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

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Elements ofa Lesson | **Monday** | **Tuesday** | **Wednesday** | **Thursday** | **Friday** |
| Objective/Focus/Essential Question | PH.2e;5dAssess 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 homeworkModel how to solve a tension cable problemGuided practice: solve a tension cable problemIndividual:Quiz about quantitative force analysisIf time permits:Whole group:Begin test review | Whole Group:Review returned quiz—highlight components, and frictionIndividual: Practice one simple quantitative force problemReview terms, laws, and their applications for the test: Make references to previous worksheets and activities, like the bowling ball and the spring scalesInertia—broom activity3rd law select force and reaction rxn pair—air trackForce 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 4Difference between weight and mass | Individual:Test about forces | Whole group:Define Atwood machine; show students modified Atwood machine using air trackAfter 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 massHave students Identify whether the gliders have a zero or nonzero net force acting on themIdentify relationship between force, acceleration, and mass—put in notes; write Newton’s 2nd LawModel how to solve Newton’s 2nd Law problemIndependent practice: solve Newton’s 2nd Law problem | Whole group:Model how to calculate the net force on an object; note stepsIndividual: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