1. Jeffrey Hsi
2. Valley Stream South H.S.
3. 11^{th} – 12^{th} grades
4. Regents Physics / AP Physics

5. CCLS Standards Addressed

ELA/Literacy -

RST.11-12.7	Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., quantitative data, video, multimedia) in order to address a question or solve a problem.
WHST.11-12.7	Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation.

Mathematics -

MP.2	Reason abstractly and quantitatively.
MP.4	Model with mathematics.
HSN.Q.A.1	Use units as a way to understand problems and to guide the solution of multi-step problems; choose and interpret units consistently in formulas; choose and interpret the scale and the origin in graphs and data displays.
HSN.Q.A.2	Define appropriate quantities for the purpose of descriptive modeling.
HSN.Q.A.3	Choose a level of accuracy appropriate to limitations on measurement when reporting quantities.
HSA.SSE.A.1	Interpret expressions that represent a quantity in terms of its context.
HSA.SSE.B.3	Choose and produce an equivalent form of an expression to reveal and explain properties of the quantity represented by the expression.
HSA.CED.A.1	Create equations and inequalities in one variable and use them to solve problems.
HSA.CED.A.2	Create equations in two or more variables to represent relationships between quantities; graph equations on coordinate axes with labels and scales.
HSA.CED.A.4	Rearrange formulas to highlight a quantity of interest, using the same reasoning as in solving equations.

6. Exploriments: Electricity – Current and Charge ($2.99)
   https://itunes.apple.com/us/app/exploriments-electricity-current/id490167317?mt=8
   http://www.exploriments.com/ipad/Current_Charge.html

7. Exploriments is an app company that has designed a wide variety of physics based experimentation apps. Each can be downloaded for $2-$3. The only real limitation is that you have to pay for each of the apps, rather than having all of the experiments within one app. In addition, the quality of each experiment ranges from excellent to mediocre. That being stated, however, Exploriments does provide a range of activities, worksheets, and quizzes to reinforce student learning.

   This Exploriments app provides an interactive environment to explore the concepts of current and charge, understand division of current in parallel circuits, understand current measurement using ammeter, gain familiarity with several types of circuits, and practice taking measurements. It's intuitive enough that someone with no real knowledge of building circuits can easily pick it up and learn from the app.

8. Within my own classroom, I currently do not have enough iPads to warrant a full classroom exercise. However, I do use it as a review tool for students when they come to extra help. The app reviews the formulas: V=IR and I in Series / Parallel Circuits ($I_S = I_1 = I_2 = I_3 \ldots$ and $I_P = I_1 + I_2 + I_3 \ldots$). The activities and quizzes reinforce the formulas as the students measure the currents with the virtual ammeters.