

## STEM in Colorado Libraries

### Anythink Libraries:

Several branches offer an annual embryology program, in partnership with the local 4-H program. Chicken or duck eggs are brought into the library in incubators, then patrons watch for the eggs to hatch. Patrons come every day—some even more often—to get a chance to see the hatching; it's the first time that many of the patrons get to see eggs hatch. After enjoying the new chicks or ducklings for a few days, they're given back to the 4-H clubs to raise.



### Spanish Peaks Library District

Our library has a couple of collections that teachers, homeschoolers, or any interested person can check out. Medical model and poster collection. Water 2012 collection (both children's and adult hydrology/ecology/water policy books).

### East Morgan County Library

We've offered monthly STEM activities for 3rd - 5th grade since January 2013.

### Mesa County Libraries

We offer a Junior Scientist Series, in which professors from our local university, CMU, host different topics related to their fields. Examples include paleontology, desert wildlife, sharks, intro to chemistry, etc. We offer this program once a month and rotate professors and topics. Also we occasionally provide experiment activities for our kids' hang out program. We've provided water and grossology experiments so far. Another cool program that we will be offering soon is a local school group will be hosting a robot program at the library. The kids will talk about how they build the robots and showcase what the robots can do. Finally, we have a local Math and Science Center in our town and college students bring in science experiments each summer that relate to the SRP theme. We plan to have them come again this year.



### Berthoud Public Library:

"Libraries are disgusting": we had a month long series of making disgusting experiments, including a kitty litter cake.

### Pine River Library District

We have Fun with Science on the second Saturday of each month. Fun with Science, Junior (for kids in K-2nd grade) is from 1-2 with a snack following the program and regular Fun with Science (for kids 3rd grade and up) is at 2:30-4 with a snack preceding the program. We've been doing it about five years and it is very popular.

### **Louisville Public Library**

SciGirls, by the CU Science Discovery outreach program, is a 7-week, hands-on science program for girls 8-12. Also, Louisville Public Library is part of the STAR-Net (Science-Technology Activities and Resources for Libraries) network, a national program led by the Space Science Institute's National Center for Interactive Learning with ALA as partner. It includes 2 traveling exhibits, hands-on and outreach activities for kids, and training for library staff.



### **Wilkinson Public Library (Telluride) & Montrose Regional Library District**

Working with the Pinhead Institute, students have the opportunity for exposure to new and engaging curricula outside of the classroom as we hope to inspire the next generation of scientific innovators. This free after school program teaches kids about the wonders of slime, how to keep an egg from breaking during a three story fall, why the color spectrum is so spectacular, how to grow glow-in-the-dark crystals, and more!

Pinhead joined forces with the [Naturita Community Library](#) this past March to offer our popular No School Science Project. In this month-long program, students created their "bugs" made from CDs, wire, and circuits to make them jitter. Students then learned about adaptations, entomology and ecology in decorating their bugs and creating their habitats. We had a blast with the students and the Naturita Community Library during our "Jitterbugs" No School Science Project.

### **Multiple libraries**

Makerspaces are collaborative spaces in libraries where people interact, engage, and create. They can be high tech but also can involve any tools that help people create, including sewing machines, looms, photo studios, video editing software, 3D printers, and much more. These tools encourage STEM skills as well as creativity, engagement with other community members, mentoring opportunities, and empowering library patrons to be content creators.



### **High Plains Library District**

We just started a Tweens STEM program and occasionally throughout the year have other STEM programs. Some branches have a STEM Club for 3<sup>rd</sup>-5<sup>th</sup> graders that offer a variety of STEM activities on topics including Scratch and the weather.

### **Gunnison County Library District**

We offer a weekly afterschool LEGO program at the Gunnison County Public Library. We suggest a weekly theme and also add supplemental materials that support the theme.

### **Basalt Public Library**

Seed bank: Seeds are available for local gardeners and farmers to “check out” with the agreement that they grow them out and collect some of the seed to return to the library. The seed of each new generation will better adapted to the local climate. They also offer gardening/horticulture related programming to go with the seed bank.



### **Mancos Public Library**

We are starting a program called "Science Fridays, A Hands-On Science Enrichment Program for K-8 Students." Library staff, local experts and volunteers will facilitate 1 session per month during this school year. Each session will address a particular scientific theme by allowing students to immerse themselves in this topic through interactive and experiential activities. Topics being explored will include the moon, light, color, rainbows, animal adaptations and more. Although planning had already begun, the motivation to launch this program arose in response to a need for youth services in the community. A decision by the Mancos School District to close school every other Friday throughout the 2013-2014 school year has generated challenges for many parents and students in the community. Many members of the community have turned to the library to help fill this gap. By offering a new, innovative, quality, educational program such as Science Fridays, we at the library hope that we can transform this challenging situation for students and families in the community into an opportunity for learning and enrichment.

### **Mamie Doud Eisenhower Public Library (Broomfield)**

Hands-on science programs for kids using expert community volunteers. A volunteer science task force of these volunteers leads the program, coordinating ideas, programming and volunteers. By involving the community, the library is able to offer a very diverse array of science programming from scientists themselves.



### **Aurora Public Library**

At Aurora Public Library, the monthly Science in the Stacks programs—based on the European Café Scientifique model— will provide a casual forum where local scientists and technologists will discuss new discoveries and issues, from CO mushrooms to how 911 works.

### **Garfield County Libraries**

For SRP this year with the teens, we did a program called "Hack the Surface" (take on "Beneath the Surface"), which incorporated the elements of STEM at the introductory level. The program's goal was to introduce teens to hacker/maker culture, with a super short presentation, and then various stations for exploration. One station, they could build Brush Bots. Another had them exploring Circuitry boards using Snap Circuits and Little Bits, Another had the MakeyMakeys set up with computers so the teens could



hack the world around them using a variety of materials, and we had a TabLab station (6 iPads) that had maker apps on them (3D modeling, video FX making, photo editing, music creation). 100% positive feedback from attending teens. The whole thing ran for about an hour total (as that was the time given).

We also offer Monday Math Madness for 4<sup>th</sup> and 5<sup>th</sup> graders; parents are encouraged to attend with kids. And, the Good, the Bad, and the Gross is hands on learning at its best. Designed for grades 4-6, participants are challenged to come ready for the good, the bad, and yes, the really gross!

### **Multiple Libraries**

Several libraries got involved in the 2013 Teen Video Contest sponsored by the Collaborative Summer Library Program. There were 21 great entries. High schools and a homeschool family got involved along with library staff.



### **Montrose Regional Library**

This summer we hosted what we called The DCC or the Digital Creations Club where 3rd-5th graders came into the library once a week and we created digital projects from using the green screen to "travel" to creating stop motion videos to editing a larger film project.