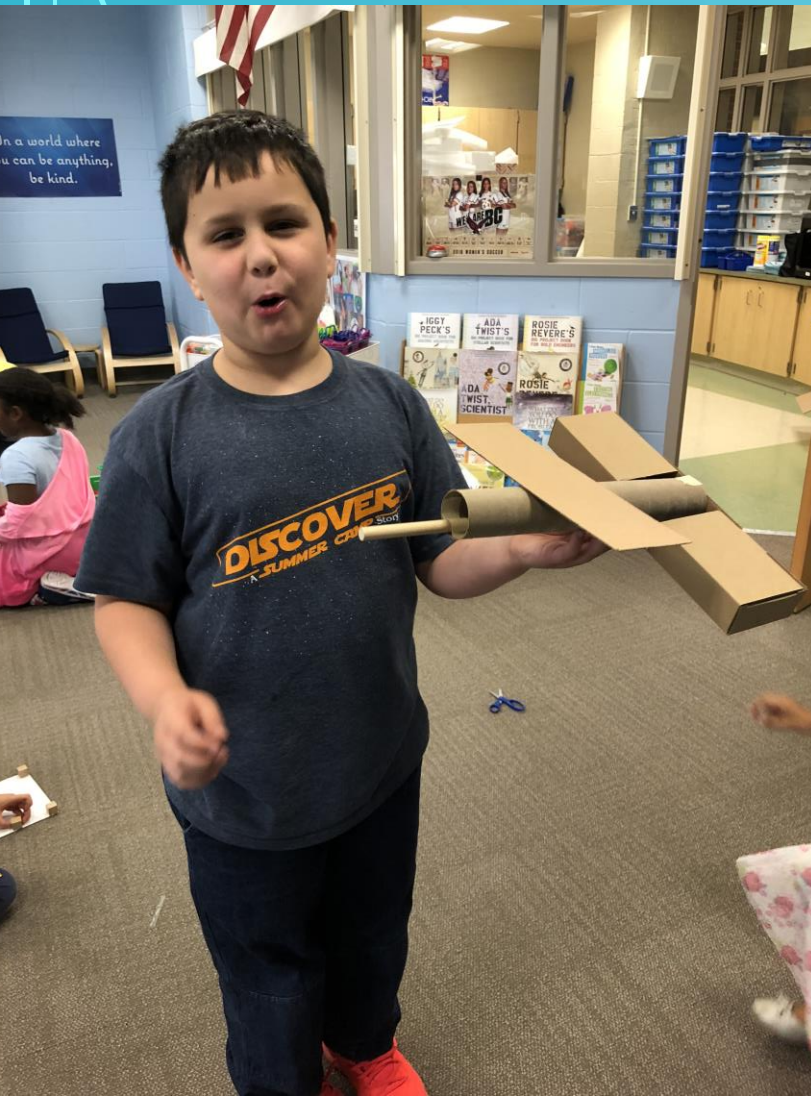


WHAT DO YOU DO WITH AN IDEA?



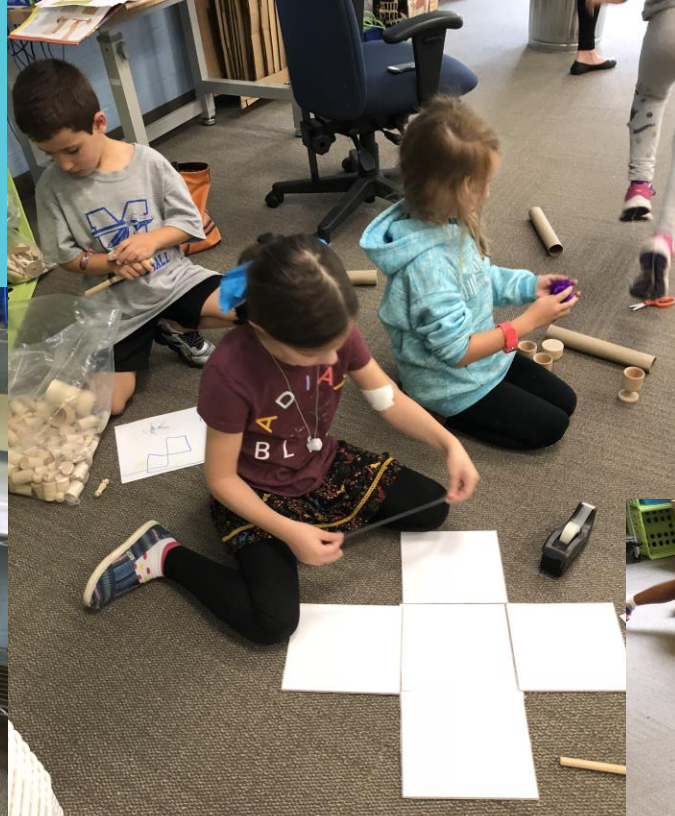
Read to each class on their first visit to Makerspace.

Exploring Makerspace



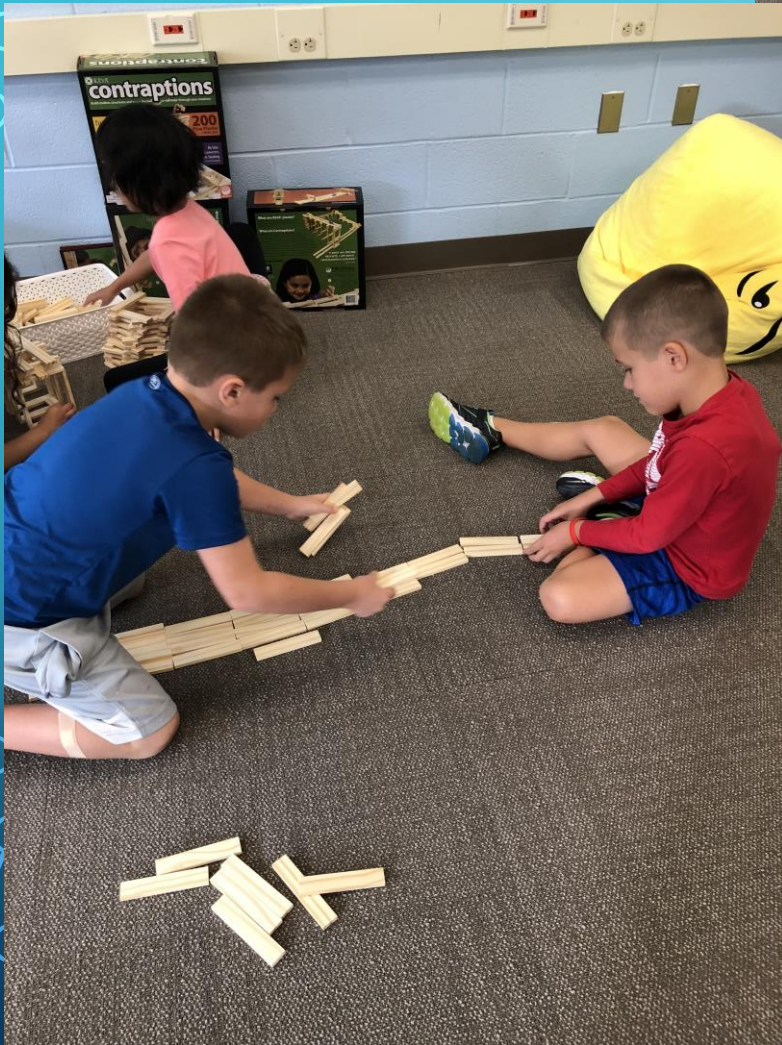
Innovative Designer
Knowledge Constructor
Empowered Learner

Exploring Makerspace



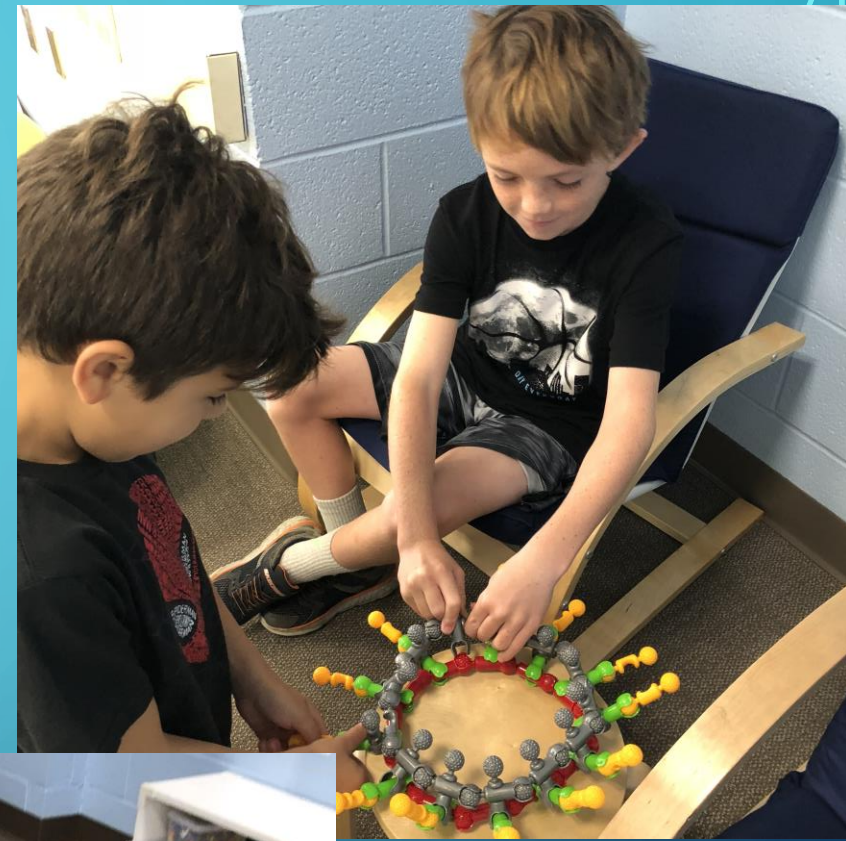
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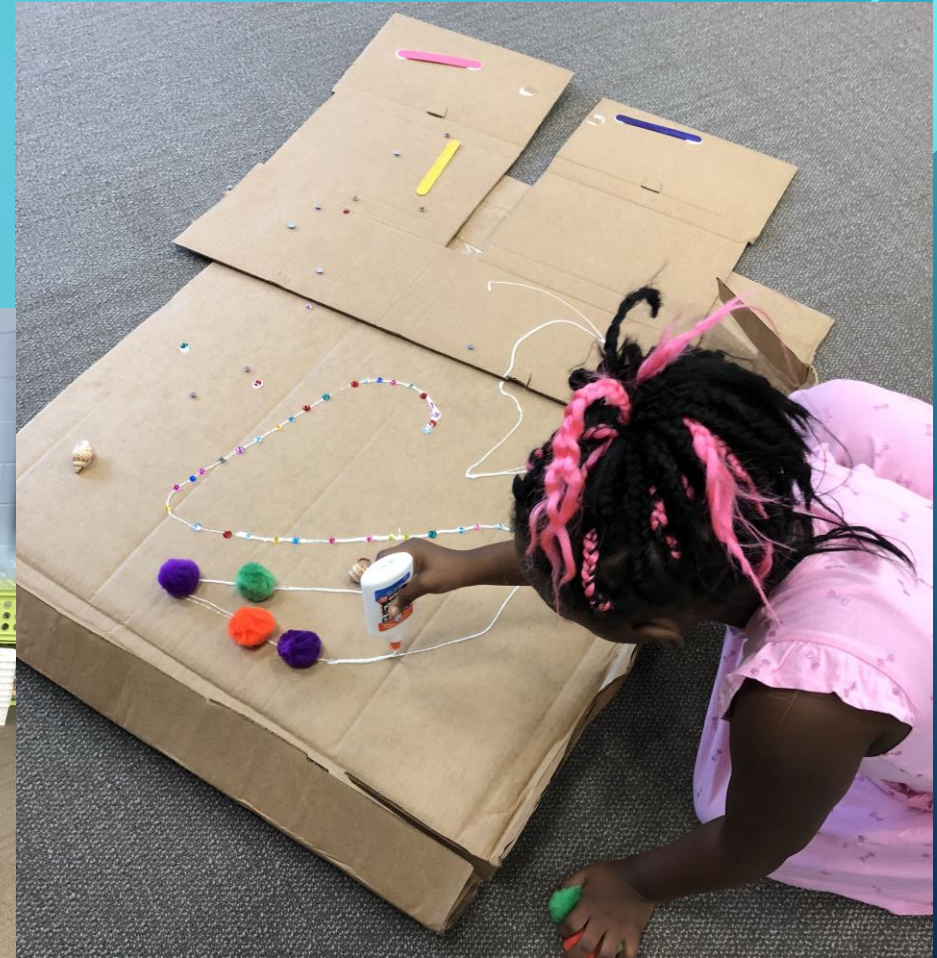
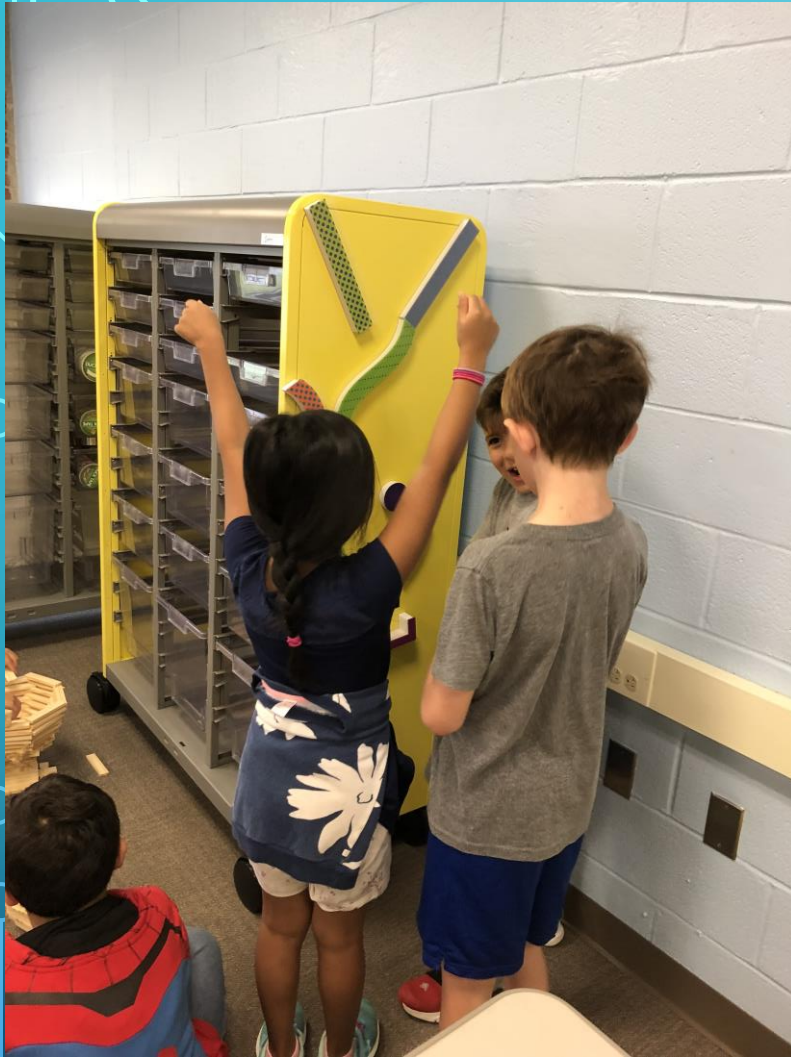
**Innovative Designer
Knowledge Constructor
Empowered Learner**

Exploring Makerspace



**Innovative Designer
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Exploring Makerspace

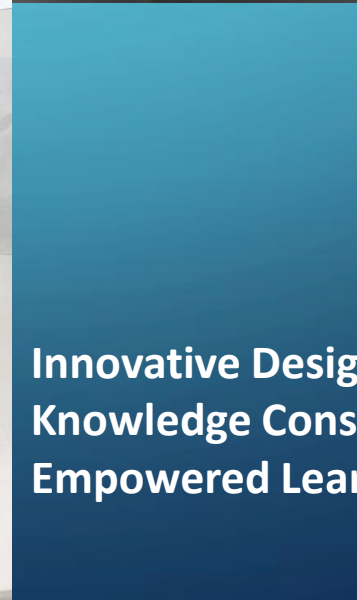
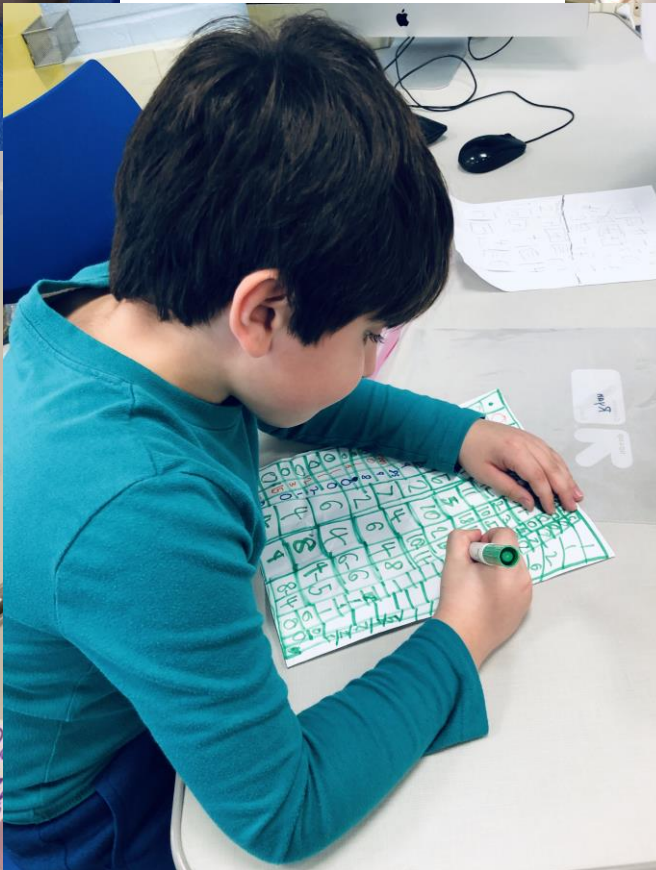
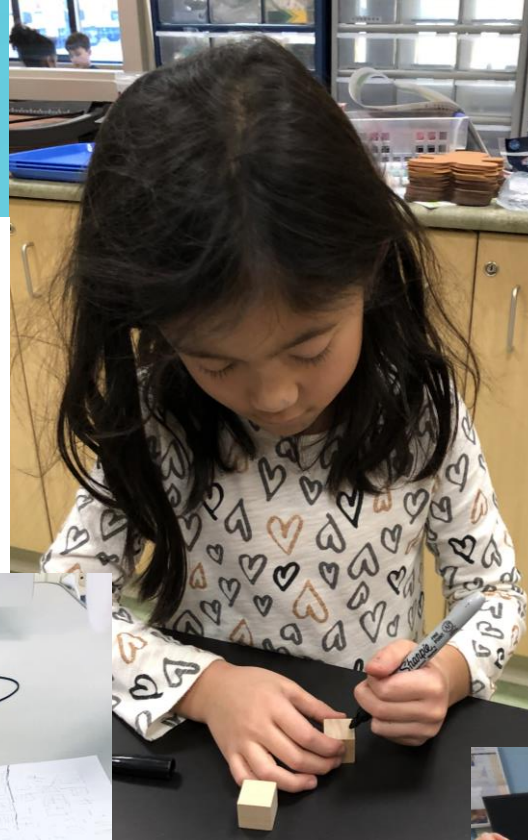
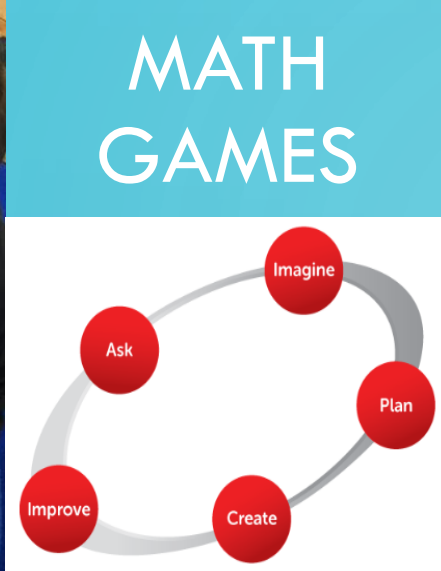


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Knowledge Constructor
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Exploring Makerspace



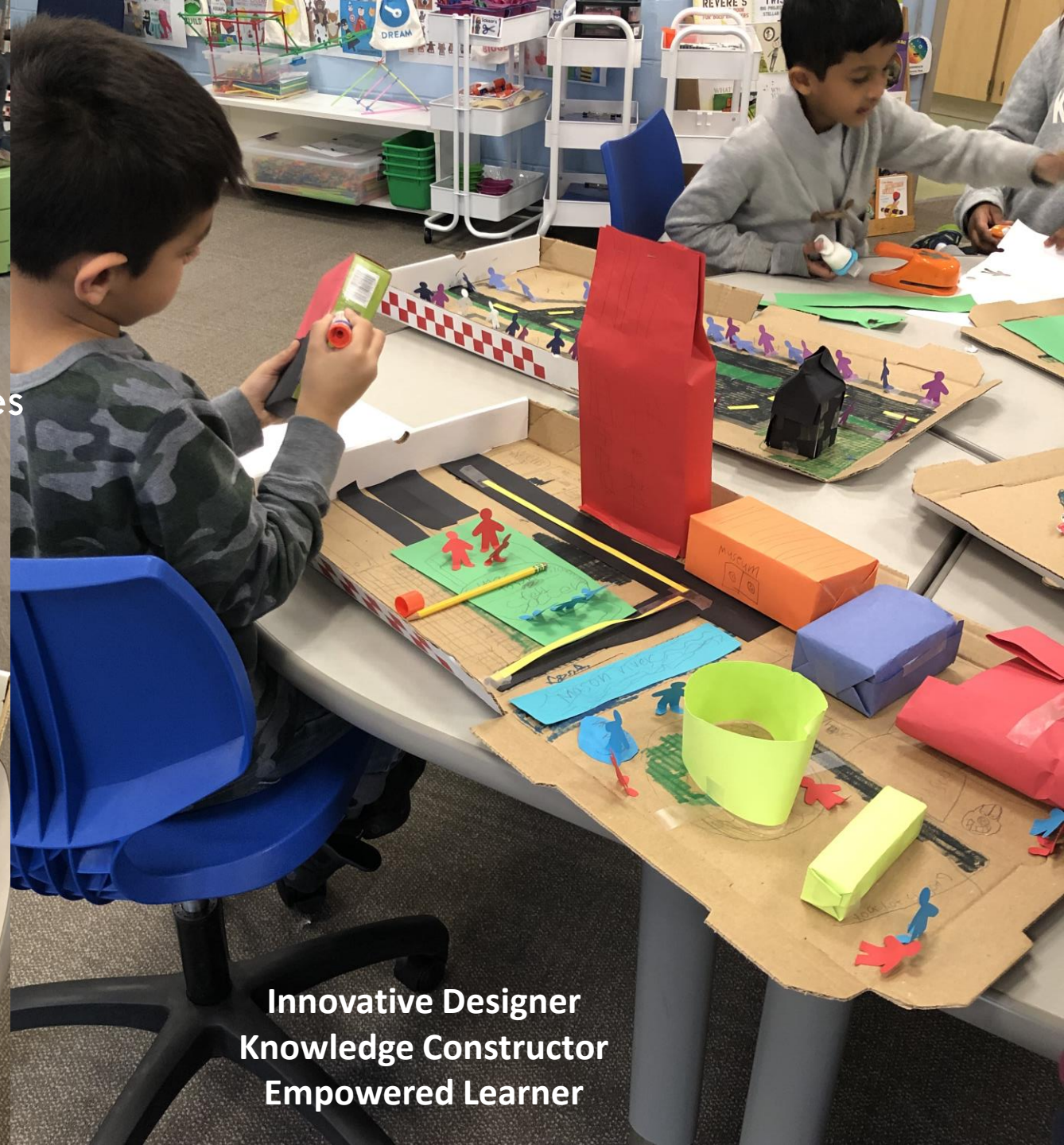
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Innovative Designer
Knowledge Constructor
Empowered Learner



Building
Communities



Innovative Designer
Knowledge Constructor
Empowered Learner



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Empowered Learner

Building
Communities



Communities
Gallery Walk

Innovative Designer
Knowledge Constructor
Empowered Learner

Communities Gallery Walk



**Innovative Designer
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Empowered Learner**

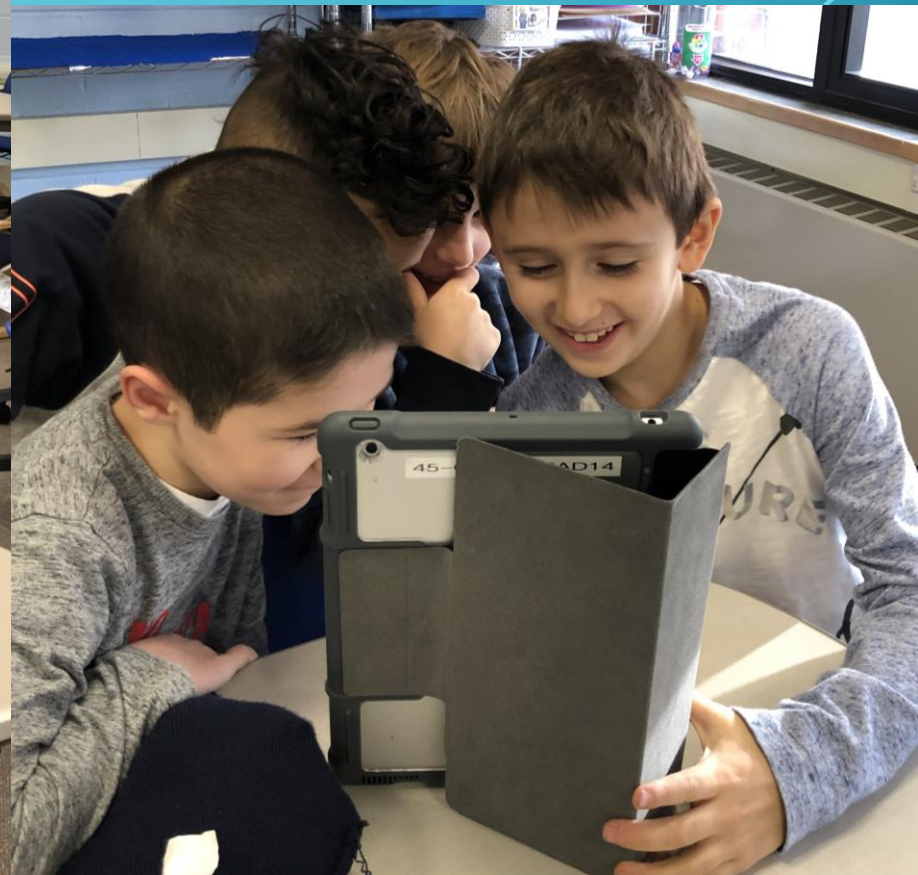


“Image, Sound, and Story” The Jacob Burns Film Center



**Empowered Learner
Digital Citizen
Creative Communicator
Global Collaborator**

“Image, Sound, and Story” The Jacob Burns Film Center

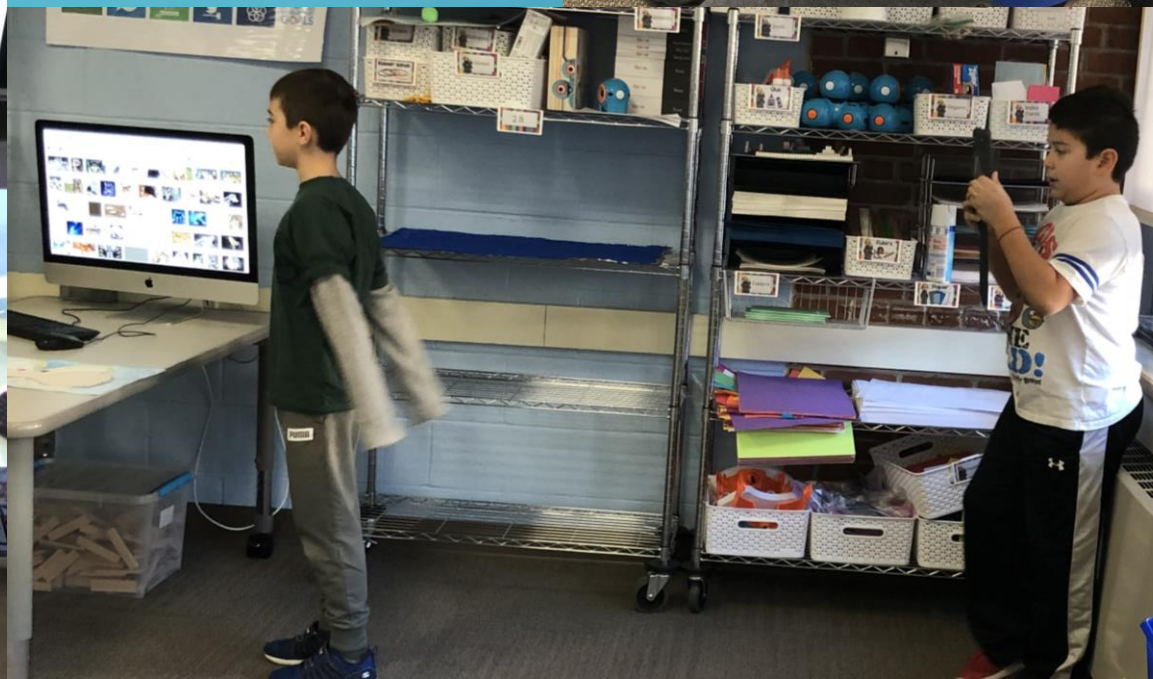


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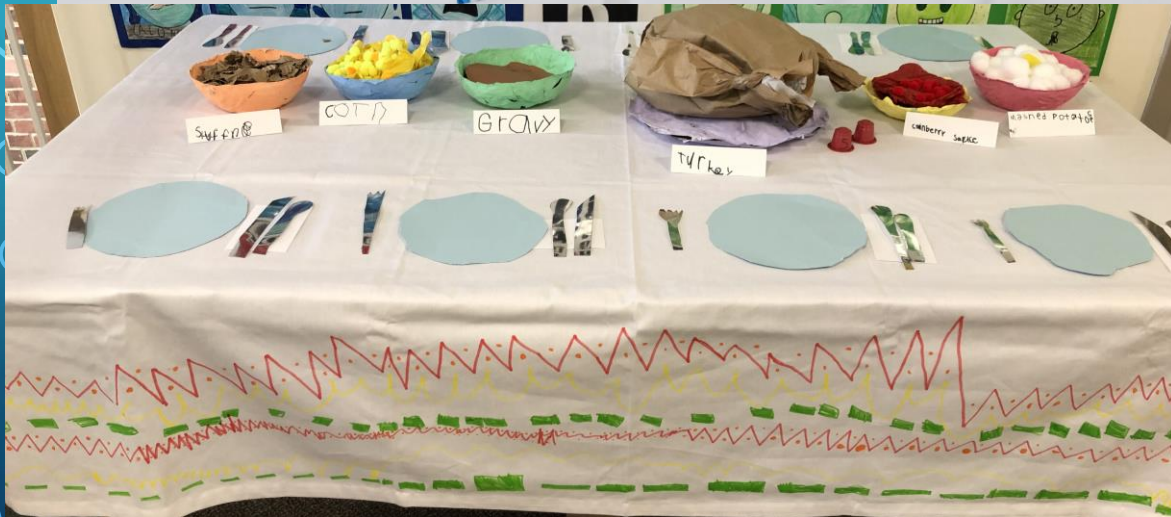
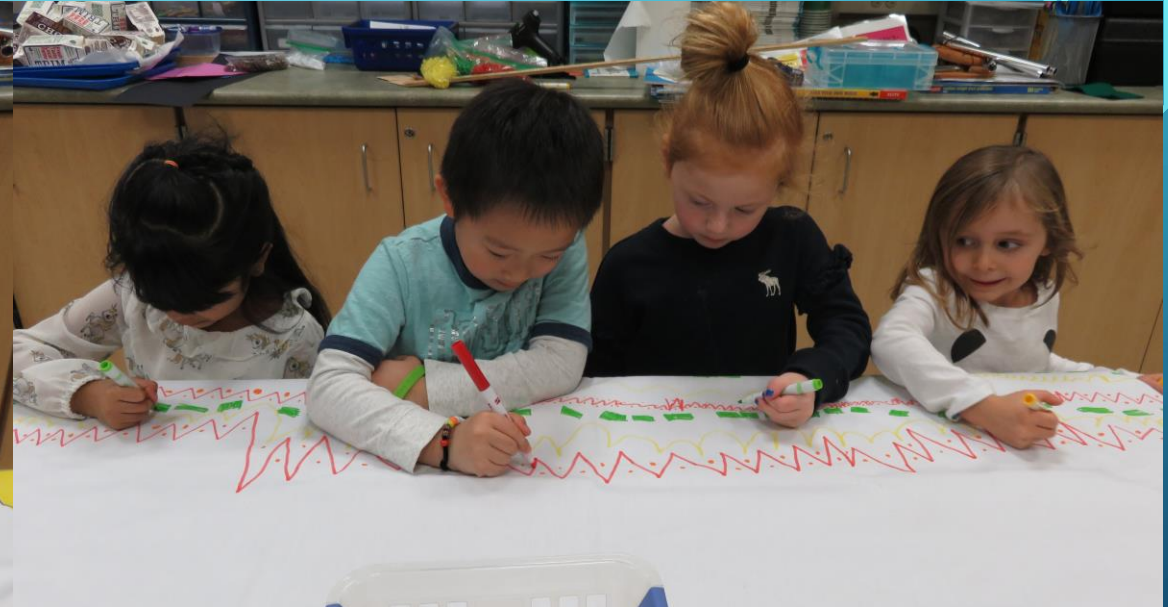


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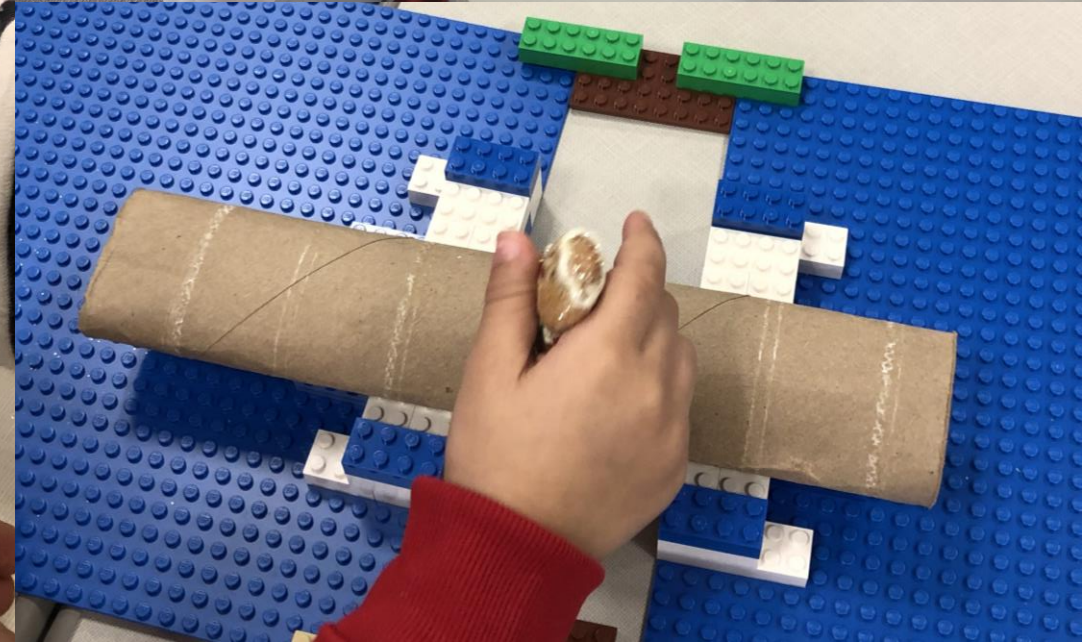
Planning and Building a Thanksgiving Table



Innovative Designer
Knowledge Constructor

Re-telling the story of Thanksgiving with the help of bead bracelets

Connection to Literature: Designing a bridge to help the Gingerbread Man escape the Fox



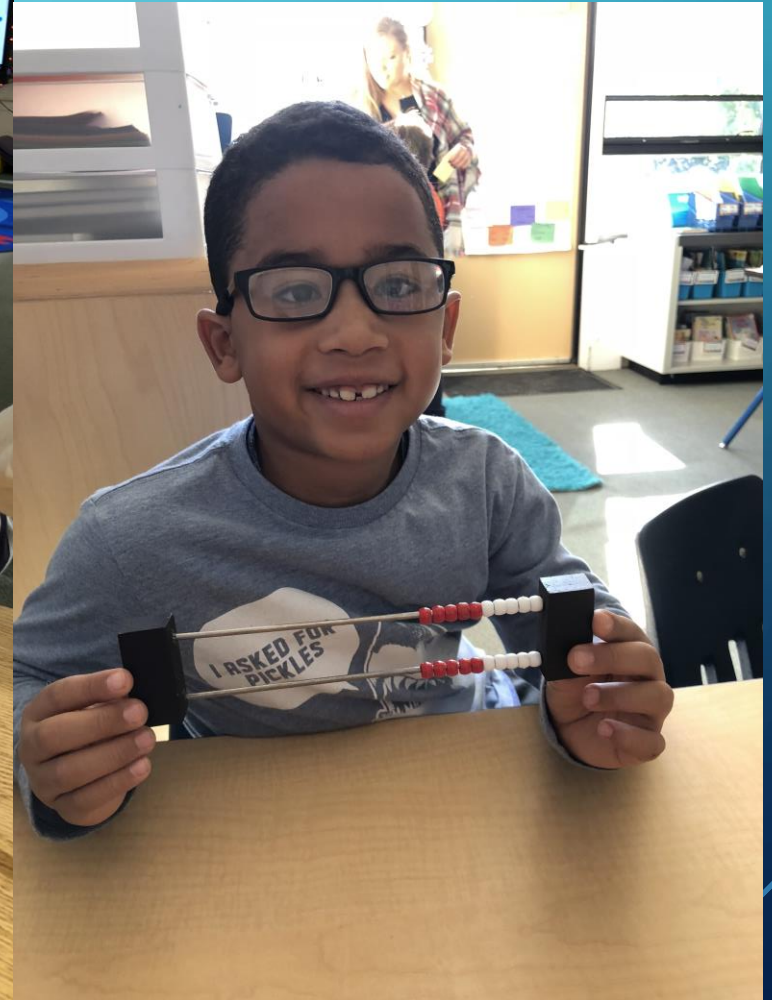
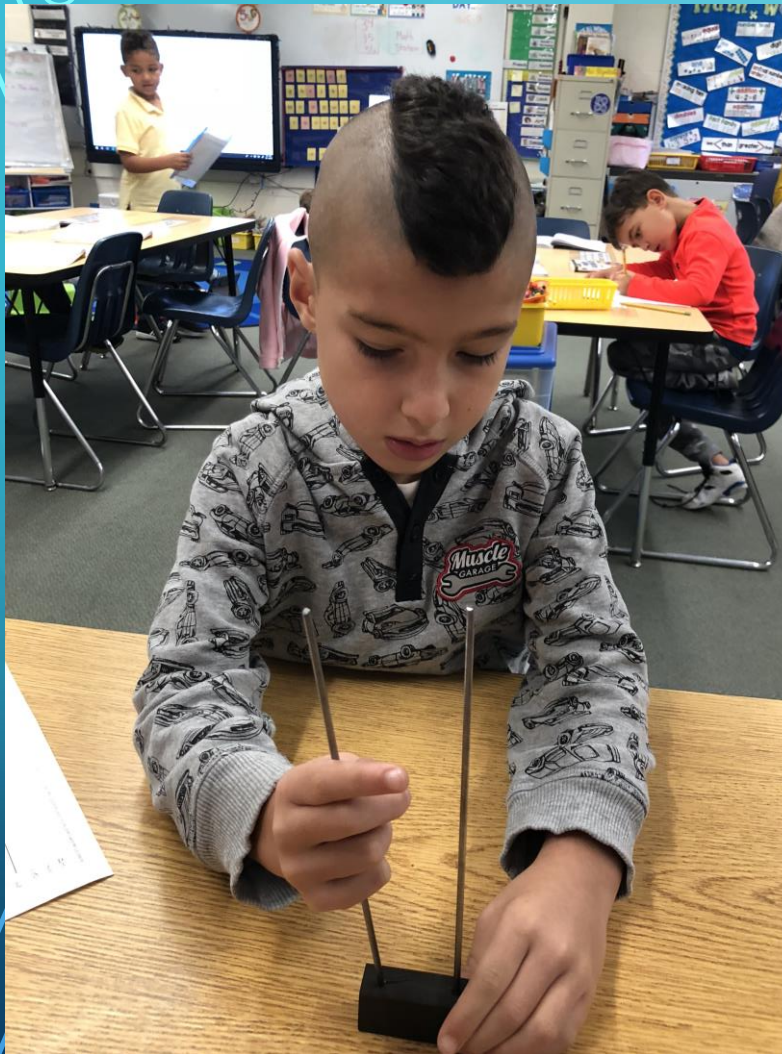
Innovative Designer
Knowledge Constructor
Creative Communicator

Building math racks to develop
number sense in kindergarten.

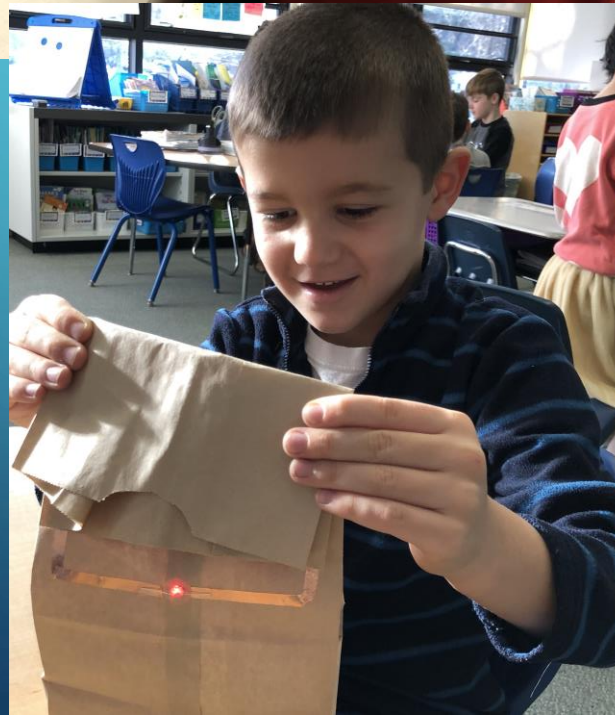
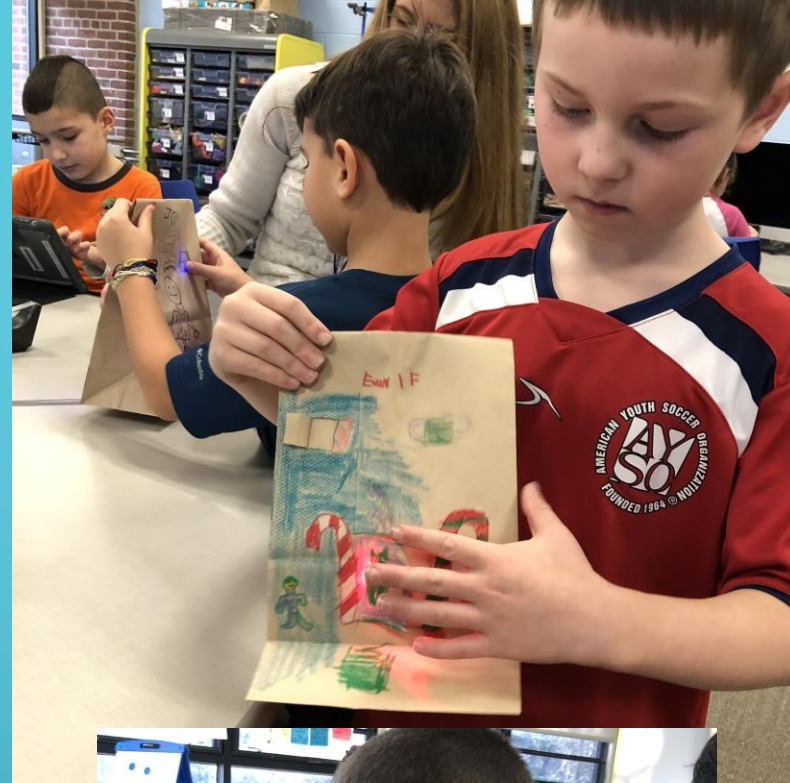


Knowledge Constructor

Building math racks to support
conceptual understanding of ten.

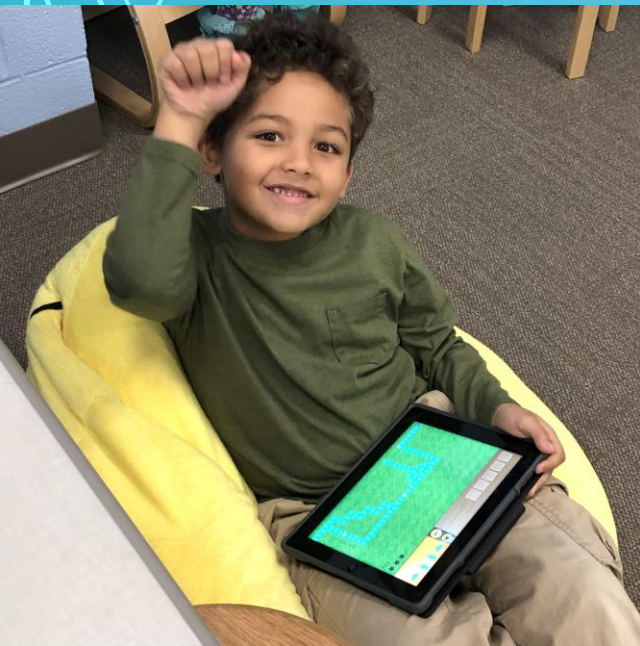


Knowledge Constructor



Paper circuits on
Gingerbread Houses

Knowledge Constructor



Kodable: Programming platform for kids.

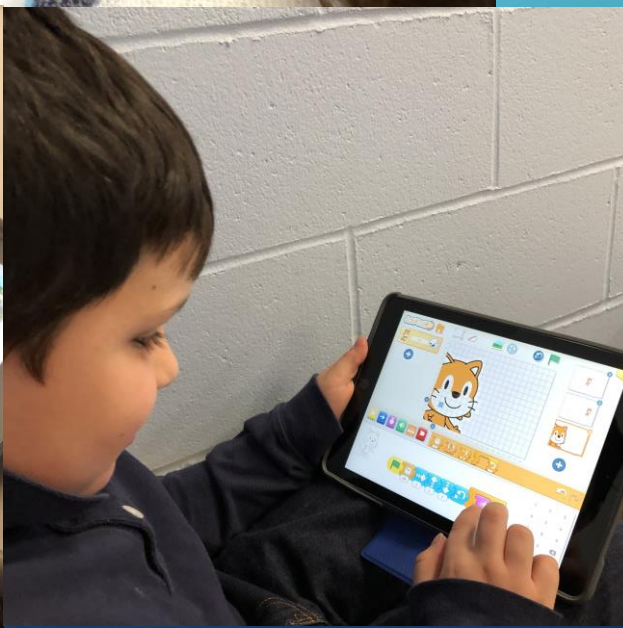
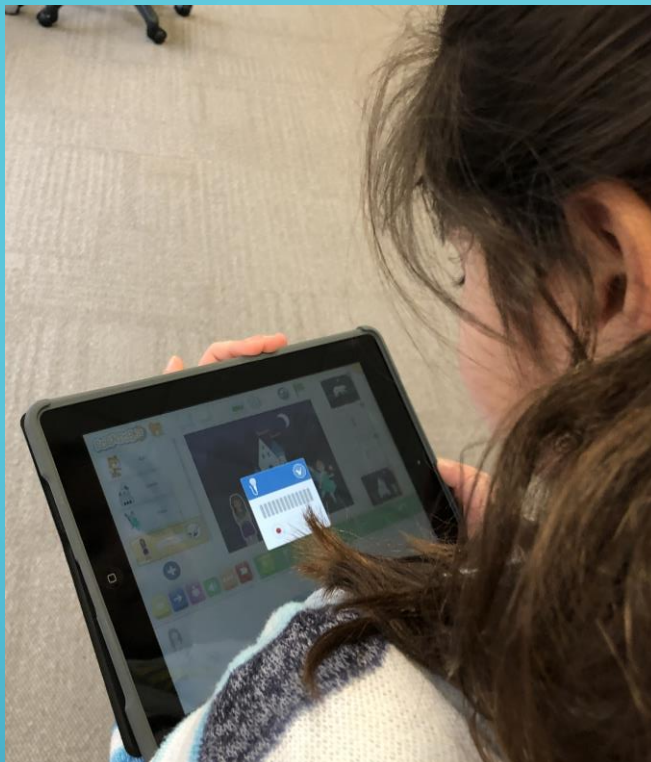


**Computational Thinker
Knowledge Constructor**



Kodable: Students begin by moving a Fuzzy through a maze in a sequence. They then use conditions to change the direction of the Fuzzy.





Scratch Jr.

Children program their own
interactive stories and games

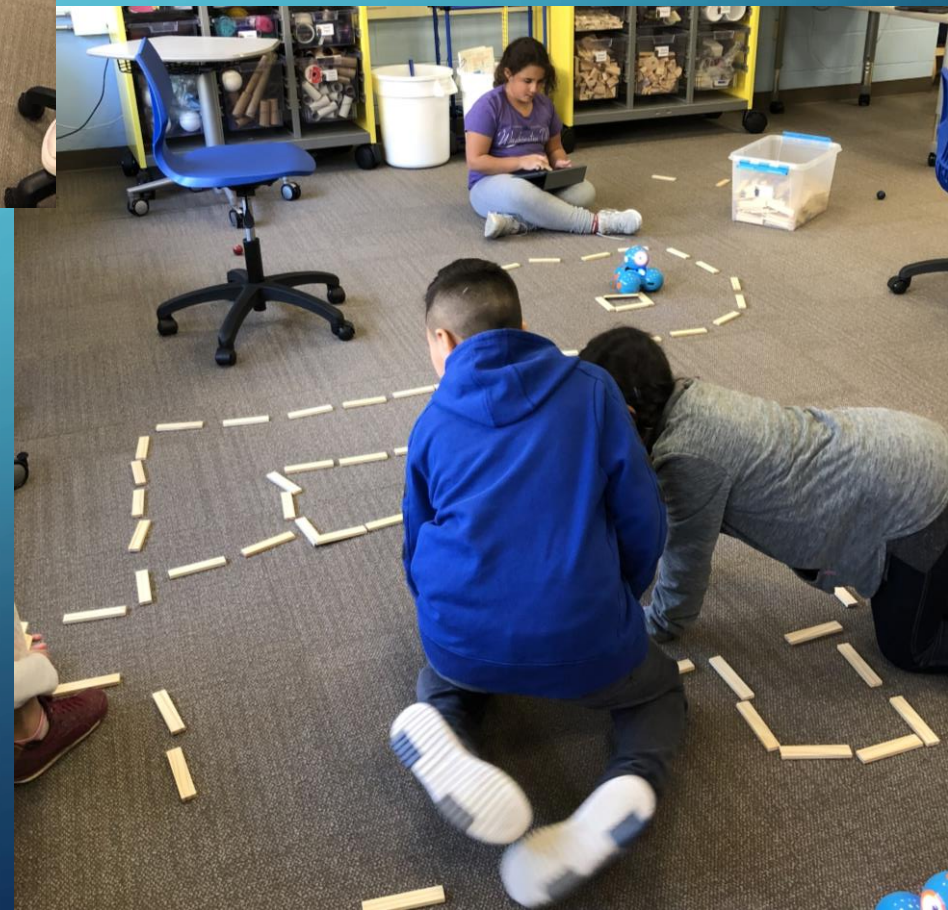
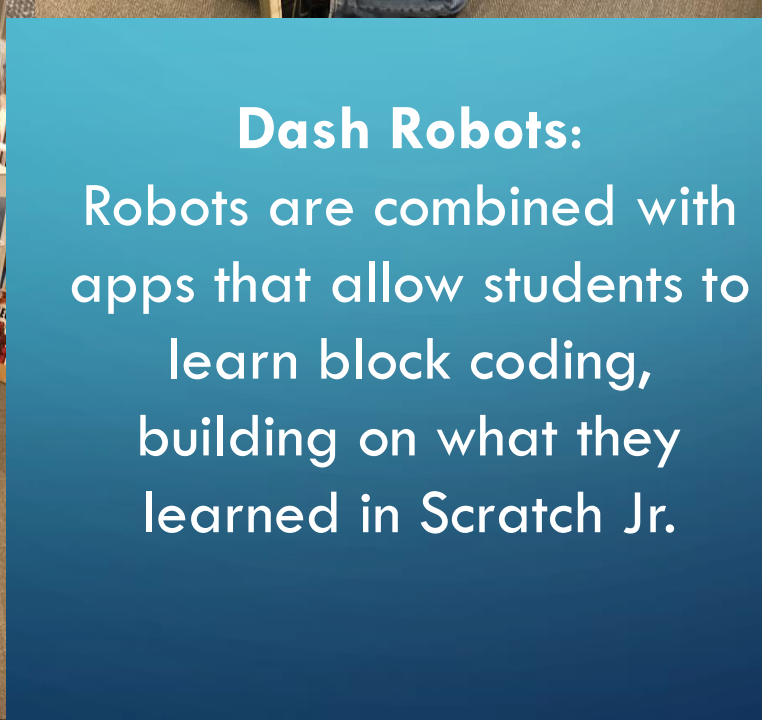
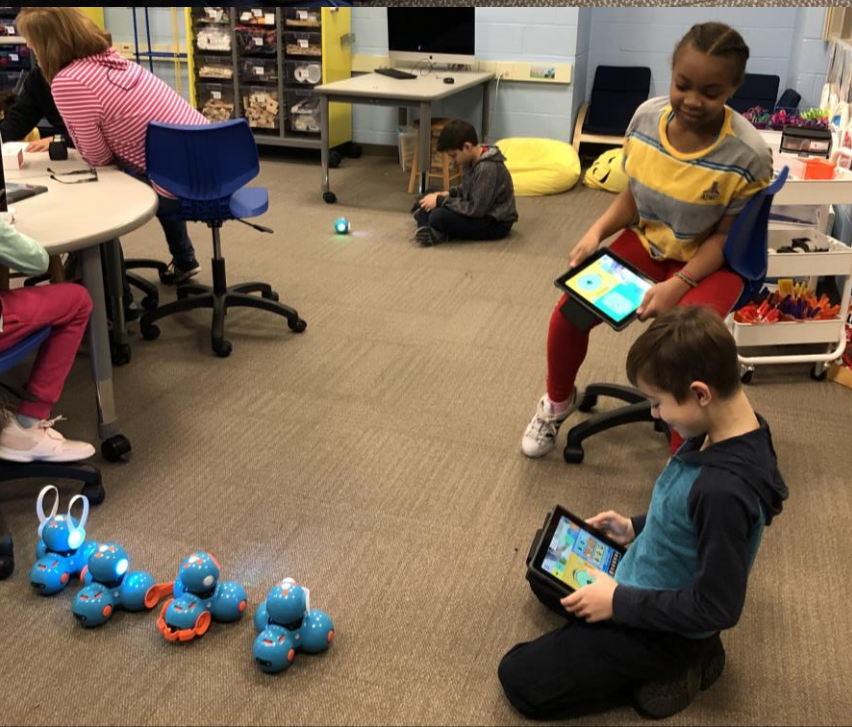
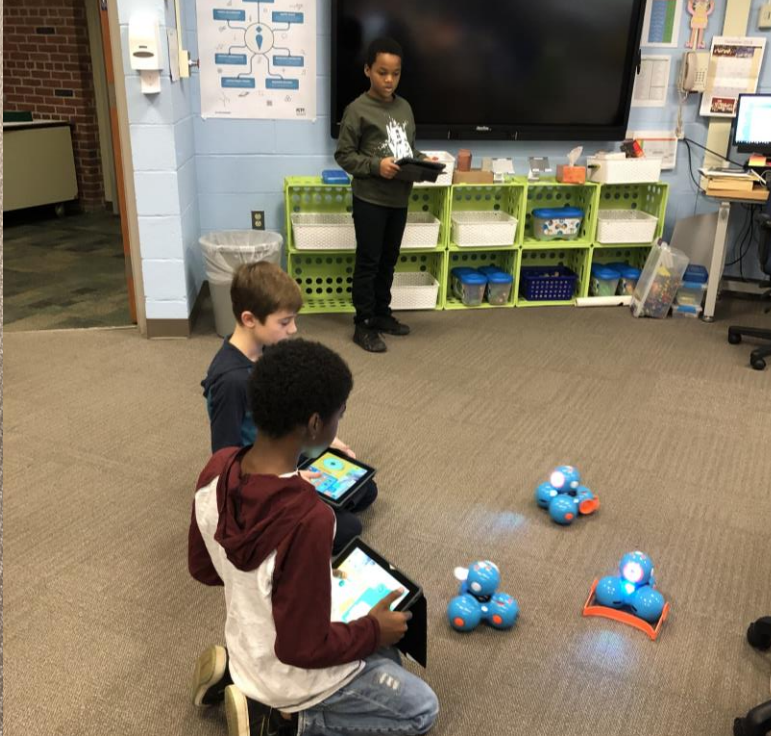
Computational Thinker
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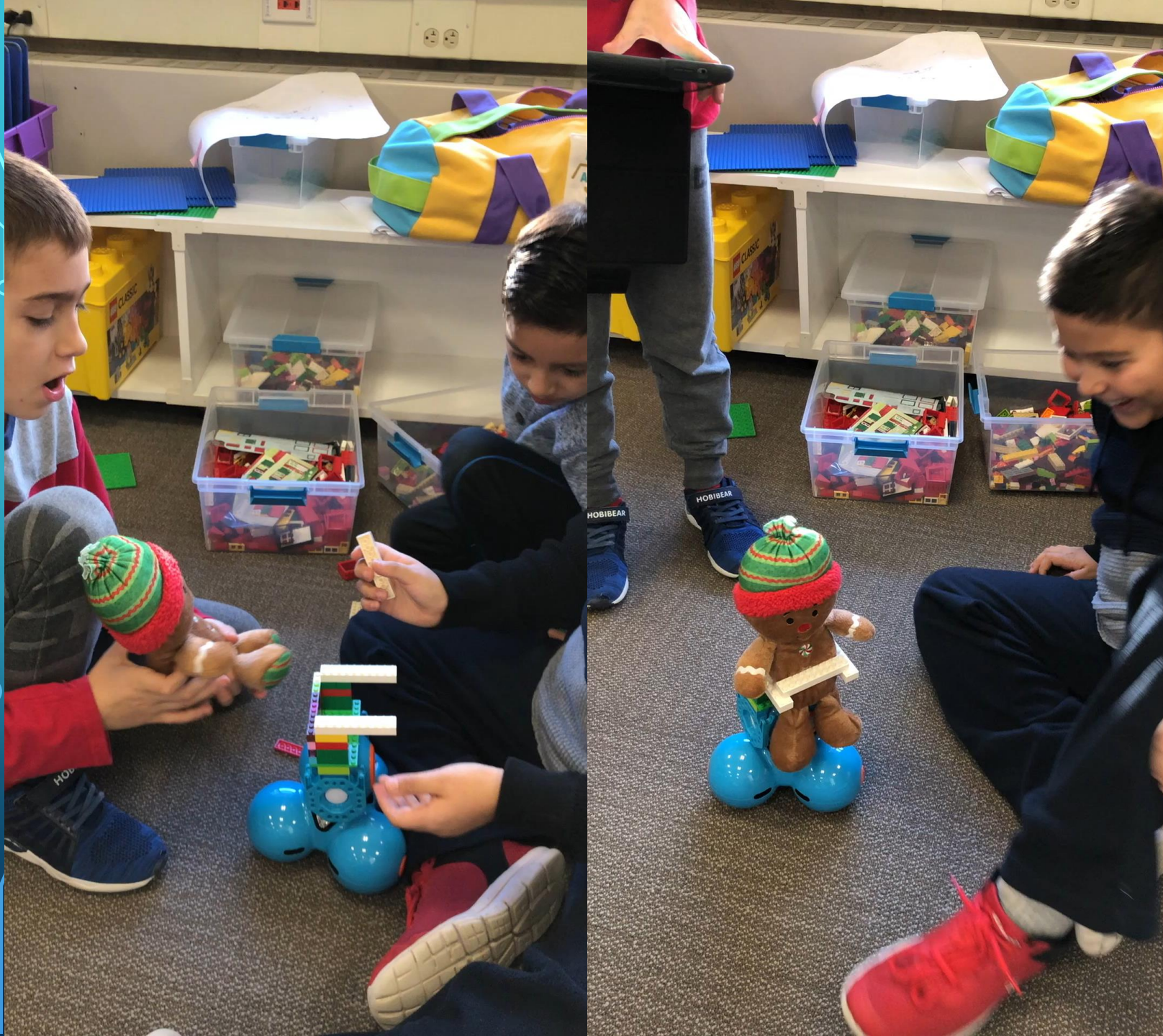


Scratch Jr.: Children snap together graphical programming blocks to make characters move, jump, dance, and sing.



Knowledge Constructor
Computational Thinker

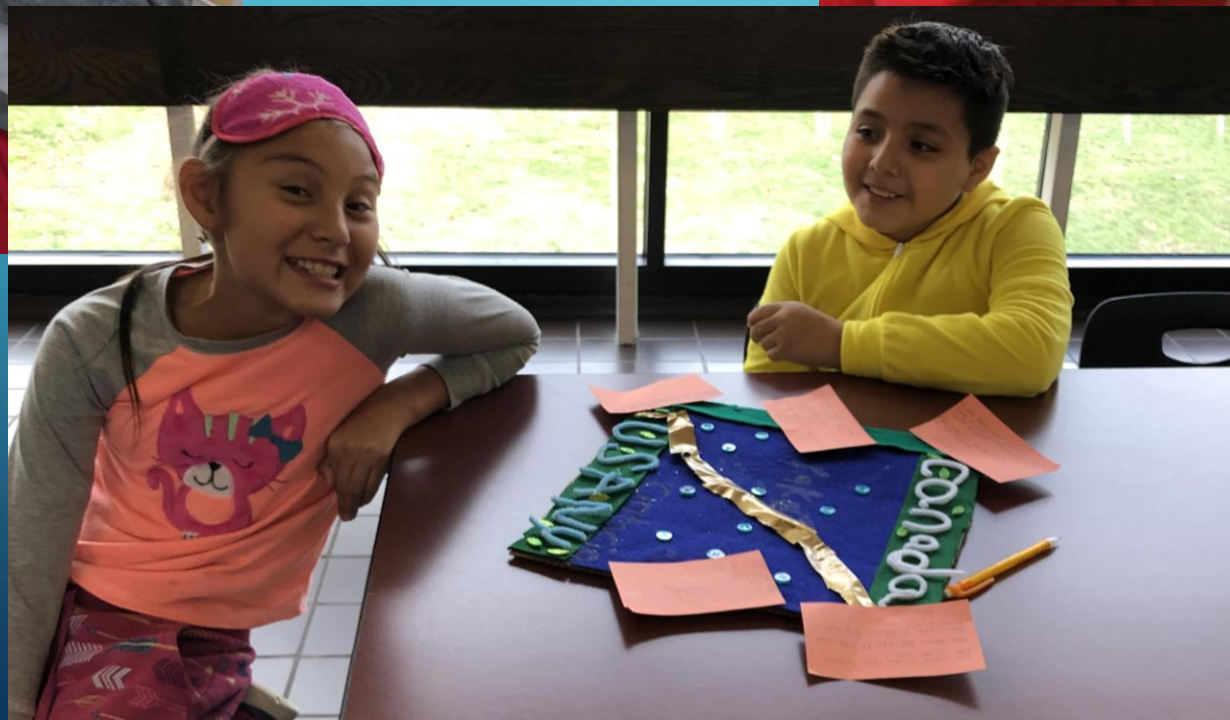




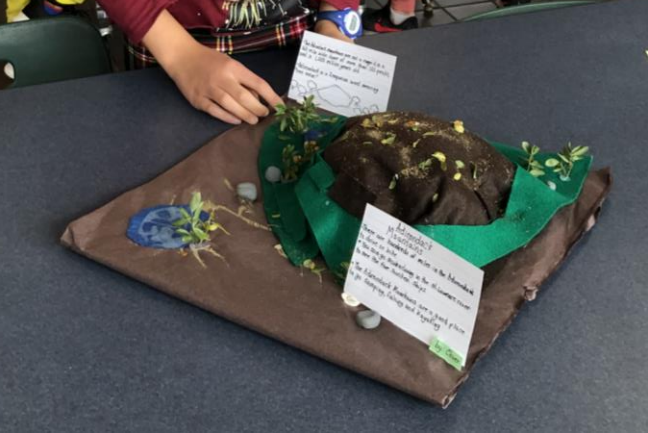
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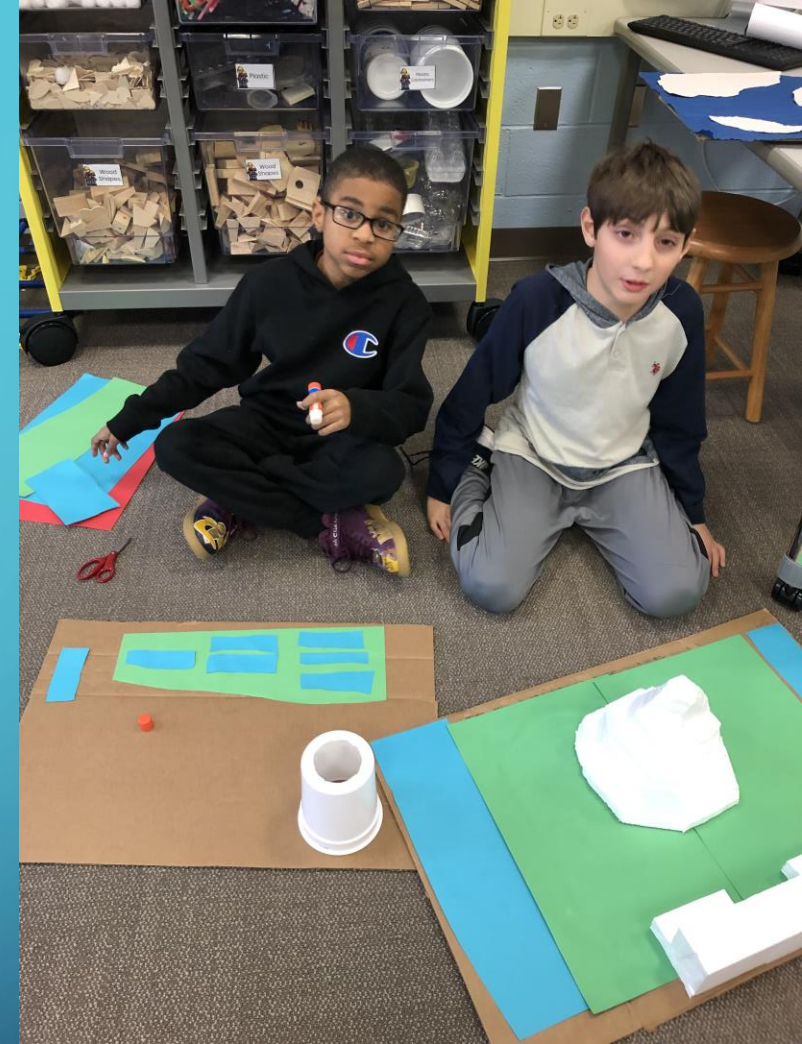
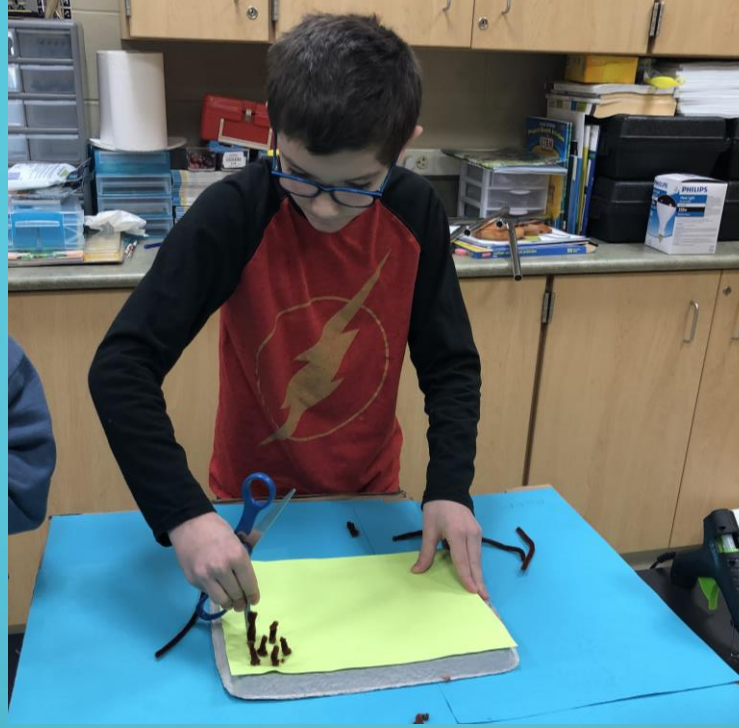
Geography: New York State Landforms



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Knowledge Constructor
Creative Communicator



Beginning of Civilization
Construction: Designing
landforms, water sources
and plant life.



Empowered Learner
Innovative Designer
Knowledge Constructor



Waterfall

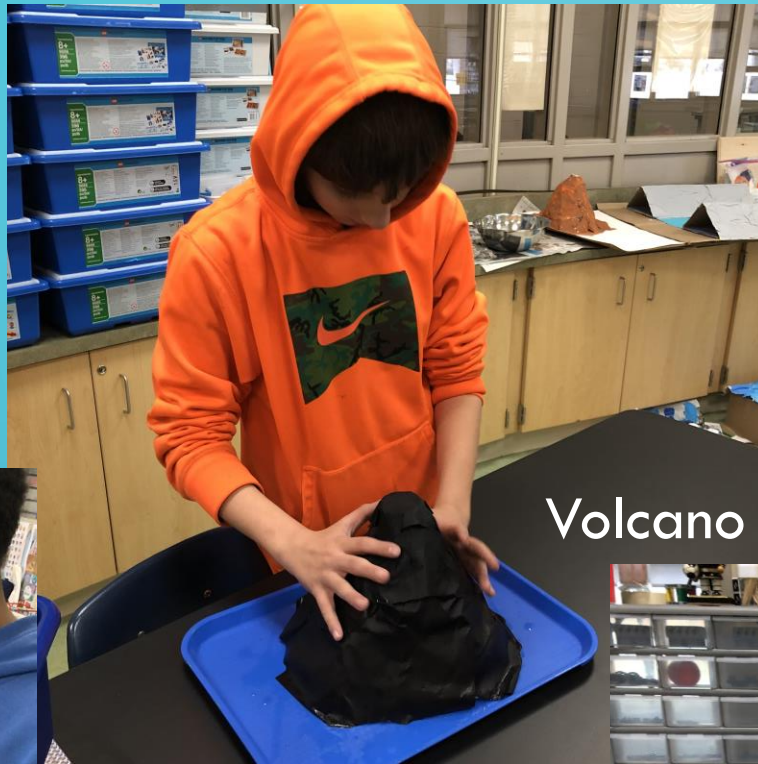


Bush



Garden

**Empowered Learner
Innovative Designer
Knowledge Constructor**



Volcano



Trees



Volcano & Tree



Trees

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Innovative Designer
Knowledge Constructor