2019 Maker Extravaganza Resource List

Boise

Makerspaces.com, www.makerspaces.com - Buy Makerspace & STEM materials, products and supplies for your maker and STEM education program. Paper Circuits, Arduino and more.
Curiosity Machine, https://curiositymachine.org - Free hands-on science and engineering projects for families and educators. Build 80+ projects with everyday household materials.
Instructables, www.instructables.com - a community for people who like to make things. Come explore, share, and make your next project with us!
Steve Spangler Science, www.stevespanglerscience.com - fun science toys, experiments, and hands-on activities
Girl Develop It, www.girldevelopit.com - a nonprofit organization that exists to provide affordable and judgment-free opportunities for women interested in learning web and software development
Free Code Camp, www.freecodecamp.org - Learn to code with free online courses, programming projects, and interview preparation for developer jobs.
Coder Dojo, https://coderdojo.com/resources - resources created by community members, partners, and our team
Teach Engineering, www.teachengineering.org - Free, K-12, NGSS standards-aligned STEM lessons and hands-on activities for teaching elementary, middle and high school science, engineering design
Maker Shed, www.makershed.com - Shop the online store of Make: magazine & Maker Faire. Find great DIY projects for the whole family - 3D Printing, Arduino, Raspberry Pi, drones, robotics
The Gender Spectrum Collection by Broadly, https://broadlygenderphotos.vice.com - The Gender Spectrum Collection is a stock photo library featuring images of trans and non-binary models
Cardboard Automata, https://www.exploratorium.edu/tinkering/projects/cardboard-automata - Cardboard Automata are a playful way to explore simple mechanical elements such as cams, levers, and linkages, while creating a moving sculpture.
Open Design Kit, http://opendesignkit.org - a living collection of guides and best practices to help you to make and design openly
STEM Powered Family, https://www.steampoweredfamily.com - STEAM Activities, Kids Activities, Education, Science Experiments, and Childhood mental health.
STAR Net STEM activity clearinghouse, http://clearinghouse.starnetlibraries.org - high quality, vetted STEM activities that are appropriate for library use.
Find a Maker Faire, https://makerfaire.com/map - Like the ones coming up in Coeur d'Alene and Idaho Falls!
CANARY cardboard scissors https://www.amazon.com/CANARY-Cardboard-Scissors-Blue-PS-6500H/dp/B000EFZKRY
STEMfinity, www.stemfinity.com - Boise business offering project-based STEM Resources with curriculum to teach PreK-16 students STEM, Robotics, Electronics, Alternative Energy, 3D Printing...
Science Buddies, https://www.sciencebuddies.org - science fair project ideas, step by step how to do a science fair project, Ask an Expert discussion board, and science fair tips for ...
3D Print Balloon Cars, https://www.yeggi.com/q/balloon+car/ - you can 3D print the body and wheels for the car, rather than building from scratch

Moscow

Drones

- HUBSAN (used at training), https://www.amazon.com/HUBSAN-H107D-Camera-5-8GHz-Quadcopter/dp/B01GKSF69K?ref_=bl_dp_s_web_7799024011
- DJI (used in new STEM AC grant), https://www.dji.com/products/steam
- Regulations
    - Federal Aviation Administration's information for educational users, www.faa.gov/uas/educational_users
    - Register your drones at the Federal Aviation Administration's DroneZone, https://faadronezone.faa.gov
    - Learn more about Section 336, the rules governing recreational fliers and model aircraft, https://www.faa.gov/uas/recreational_fliers
    - Learn more about Part 107, the rules governing when you need the official drone pilot's license, https://www.faa.gov/uas/commercial_operators

Community Library Network STEAM Kits - http://www.communitylibrary.net/drupal7/content/full-steam-ahead - kits designed to support educators who teach science, technology, engineering, art, and math with tools, books, and programming ideas for grades K-6

Library Juice Academy, https://libraries.idaho.gov/continuing-education/partner-training-opportunities/ - offers a range of online professional development workshops for librarians and other library staff, focusing on practical topics to build new skills.

Slack, https://slack.com/ – Free tool where the people you need, the information you share, and the tools you use come together to get things done.

Silhouette Cameo, https://www.silhouetteamerica.com/shop/cameo/SILHOUETTE-CAMEO-3-4T - is the ultimate DIY machine. It uses a blade to cut over 100 materials, including paper, cardstock, vinyl, and fabric up to 12 in. wide.

Kamigami robots, https://kamigamirobots.com/ - robots that moves like a real animal. Assemble from flat sheets. Fold and snap together to create a robot with no tools. Create your robot's unique Movements Interactions, Lights & Sounds. Use the app to teach TRICKS & GAMES. Use the app to RUN, DANCE, or BATTLE. Zoom over almost any surface and battle with other robots.

Idaho Falls

Ozobots, https://ozobot.com/ - Robots to teach coding and creativity

Anki Cozmo, https://www.anki.com/en-us/cozmo - The smartest, cutest AI-powered robot you've ever seen

Sphero, https://www.sphero.com/ - Sphero fuses physical robotic toys, digital apps, and entertainment experiences to unlock the true potential of play

3Doodler pen, https://the3doodler.com/ - It's time to unearth the hidden curriculum inside our classrooms, and to look beyond the standard rubric to those aesthetic attributes that carve the human spirit. We must welcome it for its complex values and for the ways in which it enriches our students. Education should aim to teach more than facts, it should instill heart, as well.

Stop Motion Studio iOS app, https://itunes.apple.com/us/app/stop-motion-studio/id441651297?mt=8
Google play https://play.google.com/store/apps/details?id=com.lego.moviemaker.thelegomovie2&hl=en_US

Dash n dot, https://www.makewonder.com/robots/dash/ - Kids can watch their virtual coding turn into tangible learning experiences in real time as Dash, with its performance and multiple sensors, interacts with and responds to its surroundings.

Virtual Reality headset information from Idaho Virtual Reality Council, https://idahovirtualreality.com:
For high end VR experiences, we recommend one of the following products:

- HTC Vive, https://www.vive.com/us/
- Oculus Rift, https://www.oculus.com/rift/

For those who want more than the mobile experience, but not at the price point of high-end VR.

- Oculus Go, https://www.oculus.com/go/

For a more budget friendly option try one of these mobile versions:

- Samsung Gear, http://www.samsung.com/global/galaxy/gear-vr/
- Google Daydream, https://vr.google.com/daydream/

Cublets, https://www.modrobotics.com/ - uses Tactile Coding to help builders of nearly any age explore robotics, coding, and more. Uniquely designed, they are little bundles of software inside little bundles of hardware. As you build a robot, you learn to build a program. It's a fun and fascinating way to introduce big ideas through play.

Root robot, https://rootrobotics.com/ - Root is a programmable drawing robot that helps K-12 students learn, play, and explore.

Zero robotics, http://zerorobotics.mit.edu/ - a robotics programming competition for middle/ high schoolers where the robots are SPHERES (Synchronized Position Hold Engage and Reorient Experimental Satellites) inside the International Space Station.

Makey Makey, https://makeymakey.com/ - Design your own controller with everyday materials like playdough or graphite pencils. Control your favorite Scratch game while you learn to code. Make musical circuits with liquids, fruits, and low-cost office supplies. Using foil, pennies, and paper clips, invent sensors like scientists do.

Snap circuits, https://www.elenco.com/brand/snap-circuits/ - makes learning electronics easy and fun! Just follow the colorful pictures in our manual and build exciting projects such as AM radios, burglar alarms, doorbells and much more!

Circuit blocks, http://www.ciplearningstore.com/circuit-block-sets - are a great DIY beginners electronics project, more robust and durable than a simple circuit using cardboard and paper clips. It involves more complex components giving you more opportunities for fun and learning while experimenting.

Paper circuits

- Paper circuits overview, https://www.makerspaces.com/paper-circuits/
- Chibitronics circuit stickers, https://chibitronics.myshopify.com/collections
- Program idea from Exploritorium, https://www.exploratorium.edu/tinkering/projects/paper-circuits
- Paper Circuit Template, http://highlowtech.org/?p=2505