Innovation Playground Resources

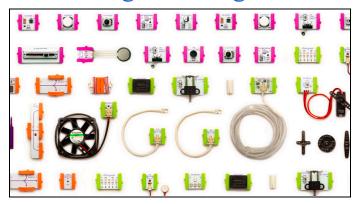
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@TeamBond

Resources collected by Jennifer Bond and Tammy Lind (@TamL17) (Tech integration teacher from Wisconsin)...CUE Rockstar Saugatuck 2016 Faculty Members!

CUE 2016 Jam Session Presentation

- 1. Little Bits
 - a. Getting started guide



- b. Educators' Resources
- 2. Google Cardboard
 - a. Get cardboard
 - b. <u>How it works</u>
 - c. New! Expeditions
- 3. Makey Makey
 - a. <u>Introduction Video</u>
 - b. <u>Quickstart Guide</u>
- 4. Doodler 3D Pen
 - a. <u>Introduction</u>

- b. Doodle Community + Stencils
- 5. Using drones in education
 - a. Reimagining Education with drones
 - b. <u>Drones for schools</u>
- 6. Sphero + Ollie
 - c. Connected play
 - d. Educational resources and lessons

7.Lily Pad...Wearables

https://www.sparkfun.com/tutorials/313

- 8. Circuit Stickers and Circuit Scribe https://youtu.be/hSKuRTLAr3s
- 9. Snap Circuits (Super Easy) http://www.snapcircuits.net/
- 10. SumBlox: Number Blocks for Math http://sumblox.com/
- 11. Trihexaflexagons: Fun Folding Crafts http://www.auntannie.com/Geometric/Flexagon/
 Tutorial:

http://britton.disted.camosun.bc.ca/trihexaflexagon/flexagon.html

- 12. Advanced Digital Sandbox and Inventor's Kit YouTube Video: https://youtu.be/2zzkeeQr49g
- 13. Adafruit: More wearables and circuit projects http://www.adafruit.com/category/65
 10% Discount for Educators:
 https://www.adafruit.com/educators
- 14. Animal Webcams
 - a. The National Zoo (The pandas are growing up.!)
 - b. The San Diego Zoo
 - c. Animal Planet WebCams
 - d. The Houston Zoo
- 15. Google CS First: https://www.cs-first.com/
- 16. Bits Box: https://bitsbox.com/
- 17. Ozobots: http://ozobot.com/
 - a. There's an app for Ozo Groove.
 - b. You can code with Ozo Blockly.
- 18. Hotwheels Speedometry: http://www.hotwheels.com/en-us/speedometry.html

- FREE to 4th Grade Teachers (TONS of track pieces, cars, and lesson plans!)
- 19. Micro Bits: https://www.microbit.co.uk/
- -A product from Microsoft. It is a programmable device that can be loaded with code and has many capabilities to make the most of physical computing.
- 20. <u>Hummingbird Robotics</u>: Maker products can come to life with this robotics kit that includes servos, LED lights, sensors and more!
- 21. <u>Paper Roller Coasters</u>: You can purchase templates and instructions that make paper roller coasters much easier to create!

Classroom Examples and Resources:

A MakerSpace Symbaloo:

http://edu.symbaloo.com/home/mix/makerspace17

<u>DIY.org</u>: Kids Can earn badges by creating, inventing, and accomplishing tasks. (Shared by leslie riley)

STEAM Activities to Promote Engineering:
http://fun-a-day.com/14-fun-engineering-activities-for-k
ids/

Cheers to Creativity and Innovation Site: https://sites.google.com/site/elementaryinnovativelearn

ing/

MakerCamp

http://makercamp.com/

Imagination Foundation http://imagination.is/

Hornung Elementary Imagination Chapter: www.thebuzzoncreativeplay.com

Camp Invention

http://campinvention.com/
Walled Lake Camp Invention:

https://www.smore.com/2q7tg

Destination Imagination: a K-12 Global Creative Problem Solving Competition (Best after school program ever!) http://destinationimagination.org/

STEAM Activities that connect with the senses:

http://leftbraincraftbrain.com/2015/08/06/sensing-stea m-30-awesome-science-technology-engineering-art-andmath-activities-for-kids/

Makerspaces:

<u>A Tale of Team Bond's MakerSpace</u>

A Maker in Any Space: Mary Wever (@weverworld) and I

Maker Material Online Stores:

Spark Fun: https://www.sparkfun.com/

Maker Shed:

http://www.makershed.com/collections/summer-blowout-30-70

Adafruit: https://www.adafruit.com/ (Check out the Adafruit Circuit Playground Express!)

<u>Makedo:</u> Cardboard cutting and connecting products

Mr. McGroovey's Box Rivets: Rivets to connect cardboard together and save duct tape!

A Makerspace for \$100 or less: An article on ways to create a makerspace for less than \$100.

<u>NAETR.org</u>: A site that allows nonprofits to get HUGE discounts on things like duct tape, post-its, markers, and more! A MUST for teachers!

STEAM Resources for Teachers

Graduate STEM Fellows Resources:

http://www.gk12.org/resources/stem-activities-and-resources-for-k-12-teachers-and-students/

American Association for Engineering Education: http://teachers.egfi-kl2.org/

Michigan STEM Partnership: http://mistempartnership.com/

Women in Science Events:

http://www.lsa.umich.edu/wise/students/precollegestudents

Project Lead the Way: http://www.pltwmichigan.org/index.html