***Lesson Plans for the Week of: 1/30/17 Teacher: Hough Course: Physical Science Period: 1,2,7/8***

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Elements ofa Lesson | **Monday** | **Tuesday** | **Wednesday** | **Thursday** | **Friday** |
| Objective/Focus/Essential Question | PS.1i-k,m-n;10aInvestigate the relationship between an object’s motion and a distance-time graph (at constant acceleration)Interpret d vs t graph  | PS. 1i-k,m-n ;10aFinish work from previous day | PS.10a--recognize that acceleration occurs when an object’s speed or direction changes--Interpret motion map for acc. | PS.1i,m;10a--Interpret a distance vs time graph to determine if an object is accelerating | 6.8a,bReview for SOL test:Review planets of the solar system and their relative distances |
| Lesson/Act.Type of Presentation | Bellwork: calculate the speed of a given objectReturn work; go over some items Whole group:Explain the beginnings of the Moving Man Phet simulation; demonstrate how it works and what the initial instructions meanIndividual: Students work through Moving Man simulation to investigate how object’s motion is shown on d vs t graphAfter students are finished with guided worksheet, they then do a final evaluation worksheet that alternates using the computer and not using the computer | Whole group:Complete previous day’s activity investigating the relationship between motion and d vs t graph (see previous day’s plan)Whole group:a) Introduce the idea of motion mapb) qualitatively show the difference between the motion map for a fast object and that of a slow object | Individual:Bellwork: Interpret motion map where the arrows are not constant lengthWhole group: a) Use motion map to introduce the idea of accelerationb) define accelerationc) emphasize that “changing velocity” means changing speed OR changing direction—thus objects moving in a circle are accelerating, even if they are moving at constant speedc) provide examples and have students identify them as acceleration or notd) review the motion map of the accelerating objectIndividual:e) Bellwork to identify whether given examples illustrate acceleration or not | Whole group:Utilize Moving Man Phet simulation to contrast how the graph looks when an object is going at a constant speed and how it looks when an object is acceleratingRemainder of day: catch up Individual:Exit pass differentiating distance vs time graphs of constant speed and accelerating objects | Whole group:Use solar system poster to review the fact that the planets revolve around the sunIdentify the 8 planets; group them into the inner planets and the gas giants |
| Evaluation | Post-activity worksheet | See previous day’s lesson | Student motion mapsAcceleration exit pass | Exit Pass |  |
| Extension/Homework |  |  |  |  |  |
|  |  |  |  |  |  |

MATERIALS:

Monday: Phet simulation <https://phet.colorado.edu/en/simulation/legacy/moving-man> plus accompanying worksheets

Tuesday: same as Monday

Wednesday: spinning object (rubber duckie?)

Thursday: Moving Man Phet simulation (same as Monday); motion maps

Friday: pre-made Planet poster, objects, rulers for comparison, mnemonic for the planets (Know locations, sizes, and names of known dwarf planets in case it comes up)