Illuminate PD

Paper electronic/simple circuits

New technology drones & virtual reality

Grant funds:

3 sets of  Lectrokit Beginner Classroom Kit  $775

Google Cardboard 10 @ 10 each $100

SYMA X5C Explorers 2.4G 4CH 6-Axis Gyro RC Quadcopter With HD Camera 3 @ 43.99 each $129

2. I work at 3 continuation high schools. Last semester I had attended a “Illuminate Your Thinking with Art & Tech” workshop at the Contemporary Jewish Museum with a science teacher where we had hands on experience making an illuminated book, a simple circuit. The hands on workshop taught us step-by-step how to create with paper electronics using copper tape, coin batteries & circuit sticker LEDs.  We also received an extensive list of resource & tutorial websites.  I decided to try to get materials for each school library so students could learn about this.  I talked with the science teachers at each site so they could teach the “science” part while I focused more on the “art” of the lesson.

We also added Google Cardboard & a drone with a camera to introduce virtual reality in each library.  These were all new technology projects for our students.

3. Prior to Teen Tech Week, classes researched basic information about circuits. The library homepage has links to research & resources for each school like chibitronics.com. Students discussed & drafted ideas for an illuminated book or

an illuminated nametags using a simpler circuit templates.

During Teen Tech Week, in the library, students were introduced to the basic Illuminated books materials & directions.  Each student made & illustrated an illuminated book or nametag.  Using the library homepage, students reviewed at least three paper electronics tutorials. Jonathan had made a circuit & then volunteered to help another class.  He was great at explaining the steps & patient when some students said, “I can’t get it to light up!”After their projects were completed, the classes wrote short step-by-step directions for other students.  These directions & the finished projects were displayed in the library during February. Selected students gave short presentations to visiting classes.

When I opened the box with Google Cardboard early one morning one of the staff immediately showed me the site on my phone & three students in the office immediately started viewing some virtual reality scenes!! All day students came to the library to try Google Cardboard.  I am going to write grants to get more sets for student use.

I also ordered 3 drones with cameras which came a little late.  Right now students are drafting tips & techniques for drone use! When the drones arrived yesterday the students read the directions & then told me “it’s too windy today!”

4. 3 Lectrokit Beginner Classroom Kits

10 Google Cardboard

3 SYMA X5C Explorers 2.4G 4CH 6-Axis Gyro RC Quadcopter With HD Camera

5. NA

6. My goals were met: introducing new technology with simple, hands on lessons.  Based on what I had learned at the CJM workshop I wanted students to learn more about circuits. Classes at each school got a chance to make the illuminated books or nametags.

While I was preparing for this I read about Google Cardboard in the library. Since every student has a phone I wanted introduce this inexpensive virtual reality (just as the Oculus Rift was being rolled out for about $1500!)  I was amazed at the interest & number of students who by word of mouth came to the library to find out more about Google Cardboard & try it out.

Then I read in a teacher magazine about using drones in science especially for mirco/macro lessons. Two of the school have urban gardens & I have worked a lot with the science teachers so I decided to get drones with cameras so students can experiment.   Students have already researched several YouTube videos about drones & they are eager to try them out this spring.

7.  The biggest success was the real enthusiasm of the students.  In each class there was real concentration & quiet determination to get that LED to light up.  They really worked together. When frustrated several students asked their classmates, “How did you make that work?”  When I read about Google Cardboard in the library on The Library Voice blog it sounded so interesting & reasonably priced.  It was amazing how so many students were almost instantly intrigued with this accessible virtual reality. I will work with teachers to plan extension lessons using Google Cardboard.

Our drones just came in & the students were very enthusiastic when they saw the package at each school. A small group in the library went over the directions & started drafting “rules”.  As we experiment with the drones this may be a technology I want to explore next Teen Tech Week!!!

8. We have enough materials in the circuit kits for more students to use in the library maker spaces. Google Cardboard is available for use in the library.  The drone can be checked out for use by the science, math & art teachers. I would like to get a grant for Google Cardboard for each student (price is only $10).

In the fall I will talk with the science, math & art teachers about more circuit &  drone activities & possibility of drone kits for students to construct!

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So what else can we imagine?