***Lesson Plans for the Week of: 4/3/17 Teacher: Hough Course: Physical Science Period: 1,2,7/8***

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| Elements of  a Lesson | **Monday** | **Tuesday** | **Wednesday** | **Thursday** | **Friday** |
| Objective/  Focus/  Essential  Question | PS.9d,e  Understand that electromagnetic waves (E/M) are the same type of wave, but that the different types differ in frequency/ wavelength | PS.1j,m;9a,c-e  Identify types of E/M waves and uses for those different types  Interpret a diagram illustrating the features of E/M waves | PS.1j,m;8b;9a,c-e  Review for test | PS.1j,m;8b;9a,c-e;11d  Test | PS.11a  ??U-shaped room?  Types of circuits  a) identify the features necessary for a circuit;  b) differentiate between a series circuit and parallel circuit  (This is also a review of fifth grade science) |
| Lesson/Act.  Type of Presentation | 1. Interpret diagram of electromagnetic spectrum 2. Electromagnetic waves are transverse waves that don’t need a medium 3. All E/M waves travel at the same speed 4. Explain what causes the EM spectrum and how it relates to a rainbow 5. As wave frequency increases, wavelength decreases | Bellwork:  Apply wave speed equation  Groups:  Use textbook to research types of E/M waves; note uses—place in organizer  Note how energy and frequency change with types of E/M waves  In order of energy:  RMIVUXG: Rotting Meat Is Under eXcellent Gardens  Whole group:  Look at 2 SOL practice diagram of E/M waves and identify parts, since they are complicated  Stuents answer questions interpreting the diagrams | Kahoot? | Test  Use textbook and internet to research conductors, insulators, and semiconductors | a)review the terms open circuit and closed circuit; use picture from SGA  b)Students will be put into groups of 2-3 and will be required to make a working circuit; they will note whether the lights all go out if one light bulb is unscrewed?  c) Discuss the circuits that were designed; features that were needed and not needed and not needed  d) If no parallel circuits were designed, then show a whiteboard design of a parallel circuit and ask if it will work; prove it with a model  e) Notes: assign the names parallel and series circuits to the concepts  f) Student worksheet  This is a review from a long time ago (4th grade)  Necessary variation: 7/8 period will need to do the activity ½ the class at a time due to lack of supplies: other half will research ac vs dc current or what a generator is in textbook or internet |
| Evaluation | Exit pass |  |  |  |  |
| Extension/  Homework |  |  |  |  | student worksheets |
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MATERIALS:

Monday: interactive achievement; resonance box

Diff: <http://home.howstuffworks.com/microwave.htm> ;

<http://www.explainthatstuff.com/microwaveovens.html> ;

<https://scitech.web.cern.ch/scitech/TopTech/01/MicroWaveOven/microwave_2.shtml> ;

<https://www.scientificamerican.com/article/how-does-a-microwave-oven/> ;

<http://engineering.mit.edu/ask/why-can%E2%80%99t-we-put-metal-objects-microwave>

https://www.fsis.usda.gov/wps/portal/fsis/topics/food-safety-education/get-answers/food-safety-fact-sheets/appliances-and-thermometers/microwave-ovens-and-food-safety/ct\_index

Tuesday:

Wednesday:

Thursday:

Friday: wires with alligator clips, batteries, light bulbs; teacher-made worksheet; whiteboards; markers;