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College of William and Mary

Applied Research Center Student Newsletter

Mini-Spectrometer Workshop with New Light Sources



Dirrell Forman (far left), the Boys and Girls Club Program Leader, is pictured here with Amy, Brandt, Nick and the middle school participants.

Amy Wilkerson presented her Mini-Spectrometer Workshop at the Boys & Girls Club of Suffolk (BGCS) for a new group of students on March 7th. A total of 11 students participated in this workshop representing John F. Kennedy, Kings Fork and Forest Glen Middle Schools. One of the highlights of this workshop was the introduction of a variety of new light sources which were displayed in custom built units that Amy, Brandt, Richard & Nick built. (Pictured on the right).



Tiara (left) served as a student helper for the workshop and plans to volunteer at the next event. She is currently in 6th grade at John F. Kennedy Middle School and she loves science.



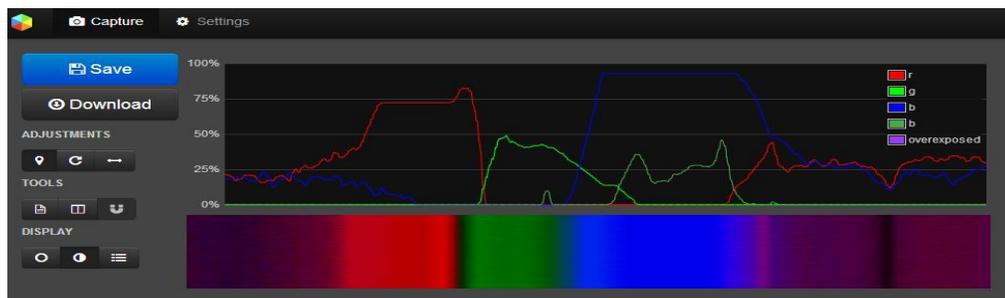
Students shown here using their newly built spectrometers with the light source



This workshop was funded by the IDEA grant Amy received from the Office of Diversity & Equal Opportunity at William & Mary for her “Fill the Gap” project. Amy was able to purchase the **Foldable Mini-Spectrometer** kits from Public Lab (<http://store.publiclab.org/>) for the students to assemble and use.

Each kit includes the mini-spectrometer which is laser cut from thick, light-blocking black card stock. The diffraction grating is formed from a piece of DVD which is also supplied with the kit. Once assembled, the mini-spectrometer is then attached to a phone, laptop or webcam to view spectra from provided light sources. The students have the opportunity to take the spectrometer home for further experiments.

Free software is available and provided through a link on the Public Lab’s website for Spectral Work Bench (<http://spectralworkbench.org/>). See example below.



Light and wavelength spectra using a 75 watt incandescent light bulb & the “free” spectral work bench software.