Maker Tech:
Tools to Support Creativity

Dr. Jacie Maslyk

Hopewell Area School District

#TRETC16

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 #TRETC16
- @DrJacieMaslyk

My Background

- Varied educational experience
- Early-implementation of dedicated STEAM learning space
- Author of a new book on STEAM and Maker Education

Who will win a copy today?

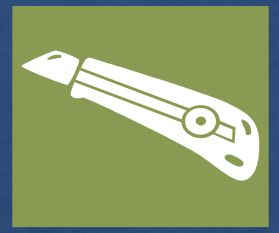
Your Background

Session Goals

- Share common practices in school makerspaces
- Explore resources for maker learning
- Engage in hands-on learning using a variety of maker tech tools
- Create a personal action plan for implementing Maker Tech in your school districts

I Wonder I Will I Want

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)

Making

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

STEAM + Maker

- Learning STEAM content is critical.
- Making can be a means to apply STEAM content knowledge to practice.
- When students become makers, they find the design and creativity in math, science, and engineering.

What is tech?

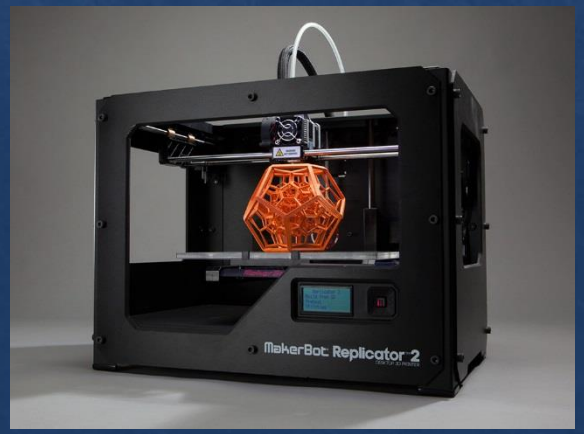
Padlet

5 S's of Making

- Space
- Stuff
- Storage
- Support
- Sustainability

Stuff

- Every makerspace is unique from the physical space to the stuff to the programs.
- Makerspaces can range from no cost/low cost to high-tech/high priced.

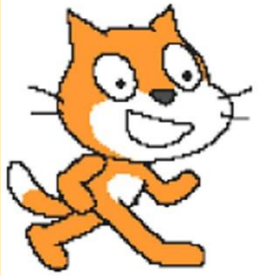


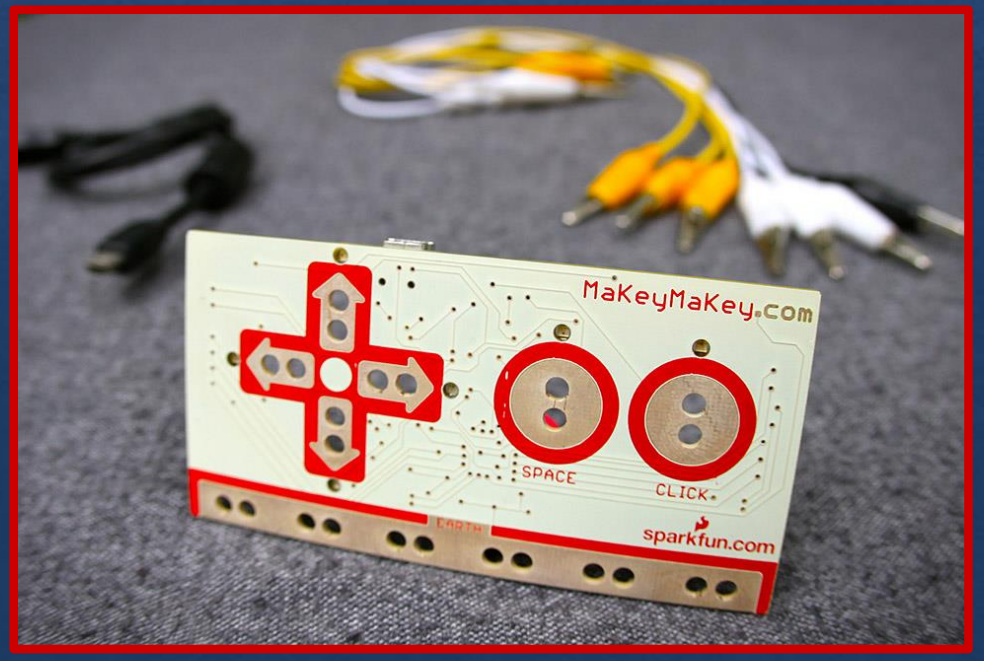
Crayola
MARKERS

THE PERIODIC TABLE
MAKE
HIGH FIVE!
masters of INNOVATION

SCRATCH

imagine • program • share





The Lure of Bright and Shiny Objects

- Explore each station
- How might I design experiences so that my students engage in both high tech and low tech tools?
- In what ways can I weave hands-on Maker Tech into my class/subject area/course ?

Station #1
Cardboard Construction

- Use the cardboard cut outs to design and build a:
  - Tall structure
  - Symmetrical structure
  - Artistic sculpture

Station #2
3-D Pen

- Create an original design using the 3D pen
- OR follow the directions to create a pencil topper

Station #3
Stik Bot

- Use the Stik Bot app and the characters provided to create a short animation.

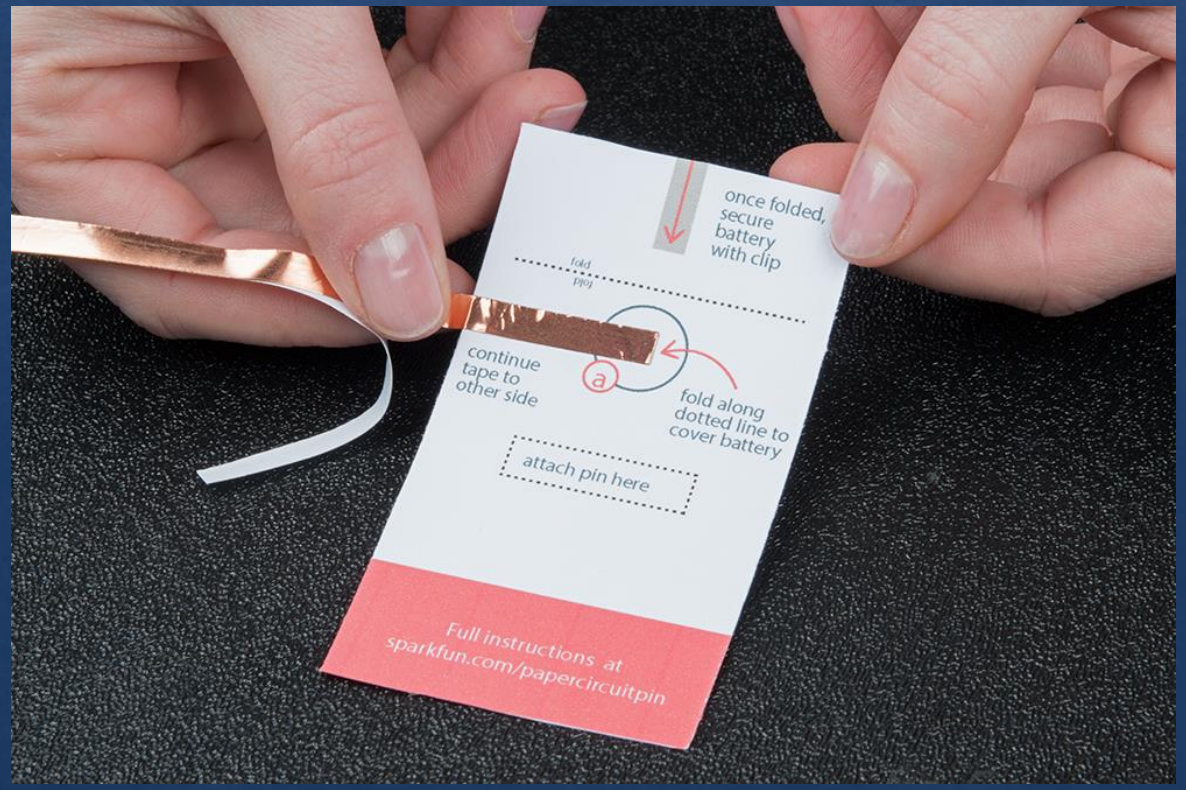
- https://www.youtube.com/watch?v=p93sDn_w71E

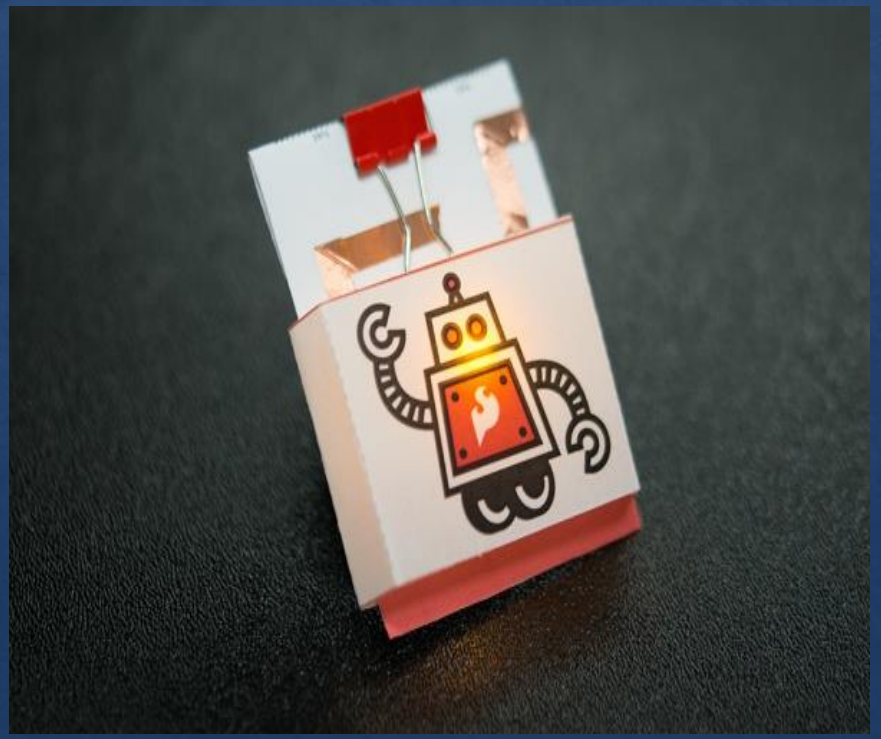
Station #4
Extraordinaires

- Use the game to create and design
- https://www.extraordinaires.com/design-and-make

Station #5
Paper Circuits

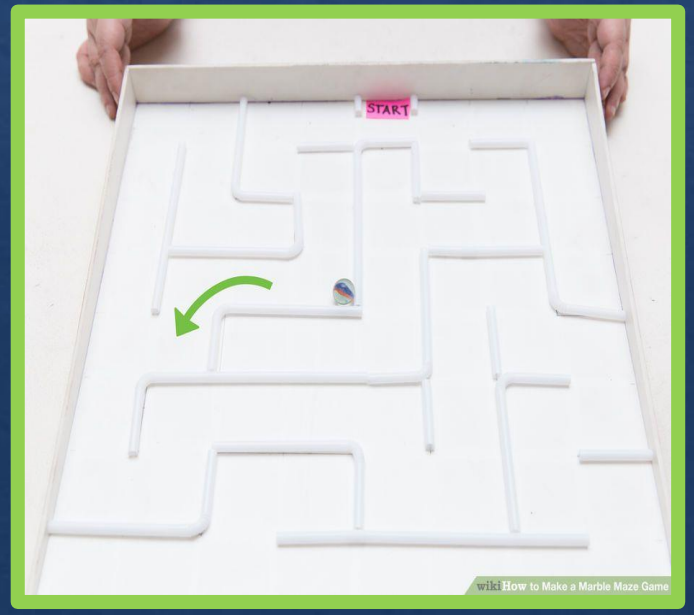
- Test your knowledge of circuits to make your robot light up !





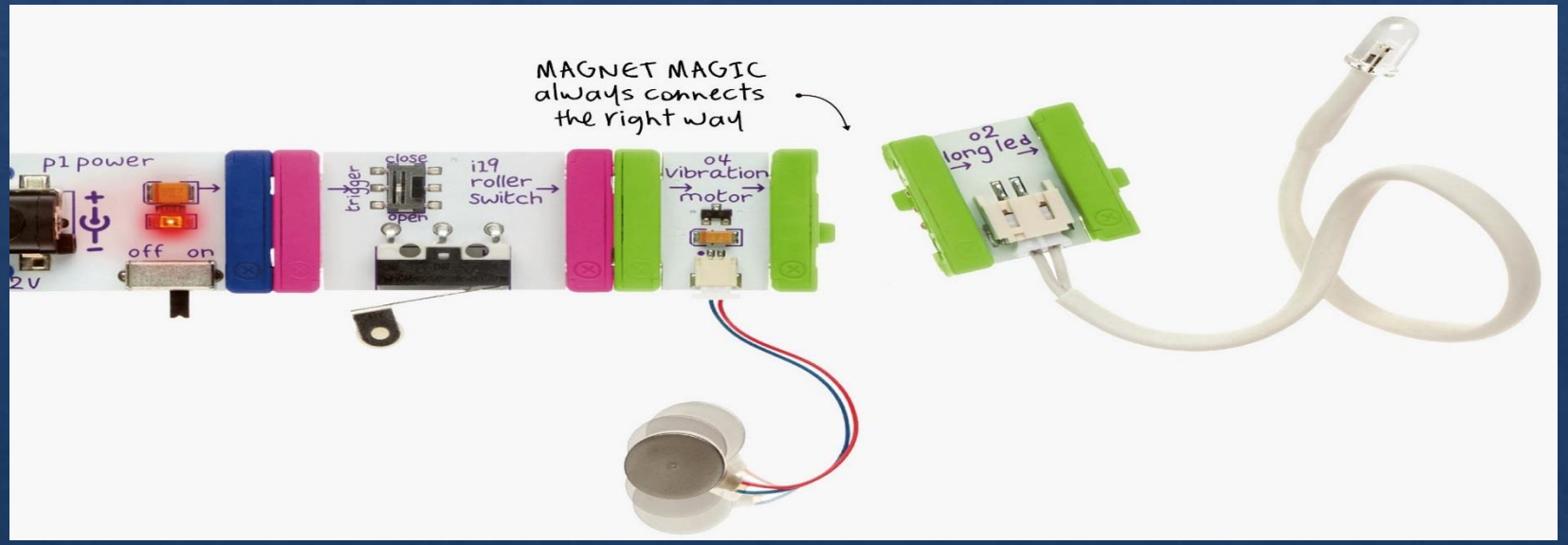
Station #6
Marble Maze

- Use the shoe box tops, straws and scissors to design and build a marble maze.
- http://www.wikihow.com/Make-a-Marble-Maze-Game



Station #7
Little Bits

- Explore with Little Bits.
- Try a 5 minute project.
- http://littlebits.cc/



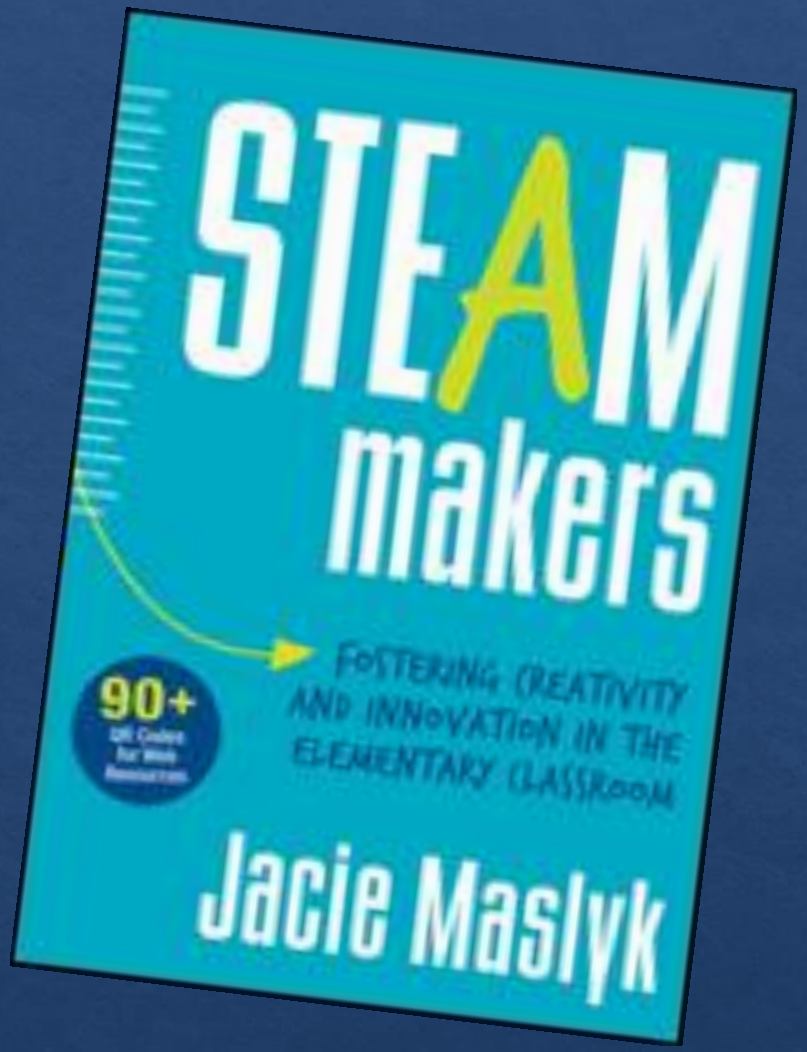
Station #8
Puzzlets

- Try out your skills with block-based code.
- Play Cork the Volcano!

Maker Tech Resources

- Spark Fun https://www.sparkfun.com/
- 3Doodler http://the3doodler.com/projects/
- Maker Shed http://www.makershed.com/
- Instructables http://www.instructables.com/
- Ready, Set, Design http://www.cooperhewitt.org/2011/09/09/ready-set-design/

- Follow me on Twitter
- @DrJacieMaslyk

- www.steam-makers.com

- Contact me at maslykj@hopewellarea.org