***Lesson Plans for the Week of: 1/16/17 Teacher: Hough Course: Physics Period: 3***

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| Elements of  a Lesson | **Monday** | **Tuesday** | **Wednesday** | **Thursday** | **Friday** |
| Objective/  Focus/  Essential  Question | No School | PH.2a,6a,7a  Apply Conservation of Mechanical Energy (CME) | PH.2a;5g  Apply the concept of Work | PH.2a;5g;6a  Understand the Work-Kinetic Energy Theorem and apply it in appropriate word problems | PH.2a;5g  --Define Power and know its units  --use Power in word problems |
| Lesson/Act.  Type of Presentation |  | Continued from previous day  Students will complete CME  Individual:  Students will use textbook to define the science concept of work and describe necessary conditions for work to be done; work equation and units | Whole group:  Review the concept of work from previous day’s research, and then address the concept of positive and negative work; use textbook p. 156 Figure 1.3 as a graphic model, prompt  Model Sample problem p. 156#3  Review concepts of kinetic and potential energies | Whole group:  Have students hypothesize reasons why work and energy have the same units  Review work and kinetic energy  Note that the change in kinetic energy equals net work  Describe the Work-kinetic energy theorem; emphasize the importance of the angle—often it is zero, but students will have to state so when they are solving the problems  Model Sample problem p. 162 #1  Individual:  CW: do worksheet containing an adapted version of textbook p. 162 problem #3 where the net force is given as 3046 N and the driveway is flat | Individual:  Students will look up the definition, equations and SI units for power in the textbook p. 173-174 and write them in their notes  Whole group:  Explain power and give example of how work and force can be the same in two situations, but power is different  Sample: problem on p. 175#2  Individual:  Independent practice using the power equations |
| Evaluation |  | Same as previous day | Results of Student practice | p. 162 # 2,4 due tomorrow, but grade is included with the next day’s homework due to the low number of questions |  |
| Extension/  Homework |  |  | p. 156#1,2; 180#8,10a |  | p. 175#1,2,5 all with scaffolding: in vertical movement, the force is the weight of the object; also be willing to use the equations of motion to find acceleration and displacement  extension: Adapt subsequent power lesson to include movement of water, per FA request |

Materials:

Monday:

Tuesday: :

Wednesday:

Thursday: practice questions for WKE Theorem

Friday: Will need power/water questions for Monday