

When I taught AP Physics 1 for the first time, we had to keep a fast pace right up to the exam. After the exam, I had some difficulty keeping kids motivated enough to keep learning (I wanted to teach them more electricity, and some magnetism). I decided to teach the material with respect to particle physics, which meant we were discussing topics that most of the students had never heard of before. They were hooked! We did the “Making it ‘Round the Bend” lab, and then we talked about how mass spectrometers worked. Scratch that, I had the students that were in AP Chemistry talk about the different particles and masses, and they related everything about electric & magnetic fields, mass, charge, and circular motion. How great was it for them to learn from each other, and the kids got to show off their skills! The students were so used to rearranging and combining equations, they just started doing that on their own, and they immediately saw the connections.

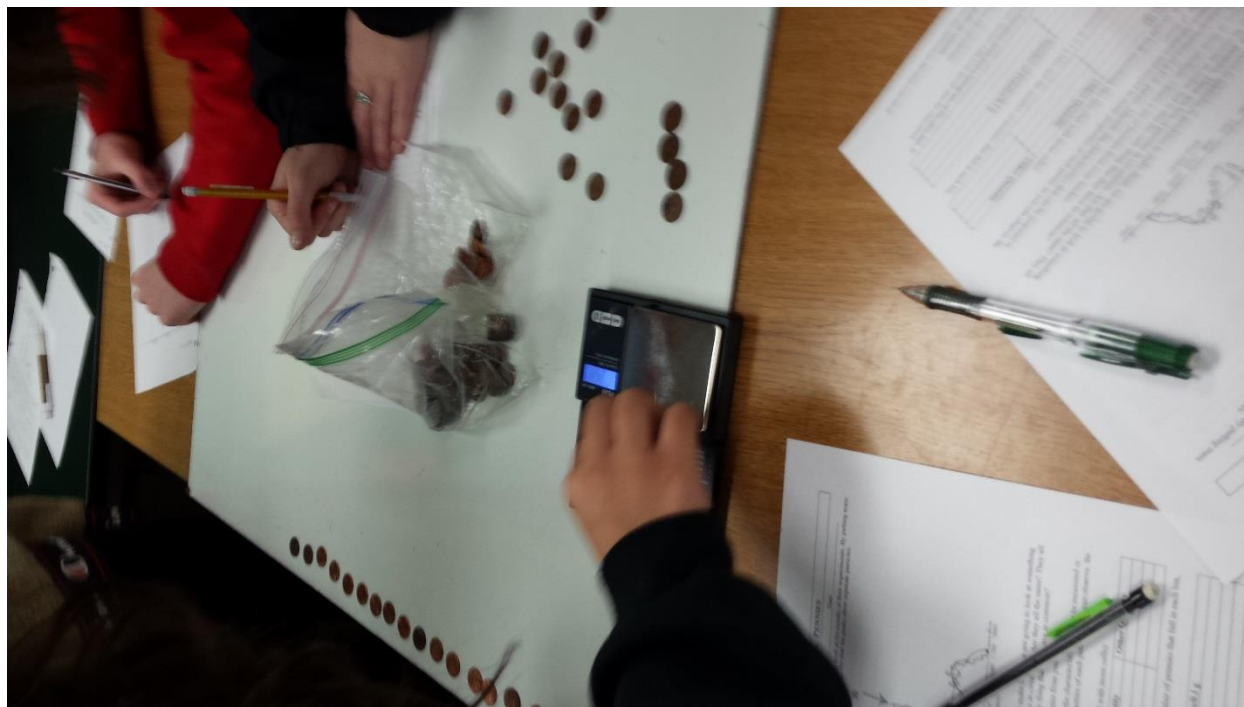
After the most recent snow, I took my son & daughter for a walk and drew their attention to various animal tracks, pointing out the evidence of the animals being there even if we never actually saw them there. This idea stuck with me, and I used it to introduce my students to how particle detectors work. Several of my students had seen bird tracks in the snow, so I asked them how they might figure out what type of bird. This led to the idea of taking lots of measurements, and seeing how consistent the values were. I segued into the “Mass of U.S. Pennies” lab, and showed them how we can use histograms to find patterns (we used the interactive histogram on shodor.org, a very handy resource!).

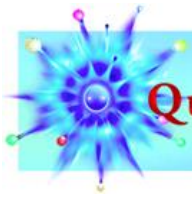
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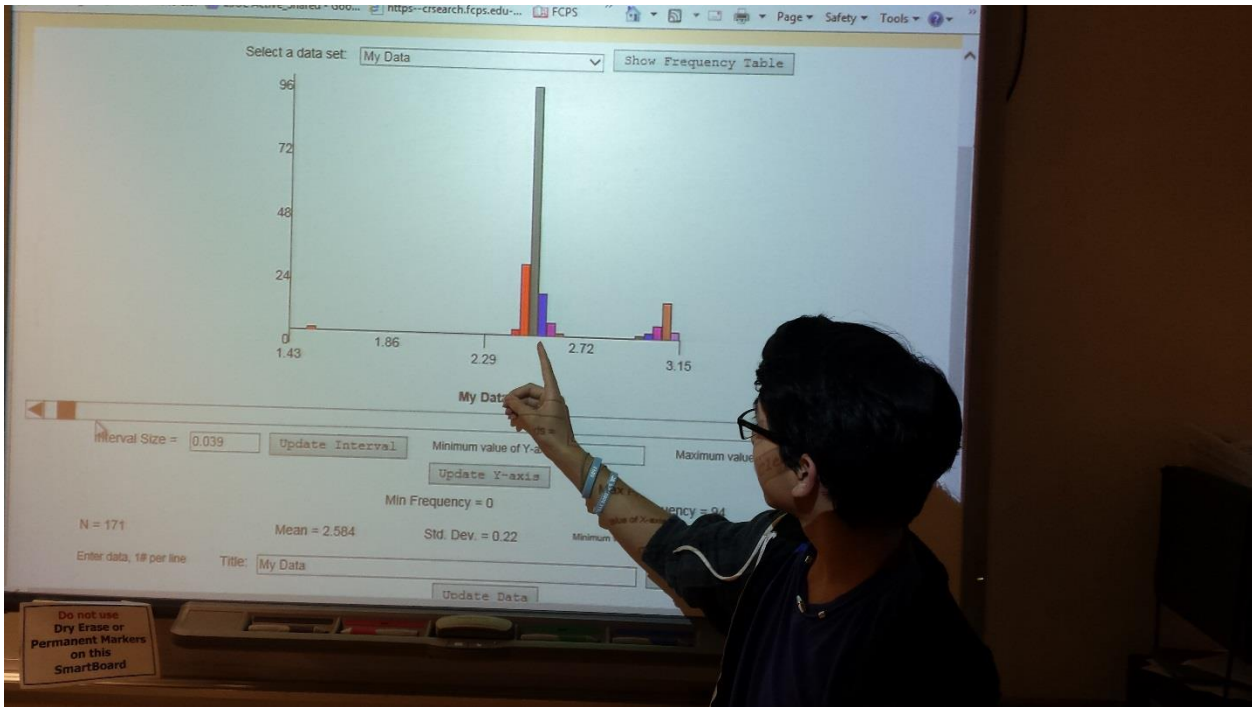
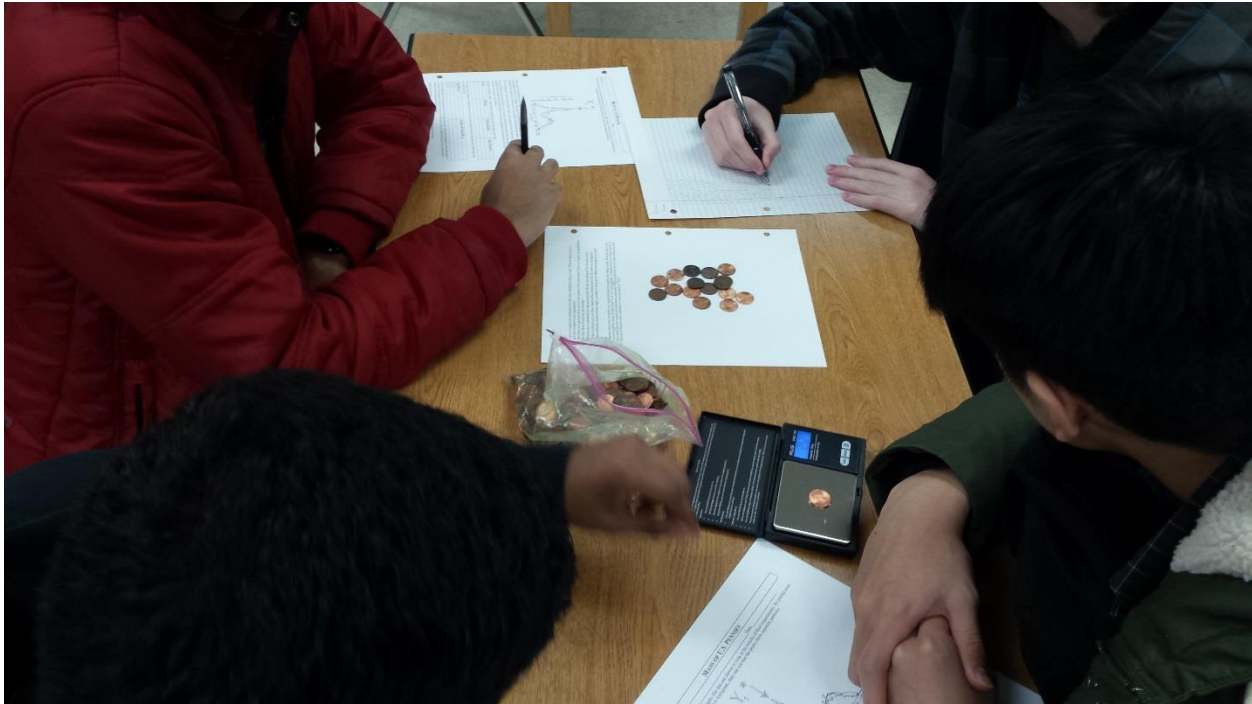
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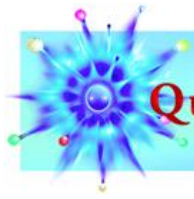




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