***Lesson Plans for the Week of: 1/23/17 Teacher: Hough Course: Physics Period: 3***

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| Elements ofa Lesson | **Monday** | **Tuesday** | **Wednesday** | **Thursday** | **Friday** |
| Objective/Focus/Essential Question | PH.2a;5g--Define Power and know its units--use Power in word problems | PH.2a;5gApply power equations to pumps moving water | PH.2a;5g;6a--review for test | PH.2a; 5g; 6a;pre-6b--test--recognize the factors which affect momentum | PH.2a; 4a;5a; 6bUnderstand the concept of momentum |
| Lesson/Act.Type of Presentation | Individual:Students will look up the definition, equations and SI units for power in the textbook p. 173-174 and write them in their notesWhole group:Explain power and give example of how work and force can be the same in two situations, but power is differentSample: problem on p. 175#2Individual:Independent practice using the power equations | Go to stairway and have students calculate the power needed to lift 1 kg, at a constant speed, over a given distance Explain how power equation can be used to solve the question of how much water a pump can move in a given amount of time—per student requestDiscuss p. 182#36 in this context | Whole groupGo over the previous day’s practice using the power equationsReview main points of work and energyIndividual:Practice solving a few assorted word problems from the work-energy unitWhole Group:Go over answers | Individual:Take test about work, energy, and conservation of mechanical energy Students will look up the following things about momentum on p. 190-191:1. definition
2. SI units
3. equation
4. vector or scalar?

No differentiation | Individual:Students will look up the following things about momentum on p. 190-191:1. definition
2. SI unit,symbol
3. equation
4. vector or scalar?

Whole group:Explain what momentum isModel Sample problem: p. 191#1 emphasizing directionality (due to vector) and unitsExplain the law of conservation of momentum (LCM) a) State the LCMb) Write the equation for the LCMWhole group:Apply the LCM equation:1) Confirm the units of the variables in the equation;2) Go over situations in which the LCM holds: collisions, and when objects push away from each other3) Note that in LCM problems, there is no friction; friction prevents the law from working, and so the problem involves low friction situations like water, ice, and outer spaceModel Sample problem: p. 201#1 |
| Evaluation |  |  | Teacher observation and student questions/ responses |  |  |
| Extension/Homework | 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 displacementextension: Adapt subsequent power lesson to include movement of water, per FA request |  |  | Post-test work is the introduction to tomorrow’s topic | p. 191#2,3; p. 215 #11a,b p. 201 #2,3; p. 216 #22a, 23 (emphasize showing correct math and correct directions, if applicable) |

Materials:

Monday: Call Pasco about rubber bands

Tuesday: : masses, string (or rope or twine), timer, meter stick, spring scale

Wednesday: review guide

Thursday: teacher-made test

Friday: