***Lesson Plans for the Week of: 3/20/17 Teacher: Hough Course: Physical Science Period: 1,2,7/8***

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| Elements ofa Lesson | **Monday** | **Tuesday** | **Wednesday** | **Thursday** | **Friday** |
| Objective/Focus/Essential Question | PS.8a;9aRecognize wavelength of waveDefine frequencyRecognize the relationship between wavelength and frequency | PS.8a,c; 9a;10c,dReview for test | PS.8a,c; 9a;10c,dTest | PS.9bUnderstand the wave phenomena of reflection, diffraction, and interference; identify examples | No School |
| Lesson/Act.Type of Presentation | a) bellwork: identify amplitude of wave from a diagram; identify lever with greatest MAb) Go over exit passes from previous classc) direct instruction: frequency and wavelength of wave, diagram the latterd) explain frequency of wavee) model the two concepts on the wave apparatus; have students recognize that when wavelength decreases, frequency increasesf) worksheet: use wave vocabulary terms; diagram, differentiate conceptsDifferentiation: 2nd period will only do a,f above, then will do a web search to investigate how a microwave oven works, esp why spoons spark in it | Practice questionsIdentify features on wave apparatus (and slinky?), plus a combination of levers and pulleys | TestPost-Test work | 1) Define reflection; give examples of light reflecting from mirror2) define diffraction; show simulation and use water tank to demonstrate3) define interference; use rope illustration to demonstrate; sound examples of lunchroom volume and car radio being drowned out by car’s engine 4) use wave apparatus to demonstrate reflection  |  |
| Evaluation | Worksheet: diagram, differentiate terms and related concepts |  |  | Exit pass differentiating terms |  |
| Extension/Homework |  |  |  |  |  |
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MATERIALS:

Monday: review guide; worksheet; Road Runner/Wile E. Coyote cartoon; Phet lever simulation: <https://phet.colorado.edu/sims/html/balancing-act/latest/balancing-act_en.html>;

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: review guide

Wednesday: test

Thursday: mirrors; https://phet.colorado.edu/en/simulation/wave-interference ; <http://www.falstad.com/ripple/>; shallow container with water, wave apparatus

Friday: