***Lesson Plans for the Week of: 3/20/17 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.8a,b; 9a  Preassessment  Resonance examples  Calculate wave speed | PS.9a,b,c,e  correctly identify whether a mirror will form a right-side up or an upside down image  correctly use vocabulary involved with mirrors: concave and convex mirrors; object; image  8th grade Writing SOL Test MC | 1st/2nd periods: Tuesday’s lesson plans  7/8 period:  PS.9b,c,e  Understand that refraction occurs when a wave changes direction as it enters a new medium | SOL Writing test | 1st/2nd periods: Wednesday’s lesson plans  7/8 periods:  PS.9e  Understand basic uses for Laser, optical fiber, telescope, microscope |
| Lesson/Act.  Type of Presentation | Preassessment about lenses, electricity, and magnets  Describe resonance; examples: resonance box, bridge: show video of Tacoma Narrows Bridge collapse  Describe wave speed equation: Model its use  Student practice using wave speed equation | 1st and 2nd periods: no class  7/8 period:  On board at start of class: object, image,  1) define opaque, demonstrate using piece of wood or back of mirror  2) Students will break up into groups and look at the images formed by 3 types of mirrors, identifying whether the images are right side up or upside down; make sure that students place the mirrors at a normal distance from their faces (30 cm?) and close to their faces (at their noses)  3)student groups will summarize observations on the whiteboards  4) put vocabulary terms to match the concepts that students observed in the prior lesson | 7/8 period:  1) define refraction; use refraction tank as example; use of laser and lens as additional example  2) groups of students will use concave and convex lenses to investigate the images they see; record results  3) Note that refraction occurs in curved lenses; use results of student observations to summarize the images which are formed by concave and convex lenses  4) teacher re-demonstrates lens effects using concave and convex lenses, with LCD projector; define focal point of convex lens  5) Students complete lens worksheet | NO 1st or 2nd period class due to SOL test  7/8 period: mythbusters video about phone book friction |  |
| Evaluation | Worksheet: calculate wave speed | teacher observation and student tables, conclusion | Pearson lens worksheet |  |  |
| Extension/  Homework |  | Exit pass |  |  |  |
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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: https://phet.colorado.edu/en/simulation/bending-light

Thursday:

Friday: