IB PHYSICS

Name: _____

Period: _____ Date: _____

DEVIL PHYSICS

BADDEST CLASS ON CAMPUS

TSOKOS READING ACTIVITY

Section 2-1B

1. Sub-Topic/Lesson # 2.1B – Motion
   a. Uniformly accelerated motion
   b. Acceleration of free fall
2. Essential Idea: Motion may be described and analyzed by the use of graphs and equations.
3. Nature Of Science: Observations. The ideas of motion are fundamental to many areas of physics, providing a link to the consideration of forces and their implication. The kinematic equations for uniform acceleration were developed through careful observations of the natural world.
4. International-Mindedness: International cooperation is needed for tracking shipping, land-based transport, aircraft and objects in space.
5. Understandings:
   a. Acceleration
   b. Graphs describing motion
   c. Equations of motion for uniform acceleration
6. Applications And Skills:
   a. Determining instantaneous and average values for acceleration
   b. Solving problems using equations of motion for uniform acceleration
   c. Sketching and interpreting motion graphs
   d. Determining the acceleration of free-fall experimentally
7. Guidance: Calculations will be restricted to those neglecting air resistance.
8. Data Booklet Reference:
   a. $v = u + at$
   b. $s = ut + \frac{1}{2}at^2$
   c. $v^2 = u^2 + 2as$
   d. $s = \frac{(v+u)t}{2}$
9. Utilization:
   a. Biomechanics (see Sports, exercise and health science SL sub-topic 4.3)
   b. Quadratic functions (see Mathematics HL sub-topic 2.6; Mathematics SL sub-topic 2.4; Mathematical studies SL sub-topic 6.3)

c. The kinematic equations are treated in calculus form in Mathematics HL sub-topic 6.6 and Mathematics SL sub-topic 6.6

10. Aims:
    a. Aim 2: much of the development of classical physics has been built on the advances in kinematics
    b. Aim 6: experiments, including use of data logging, could include (but are not limited to): determination of g, estimating speed using travel timetables, analyzing projectile motion, and investigating motion through a fluid
    c. Aim 7: technology has allowed for more accurate and precise measurements of motion, including video analysis of real-life projectiles and modeling/ simulations of terminal velocity
11. Read section 2-1, Pg 37-44, in your textbook.
12. Use the Cornell Notes system to take notes on the lesson material. You have the following options:
    a. You can print multiple copies of one of the forms on the following pages of this document and handwrite your notes.
    b. You can use the MS Word form supplied below and type your notes.
        i. You can then print your work and submit the hardcopy.
        ii. You can upload your work to Focus. If you do this, you must use a filename with the following format, "LastnameFirstinitialPerXAsgnmtname"
13. ***It is up to you to decide what your notes should cover.***
14. When using this form, remember the Five R's of Notetaking:
    a. ***Record*** – the most important or emphasized information
    b. ***Reduce*** – and synthesize information wherever possible, making it as concise as you can
    c. ***Recite*** – read your notes out loud
    d. ***Reflect*** – and consider how this information is connected to your personal experiences and what you already know
    e. ***Review*** – look over your notes more than once
15. Answers may be typed or neatly printed. Drawings may be freehand, but try to make use of the 'Shapes' or 'Insert Clipart" functions of MS Word.
16. ***A reading assignment may contain drawings that would be useful in your notes. If you have scanning capability, you should practice scanning pictures and inserting them into documents. As you prepare for college, you should consider investing in a desktop printer-scanner-copier. Just remember that for formal reports you have to cite any images that you insert into your document. You don't have to cite scanned images for this exercise unless you use a source other than the textbook.***

CORNELL NOTES and the 5 R's

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Name:

Date:

Topic:

Questions/Key Points	**Notes**

SUMMARY:

Name _____

Date _____

CORNELL NOTES

Topic _____

Questions/key points	Notes

Summary