Backward Design Template

Identify Problem and Desired Transformation

What content based problem do you see in your students that you would you like to address?	**What is the transformation in understanding that you would like to see in your students?**
I would like to work with my physics students (11th grade) on understanding and interpreting data represented in graphical form.	By the 11th grade, students should have had experiences in both math and science classes creating different types of graphs. As a class, we will work on graph creation, whether it's with data that the students have taken, or data that's given to them. Something the students are not as familiar with is analyzing data given to them as a graphical representation. I would like to see students analyzing graphs created from single variable changes to multiple variable changes.

What skills or understandings do you want your students to have as a result of the technology integration you propose?	**What questions will be used to frame this area of content (unit questions or big ideas)?**
One of the main things I would like students to take away would be to give meaning to the slope of linear graphs. I would also like my students to be able to make predictions about future events, or events that weren't directly test in the lab based on the data graphed.	What is the real-world meaning of the slope of the graph? What is the real-world meaning of the y-intercept of the graph? Write a for-every statement to represent the slope. Predict what would happen if … (using the trend from the graph)

Determine Acceptable Evidence

What technology seems best suited for your problem? What this is the best as opposed to other options?

I would like some type of graphing program (like Excel, but hopefully iPad compatable) that the students can use to input data and generate a graph with an equation for the line of best fit. From there, the students can give meaning to the slope and y-intercept of the line.

What pedagogies do you think will work best given your choice of content and technologies? Why this choice over others?

I would like my students to work up the Bloom's Taxonomy pyramid. Not only would I like them to create graphs, but they will need to analyze and interpret them, among other things. Bloom's Taxonomy provides many different levels for student learning, and will allow development and growth for all students.

How will you measure the impact of your technology integration on student learning (Surveys, interviews, observations, assessments, etc.)

I will measure the impact of the technology integration through observations, interviews, and assessments. The students will hopefully be able to not only create, but analyze graphs with multiple variables being represented.