***Lesson Plans for the Week of: 11/7/16 Teacher: Hough Course: Physics Period: 3***

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| Elements of  a Lesson | **Monday** | **Tuesday** | **Wednesday** | **Thursday** | **Friday** |
| Objective/  Focus/  Essential  Question | PH.2e;5d  Assess student abilities in quantitative system analysis of forces | PH.2a,e;4a;5d,e  --Review for test | PH.2a,e;4a;5d,e  --Force test | PH.5d  --observe the relationship between force and acceleration  (senior pictures) | PH.2e;5d,e  --Calculate the net force on an object (nonzero) (spiral and extension from previous chapter) |
| Lesson/Act.  Type of Presentation | Whole group: go over homework  Model how to solve a tension cable problem  Guided practice: solve a tension cable problem  Individual:  Quiz about quantitative force analysis  If time permits:  Whole group:  Begin test review | Whole Group:  Review returned quiz—highlight components, and friction  Individual: Practice one simple quantitative force problem  Review terms, laws, and their applications for the test: Make references to previous worksheets and activities, like the bowling ball and the spring scales  Inertia—broom activity  3rd law select force and reaction rxn pair—air track  Force diagrams: ws 1,2 using normal force and friction **qualitatively**;  Calculating vector components;  ws 3,4 quantitatively using vector components, forces on an incline, and trig functions, plus all things **quantitatively**  Weight: ws 4  Difference between weight and mass | Individual:  Test about forces | Whole group:  Define Atwood machine; show students modified Atwood machine using air track  After demonstrating how it works, have students relate the forces on the glider and the hook, highlighting the friction and the tension in the string.  Illustrate how more force causes greater acceleration of mass  Have students Identify whether the gliders have a zero or nonzero net force acting on them  Identify relationship between force, acceleration, and mass—put in notes; write Newton’s 2nd Law  Model how to solve Newton’s 2nd Law problem  Independent practice: solve Newton’s 2nd Law problem | Whole group:  Model how to calculate the net force on an object; note steps  Individual:  Student practice calculating the net force on an object |
| Evaluation | Student work | Teacher observations; student questions |  | Teacher observation; student responses | Student accuracy and teacher observations |
| Extension/  Homework |  | This is preparation for a summative assessment |  | p. 130 #1-4 |  |

Materials:

Monday: ws4, quiz3

Tuesday: modeling ws 3 and teacher examples

Wednesday: teacher made test

Thursday: Air tracks, gliders, masses, pulleys, string, associated masses, photogates

Friday: classwork: p. 126 #2,3; p. 143#7 (adapted) & 10