

What great children's books do you use to connect STEAM and Making?

- <https://padlet.com/jmaslyk1/tmhfcf8rpy8z>



INNOVATION LITERACY

Incorporating Children's Literature into STEAM and Making Practices

International Literacy Association

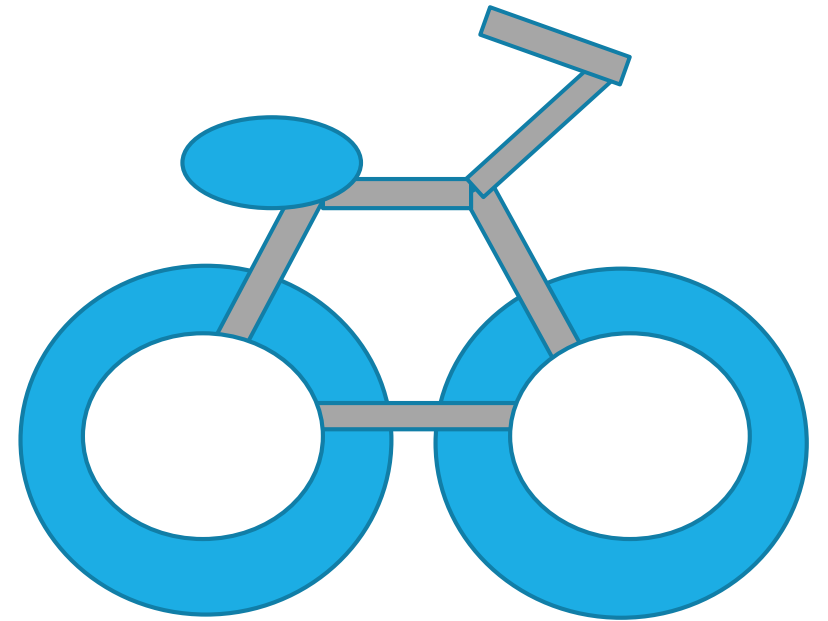
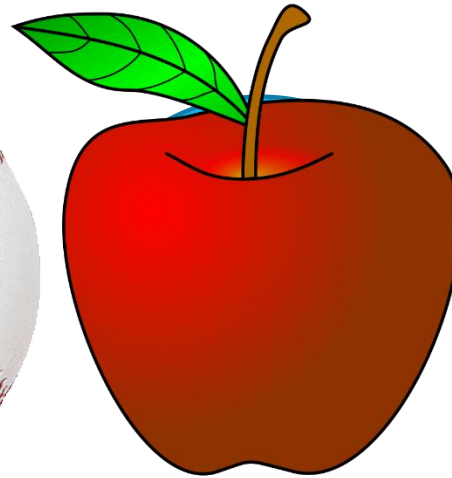
#ILA17

Dr. Jacie Maslyk

Assistant Superintendent

Hopewell Area School District, Pennsylvania

Just how creative are you?



Goals

- **Build an understanding of the importance of STEAM Education and the Maker Movement**
- **Discover ways to incorporate STEAM Maker learning into English Language Arts**
- **Engage in hands-on learning connected to children's literature**

Resources

- All materials for this session are available on my website:

- www.steam-makers.com

- Check out my STEAM Makers Pinterest page:

<https://www.pinterest.com/jaciemaslyk/steam-makers/>

- Please tweet about the session using #ILA17

[@DrJacieMaslyk](https://twitter.com/DrJacieMaslyk)

Formative Assessment

- I know about STEAM and use it in my classroom/school.
- Hands-on making is a part of my instructional practice.
- Innovation and creativity are embraced in my school/classroom.



Self Reflection

Project Zero Thinking Routine

- Color-Symbol-Image
- Can be used to
 - Enhance comprehension
 - Synthesize new ideas
 - Facilitate discussion

(Innovation Literacy)

A way of thinking that creates
new experiences around literacy
teaching and learning through
creativity and design.

- @DrJacieMaslyk

I REMEMBER

-
- The infographic consists of a vertical list of seven items. Each item is presented as a percentage inside a yellow circle with a blue border, followed by a description in blue capital letters. The background is a light green color. At the top, there is an orange header with the title 'I REMEMBER' in blue. Below the header is a yellow circle with a black outline, centered on a horizontal dashed line that spans the width of the infographic.
- 5% OF WHAT I HEAR
 - 10% OF WHAT I READ
 - 20% OF WHAT I HEAR AND READ
 - 30% OF WHAT I AM SHOWN
 - 50% OF WHAT I DISCUSS
 - 75% OF WHAT I DO
 - 90% OF WHAT I TEACH OTHERS



Reading is an active,
imaginative act; it takes work.

Khaled Hosseini



SCIENCE TECHNOLOGY ENGINEERING ART MATHEMATICS

- Requires thoughtful integration into the curriculum
- Revolves around the idea that:

Science & Technology interpreted through
Engineering & the Arts, all based
in **Mathematical** elements.

(Yakman, 2009)

Making

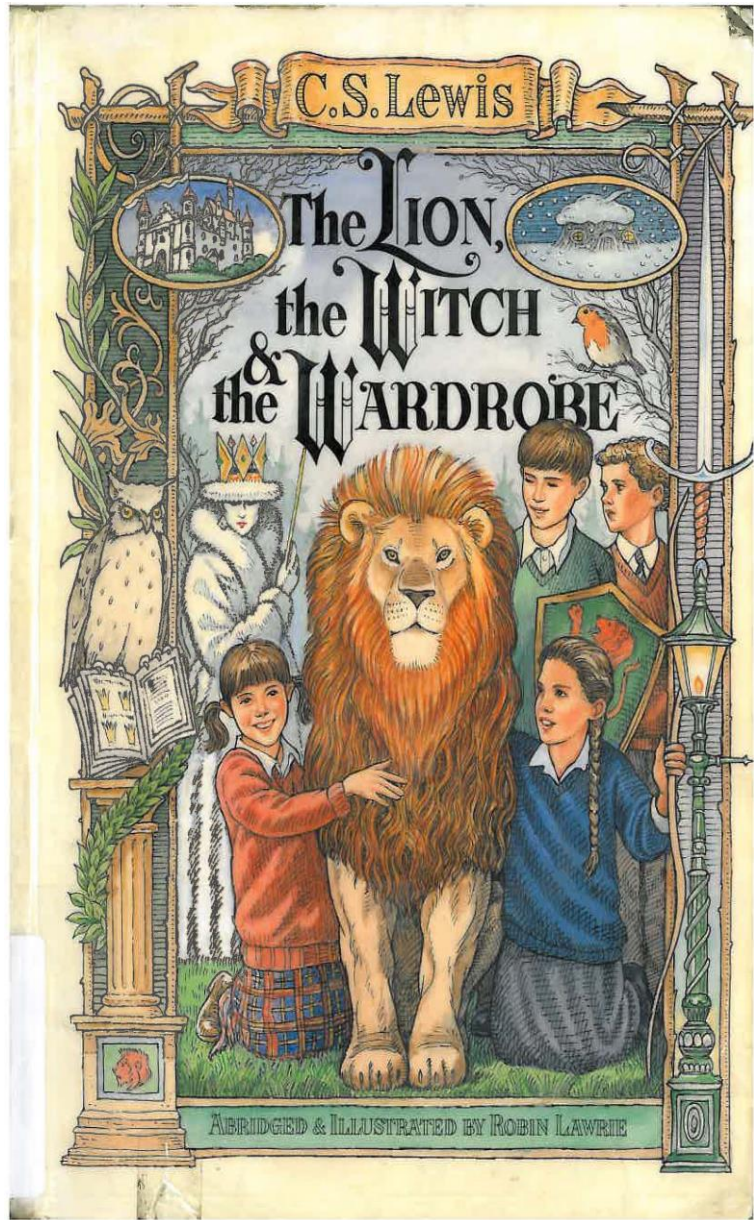
- An opportunity to learn through hands-on/minds-on work that fosters curiosity, creativity and innovation through messing, building, designing, hacking, and remaking.



Maker Movement

- “The shift to “making” represents the perfect storm of new technological materials, expanded opportunities, learning through firsthand experience, and the basic human impulse to create.”

(Gary Stager, 2014)



Why STEAM and the Maker Movement?

- **Relevant**
- **Rigorous**
- **Empowering**

Learning Benefits

- Work collaborative in groups
- Follow a plan
- Give and receive feedback
- Fail and persevere

• <https://www.powtoon.com/online-presentation/bPBbANiqRwX/4-cs-presentation/?mode=movie>

Cause
and
Effect

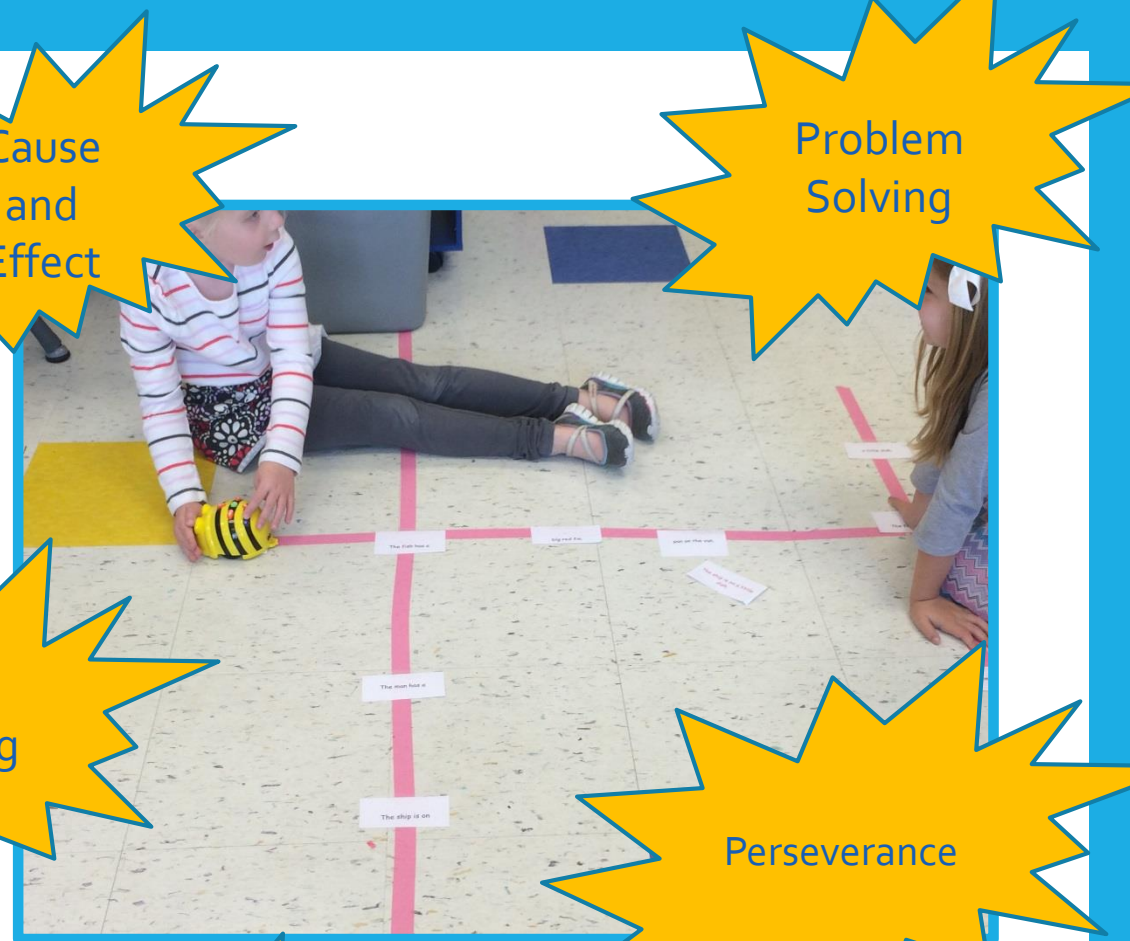
Problem
Solving

Planning

Perseverance

Left
to
Right

Sequencing



5 Things to Consider

- Space
- Stuff
- Storage
- Support
- Sustainability

(Range & Schmidt, 2014)

Innovative Learning Spaces

should encourage students to

Collaborate

Create

Contribute

@DrJacieMaslyk

In Classrooms



In Libraries



On Carts



What's your PURPOSE ?

- Integrate STEAM and Making to:
 - Challenge students.
 - Build problem solving skills.
 - Establish meaningful connections that build and expand student understanding

STEAM

K-1 Scratch Jr., BeeBots, Puzzlets,
Squishy Circuits

2 Rokenbok, Osmo, Finch
Robots, Ozobots, Lego We-Do

3 Scratch, Snap Circuits, Bloxels,
Little Bits

4 Makey-Makey, Stop motion
animation

5 Sphero, K'Nex, Extraordinaires

6 Vex IQ, Hummingbird, Drones

Making

Each grade level
should begin to
develop skills in:

-woodworking

-circuitry

-sewing

-digital animation

-deconstruction

-re-purposing and

recyclable art

-building and design

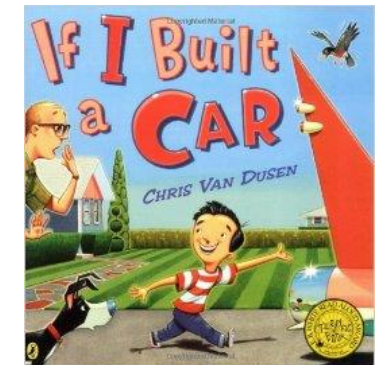
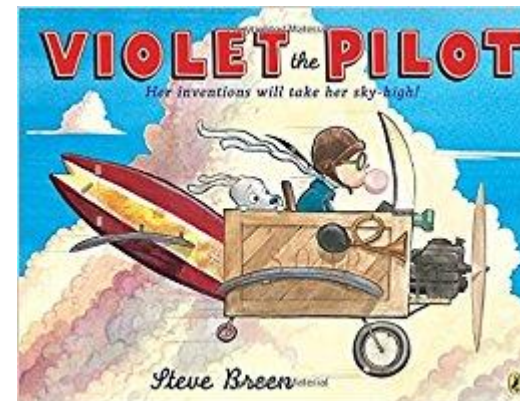
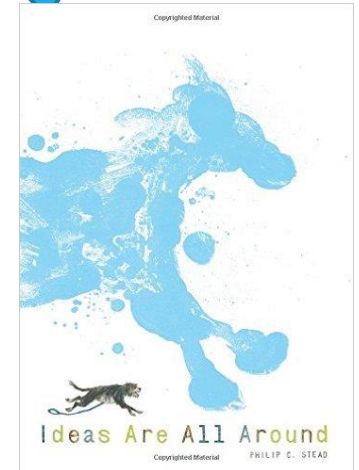
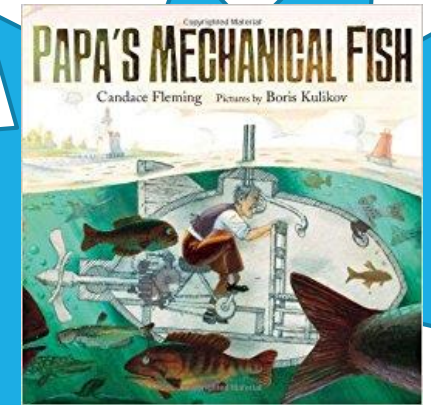
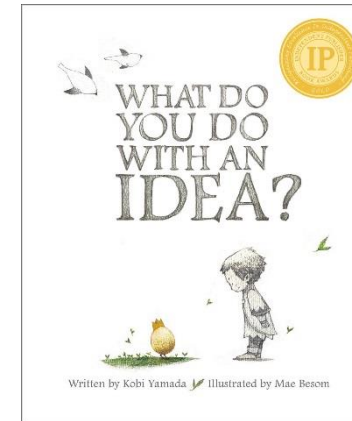
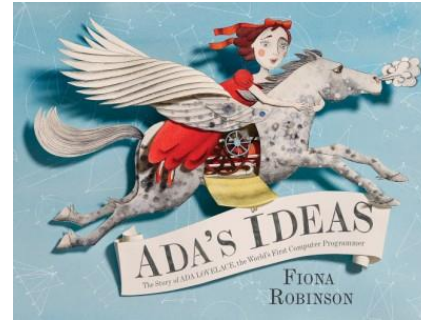
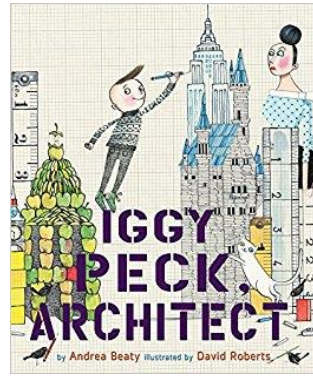
challenges

3 Literacy Connections

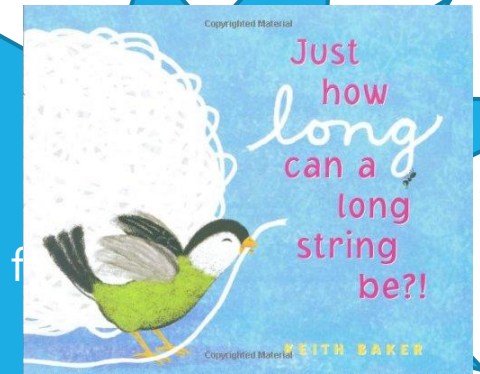
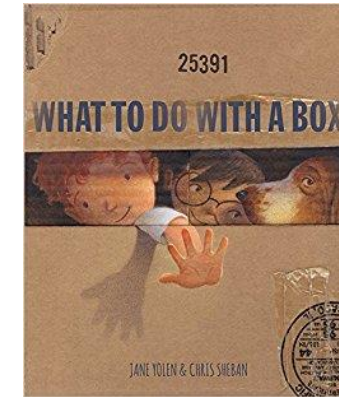
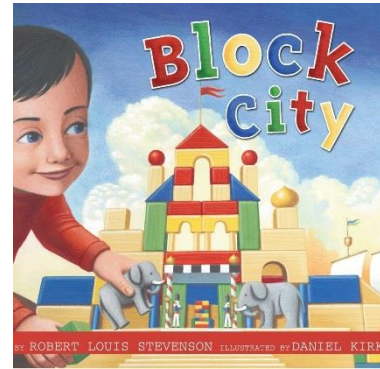
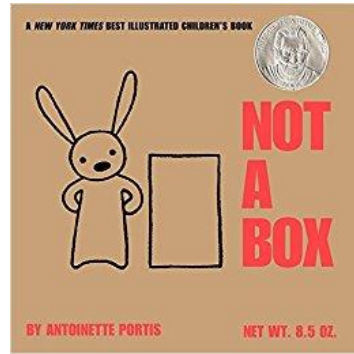
- Content
- Theme
- Dispositions

Content

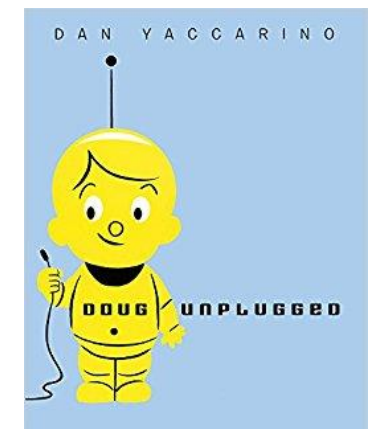
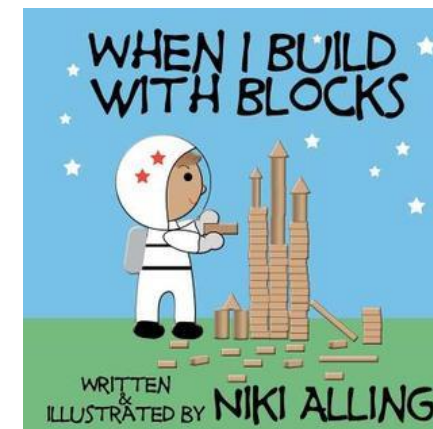
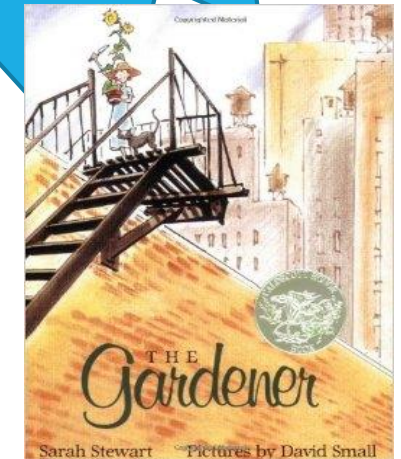
- Iggy Peck Architect by Andrea Beaty
- Ada's Ideas by Fiona Robinson
- What Do You Do With an Idea? By Kobi Yamada
- Papa's Mechanical Fish by Candace Fleming
- Ideas Are All Around by Philip Stead
- If I Built a Car by Chris Van Dusen
- Violet the Pilot by Steve Breen



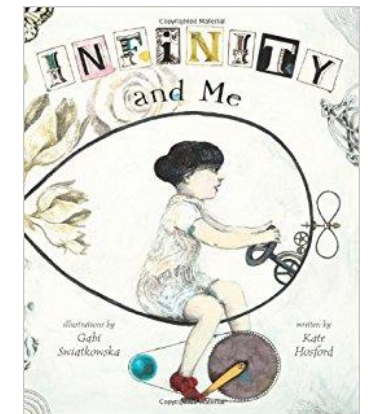
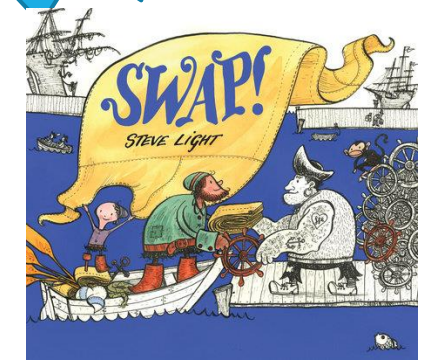
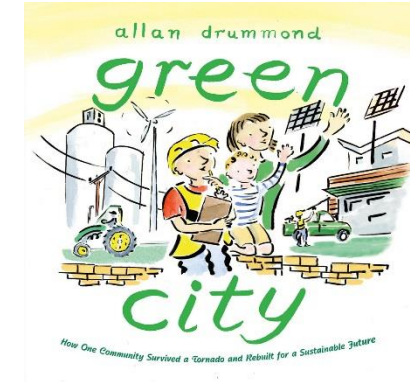
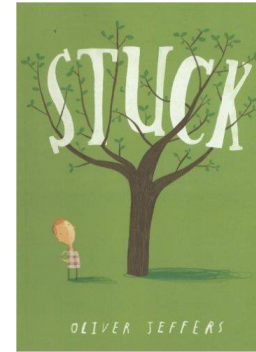
Theme



- Not a Box by Antionette Portis
- Block City by Robert Louis Stevenson
- What To Do With a Box? By Jane Yolen and Chris Sheban
- Just How Long Can a Long String Be? By Keith Baker
- The Gardener by Sarah Stewart
- Doug Unplugged by Dan Yaccarino
- When I Build With Blocks by Niki Alling



Dispositions





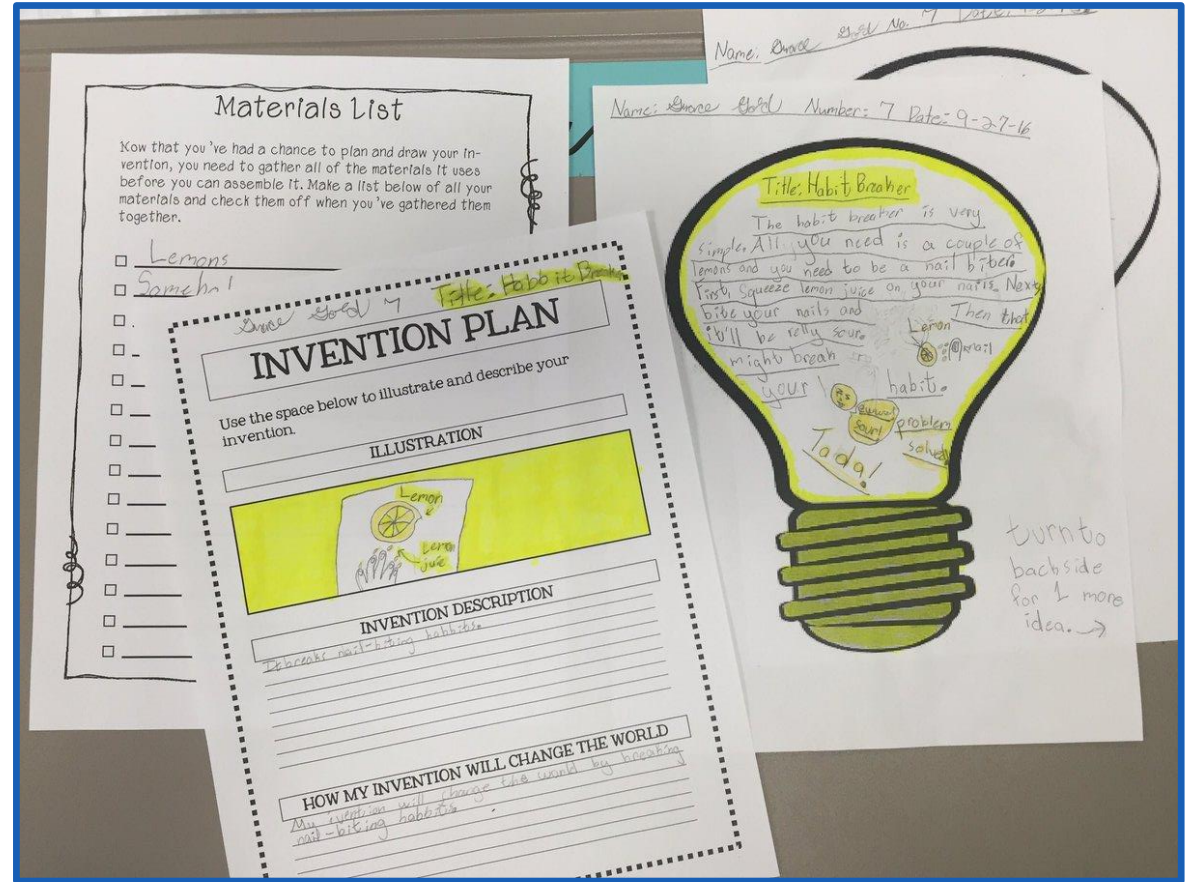
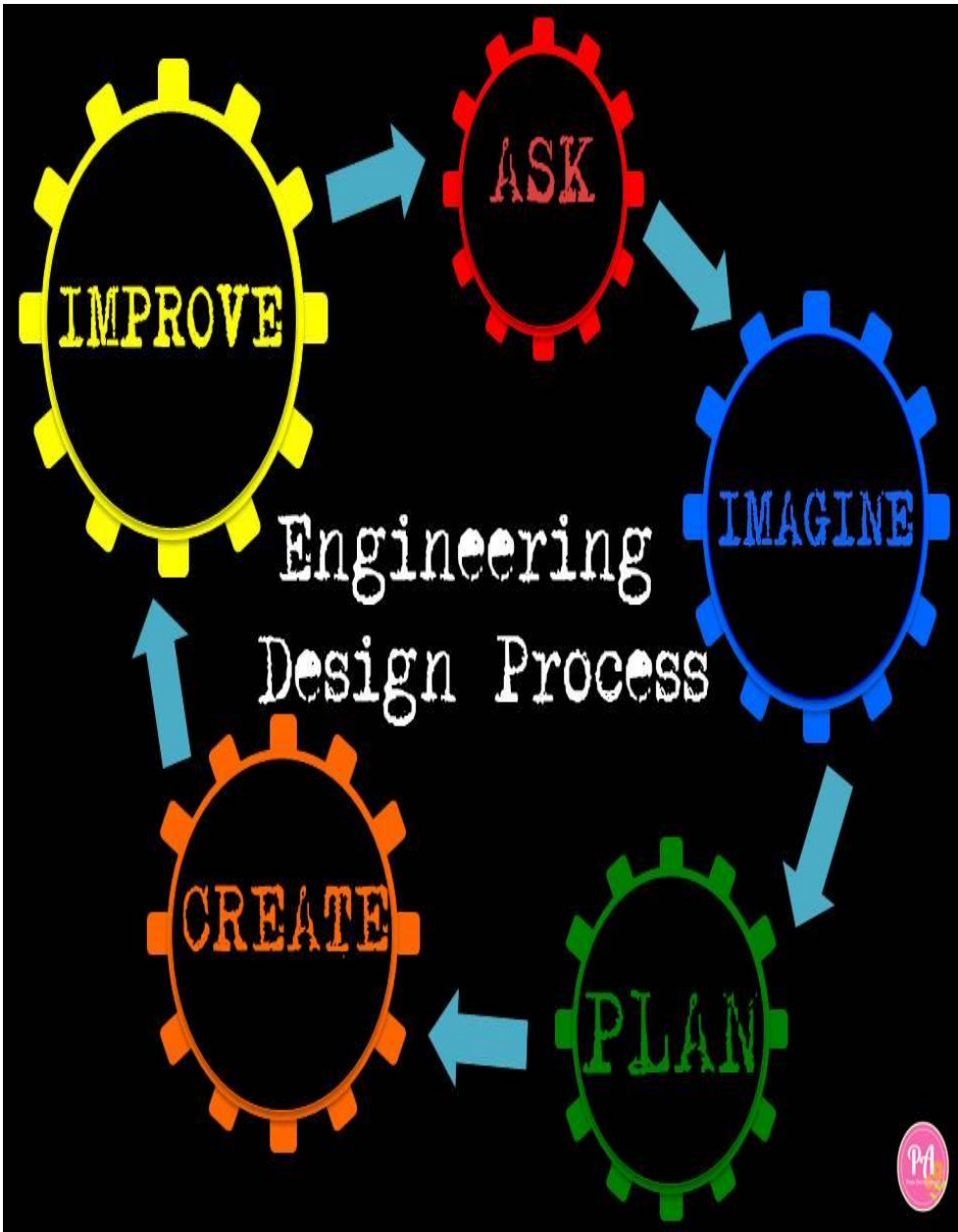
- The Most Magnificent Thing by Ashley Spires
- Stuck by Oliver Jeffers
<https://www.youtube.com/watch?v=hipx6HJs4XQ>
- Green City by Allan Drummond
- Marvelous Thing That Came From a Spring by Gilbert Ford
- Swap! By Steve Light
- Infinity and Me by Kate Hosford

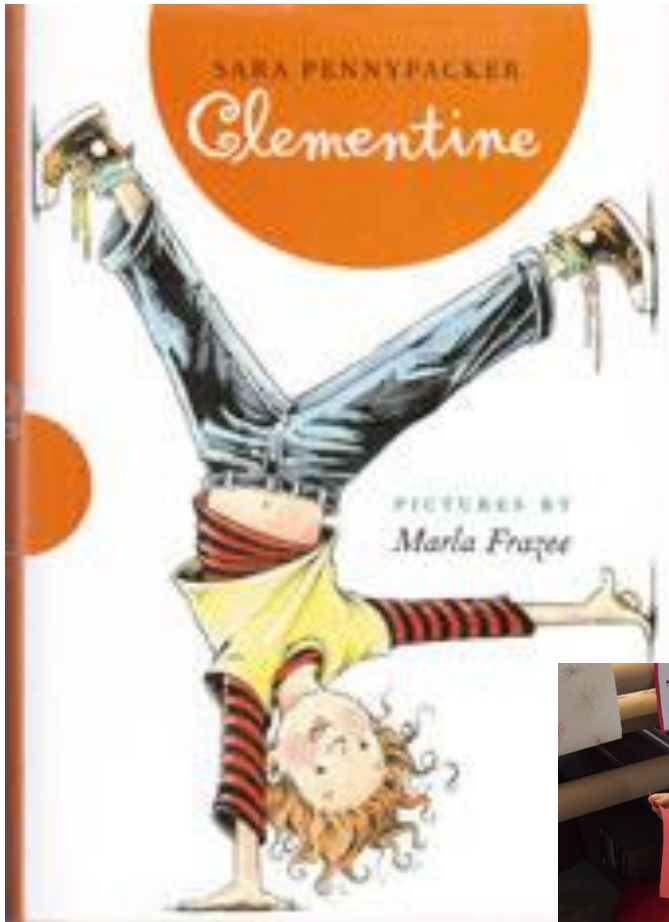


Simple Ways to Add Making to ELA

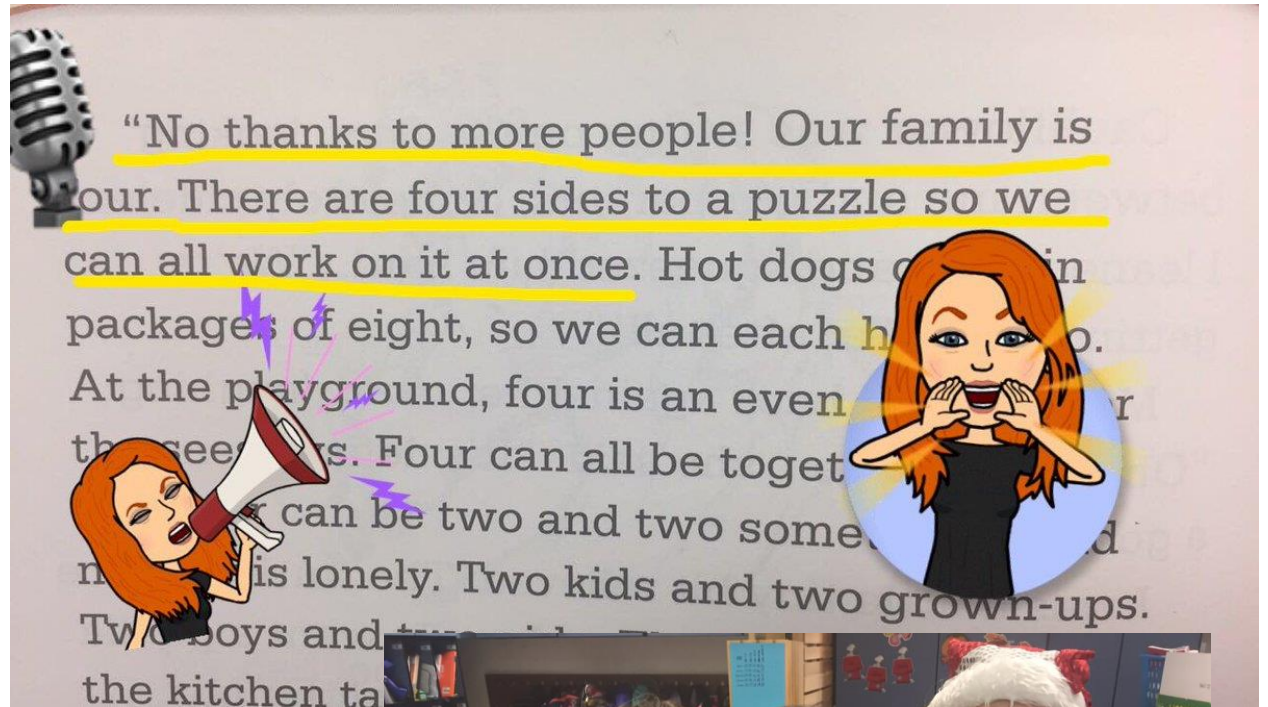
- Create a new ending to a story using video animation
- Build a model of the setting for the story
- Bring the character to life through design/draw/build
- Construct a 3D scene of a story
- Design a solution for a problem a character is having

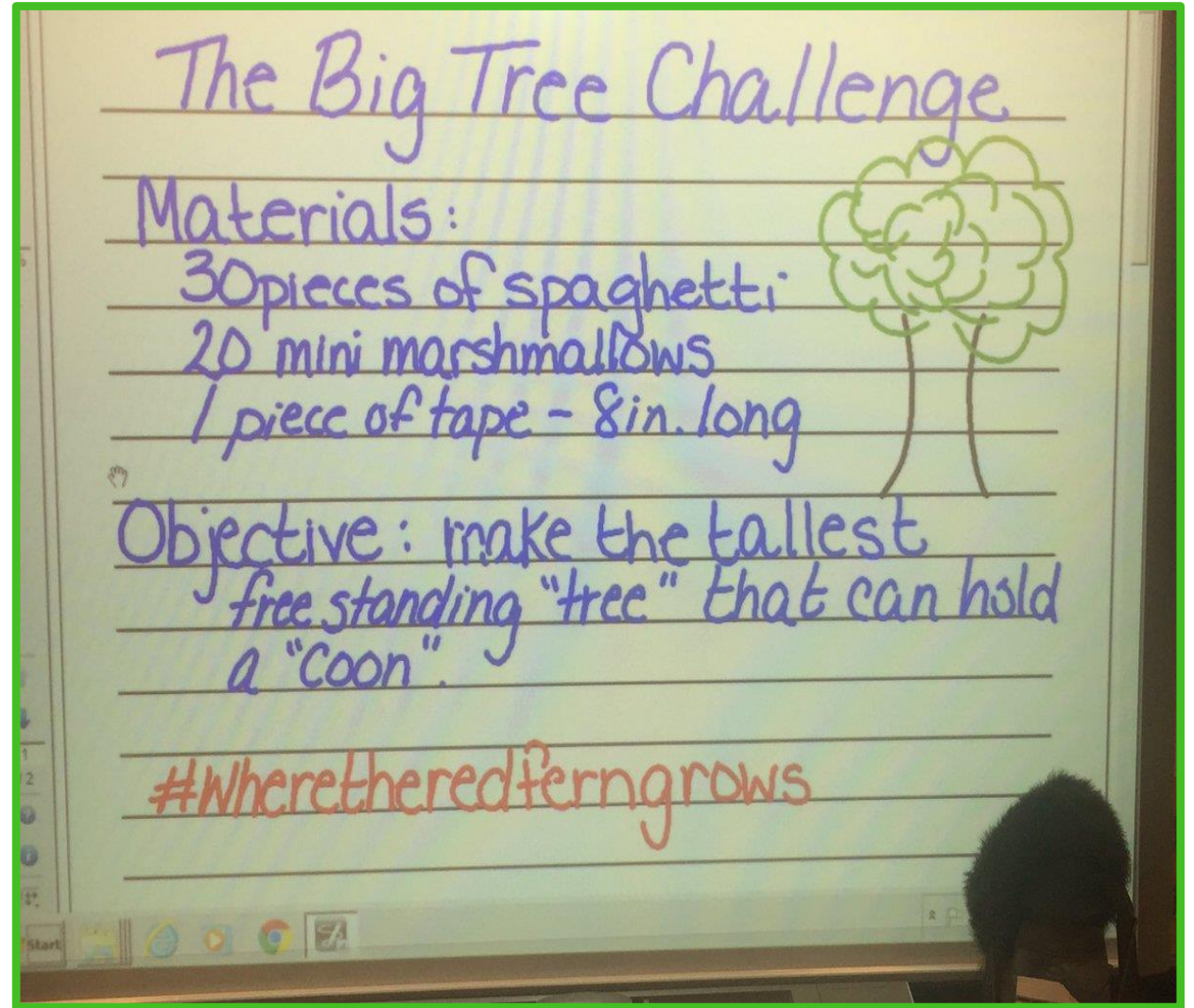
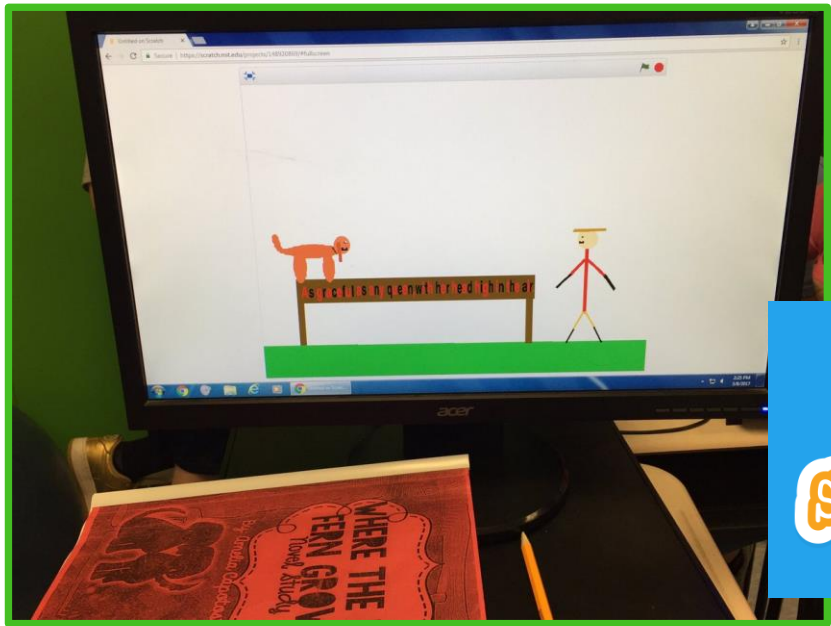
BOOK	AUTHOR	MAKE IT!	A LITTLE INSPIRATION	QR CODE
<i>The Miraculous Journey of Edward Tulane</i>	Kate DiCamillo	Re-create a scene from the story for Reader's Theater including creating costumes, scenery, props, backdrop.	There are lots of resources surrounding this <i>Global Read Aloud Book</i> from 2014: http://www.edwardtulane.com https://www.pinterest.com/emilybstarkey/miraculous-journey-of-edward-tulane	 Edward Tulane  Edward Tulane Pinterest
<i>Shh! We Have a Plan</i>	Haughton	Learn about the design process.	PBS Design Squad http://pbskids.org/designsquad	 PBS Design Squad
<i>The Great Kapok Tree</i>	Lynne Cherry	Build a model of the layers of the rainforest.	Here's a great Prezi with a link to a fascinating YouTube video: https://prezi.com/phh12comcrpf/the-great-kapok-tree/#	 The Great Kapok Tree Prezi
<i>Not a Box</i>	Antoinette Portis	Use recycled materials to create a "not a" story; for example, not a button, not a battery, not a thread.	Try these bookmarking websites to design and publish books: http://www.storyjumper.com https://www.mystorybook.com https://storybird.com	 Storyjumper  My Storybook  Storybird
<i>The Boy Who Harnessed the Wind</i>	William Kamkwamba	Build a windmill.	http://tryengineering.org/lesson-plans/working-wind-energy http://learn.kidwind.org/learn/science_fair_projects	 Try Engineering

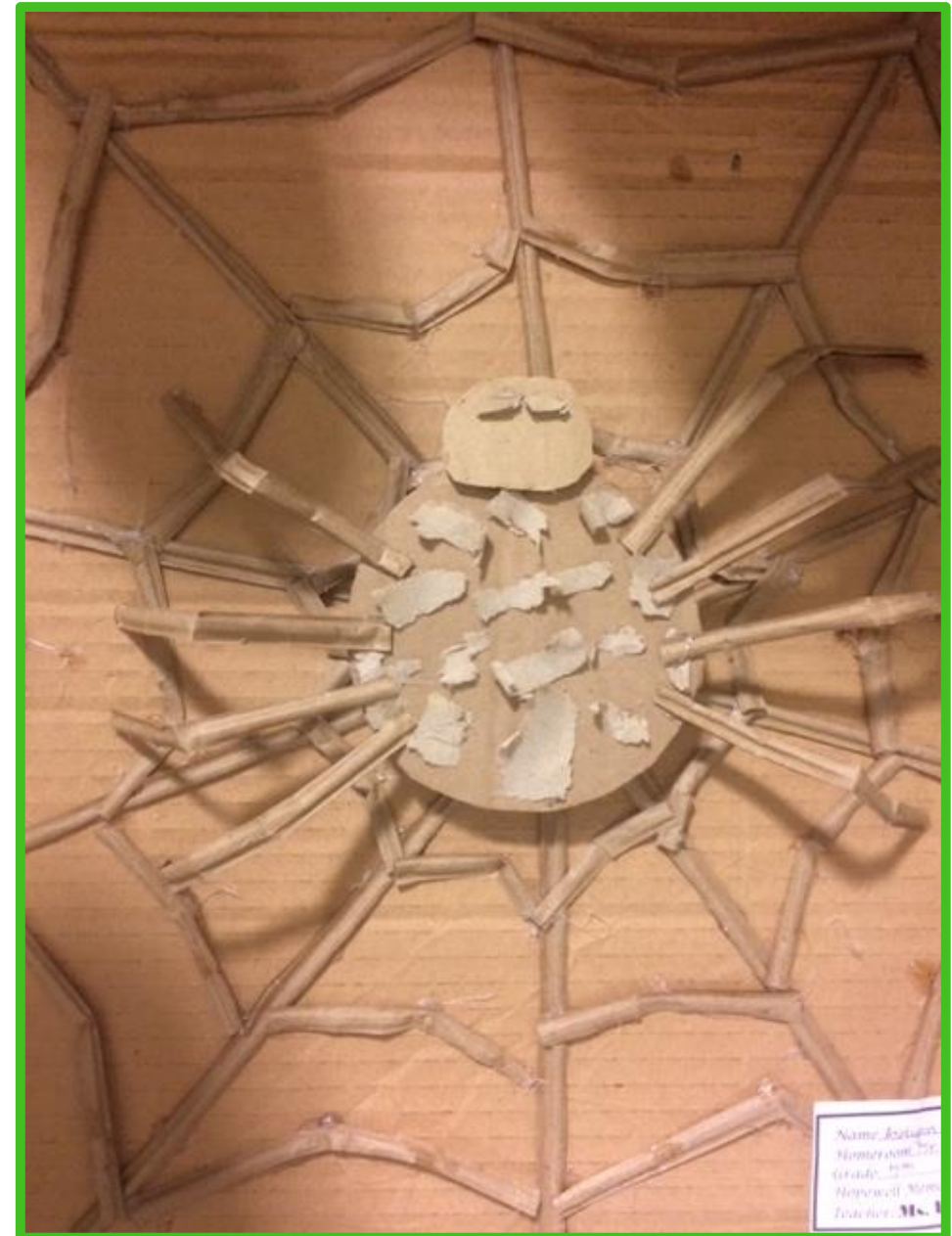
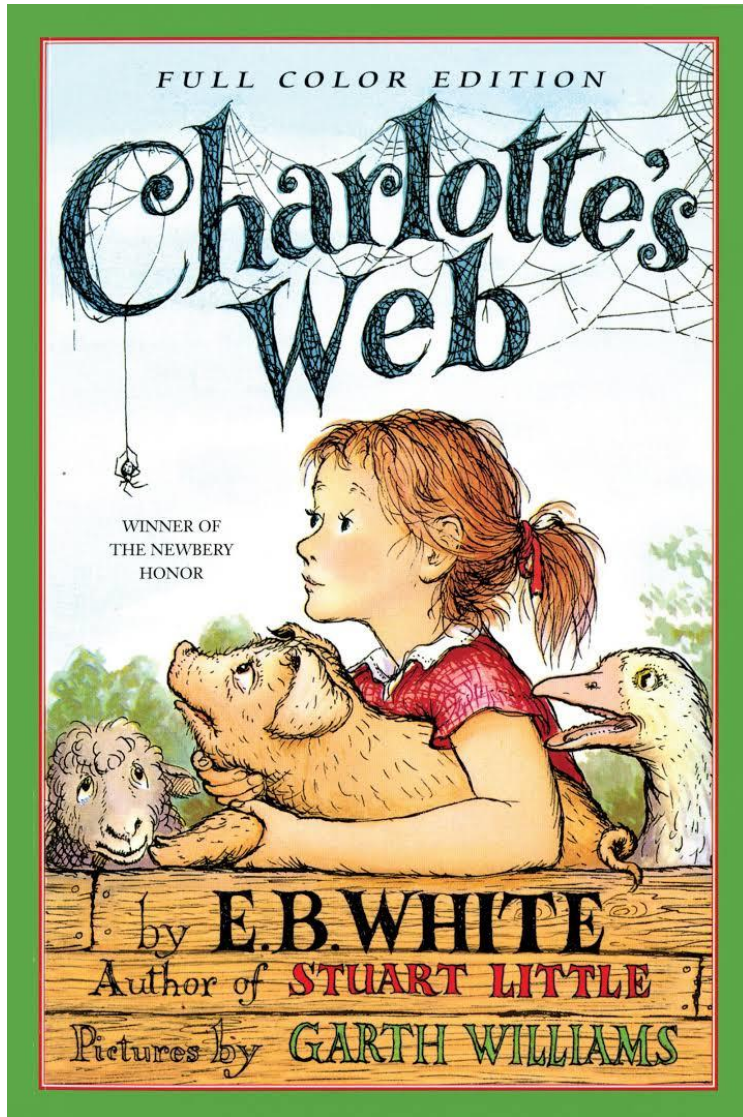


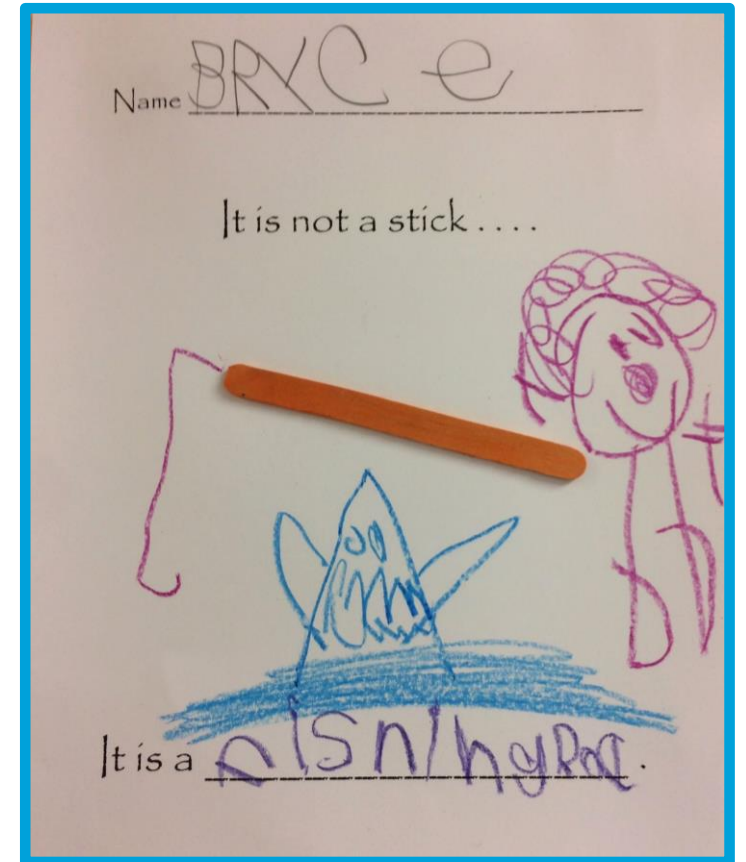
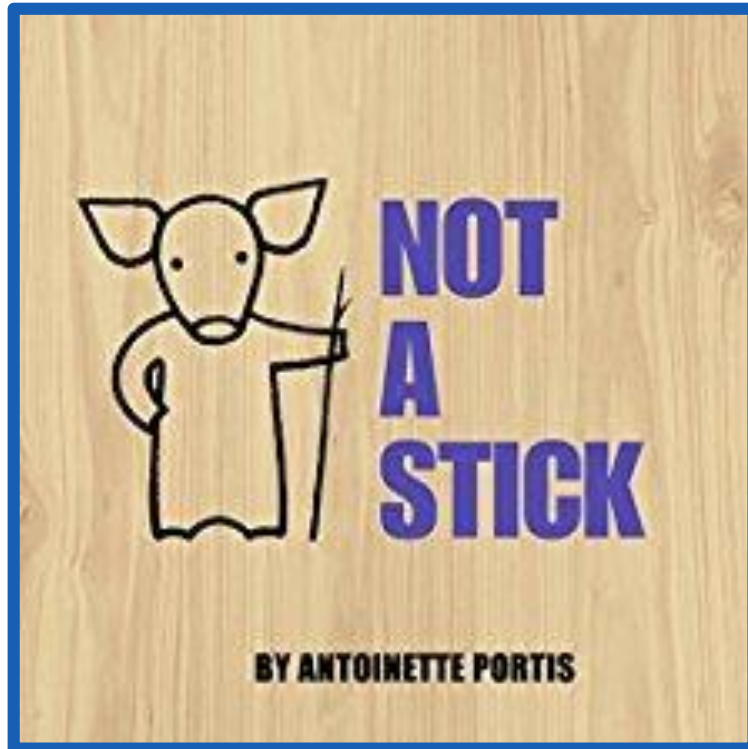
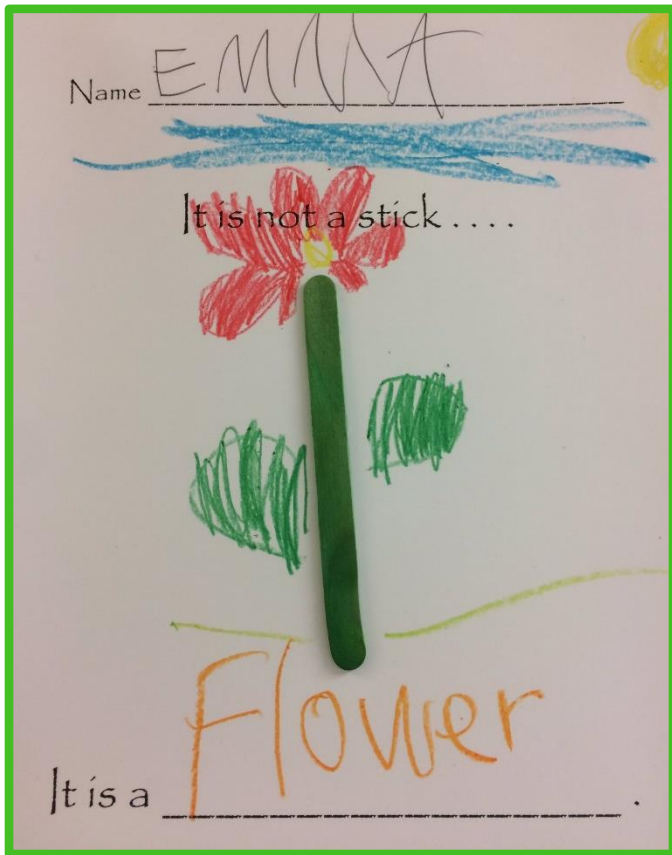


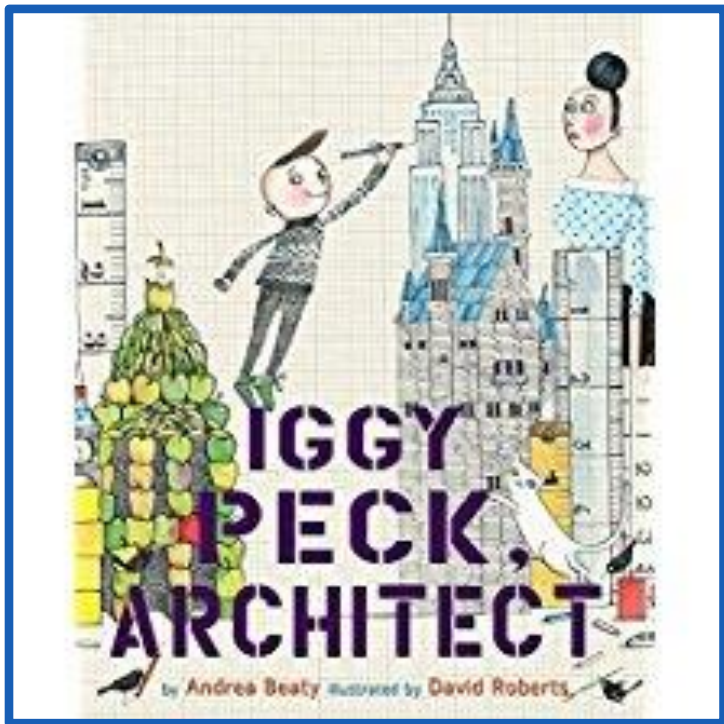
#BookSnaps

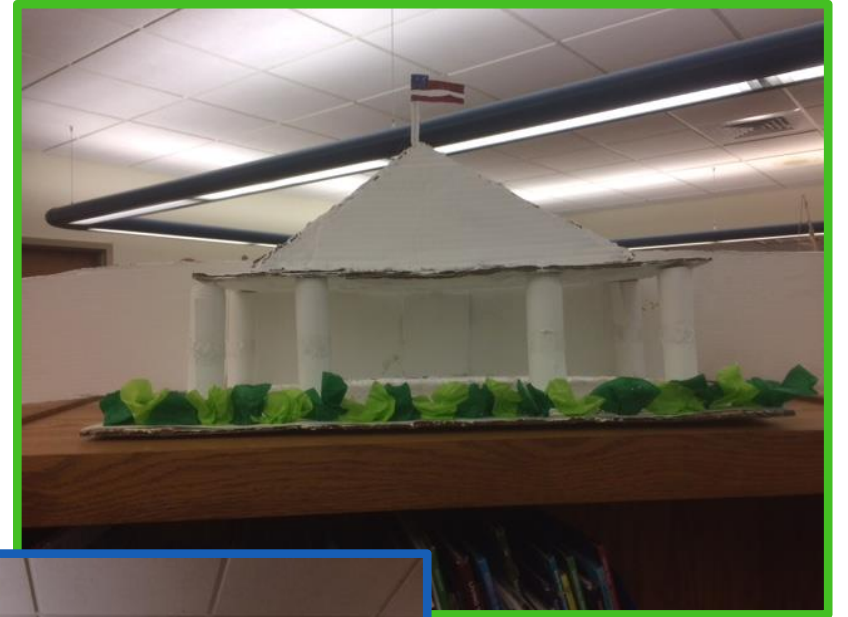
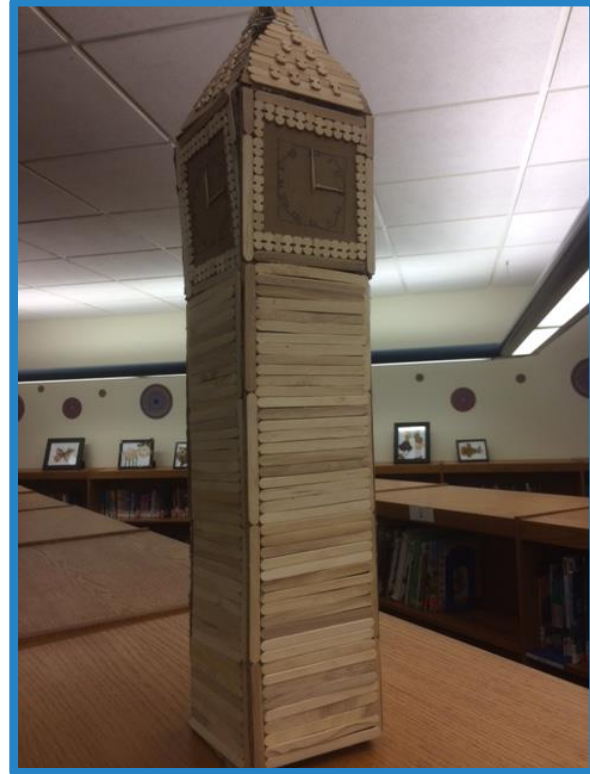
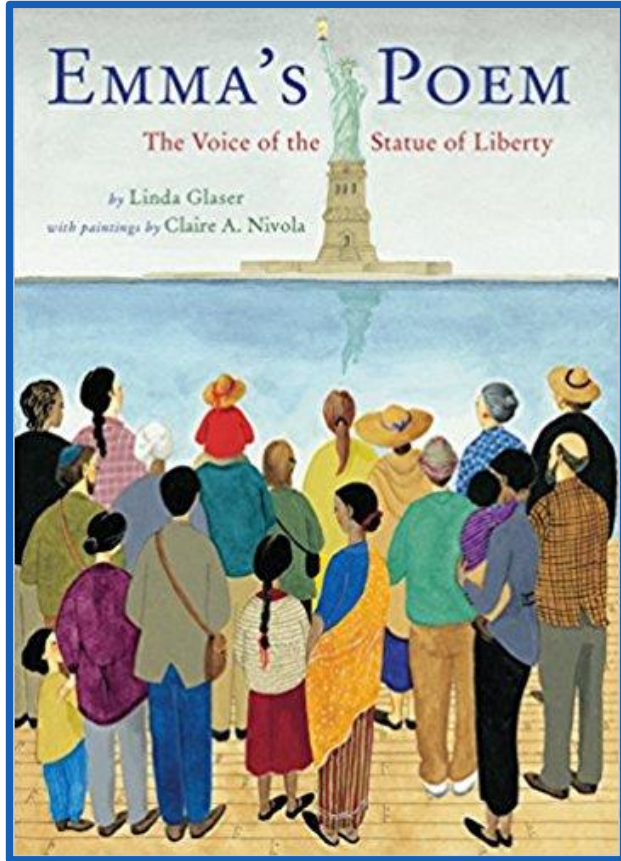


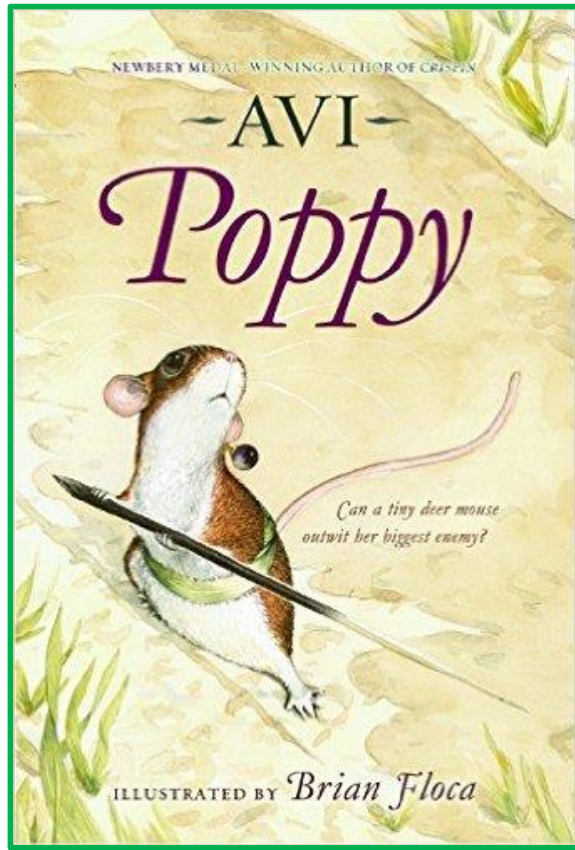




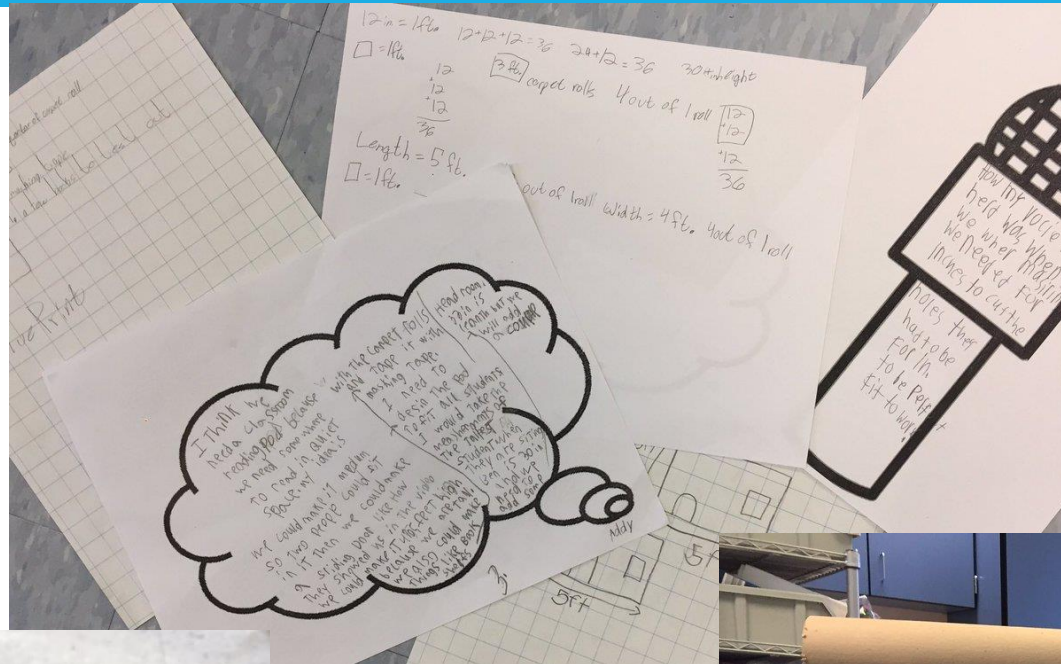






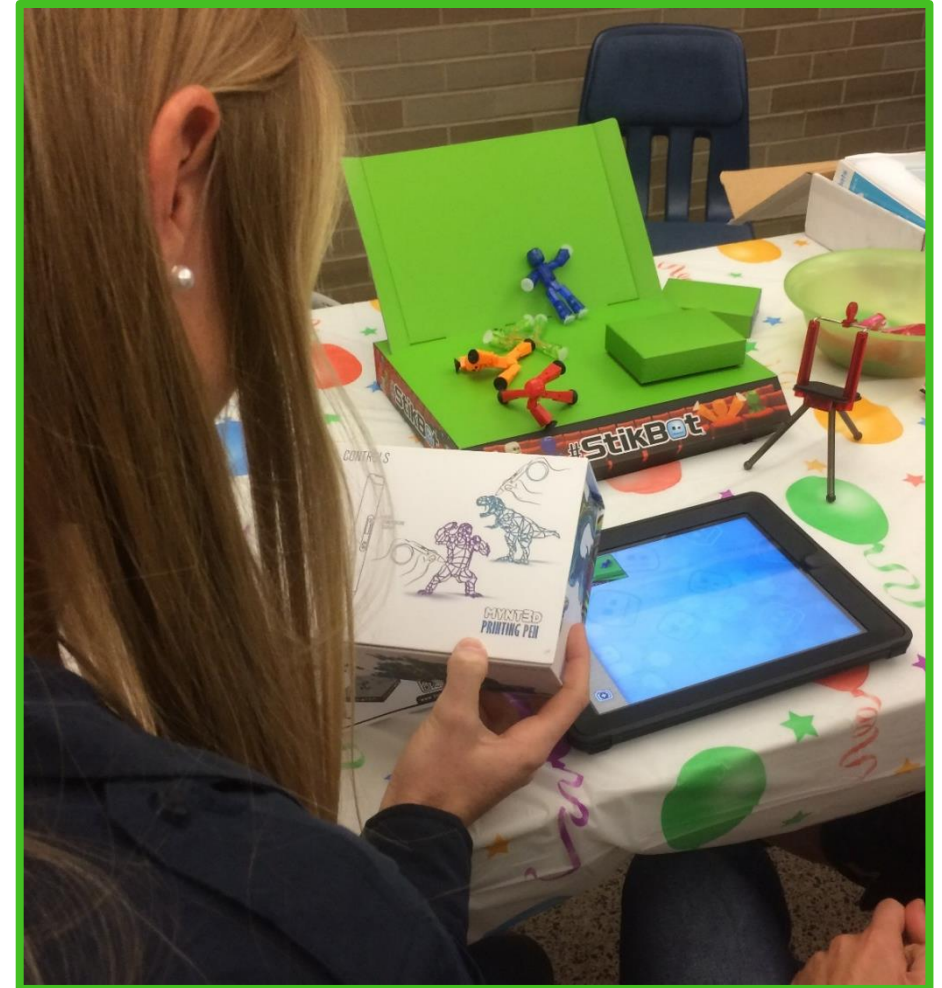


Design and Engineering



Video Production and Animation

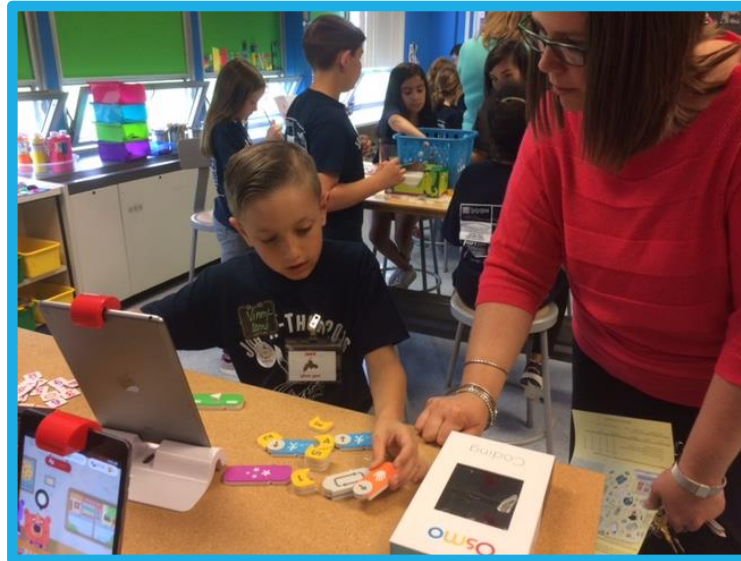
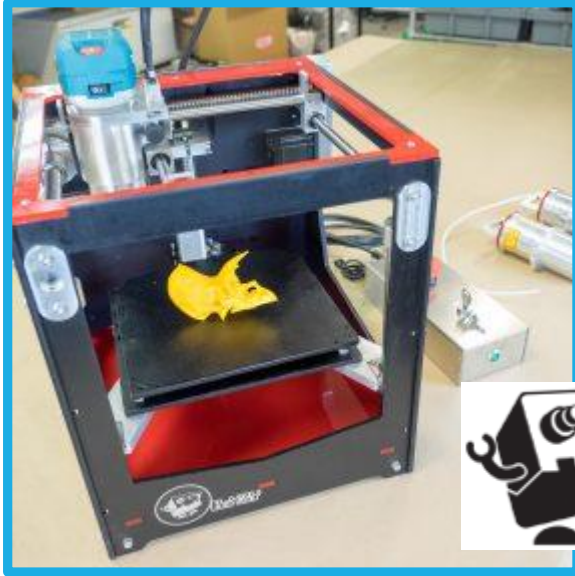
- Stikbot
- Green screens



Vocabulary



Writing



Let's Make

- Use the cards to think about a popular character from children's literature (or choose your own).
- Discuss what problem's this character might need solved.
- Design something to help this character.
 - Sketch, write, or build your solution.



Building Capacity for Innovation

- People
- Programs
- Partnerships

Professional Development



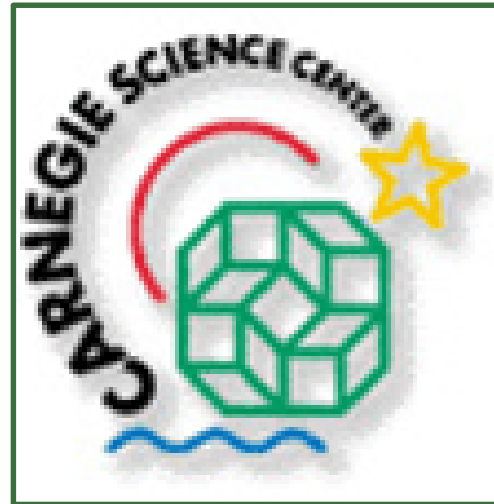
MAKESHOP



Maker Mentors



Engaging Local Resources



Find Your Network



- Remake Learning
 - A professional network of over 300 organizations and innovators working together to shape the future of teaching and learning.
- Playbook

Reflect

- **WOW, Wonder, Want**
- **Share your feedback in a tweet.**



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