| AP PHYSICS |  |
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| Name:      |  |

Period: \_\_\_\_\_ Date:



## GIANCOLI READING ACTIVITY

## Section(s) 3-7 to 3-8

- 1. Big Idea(s): The interactions of an object with other objects can be described by forces.
- 2. Enduring Understanding(s): All forces share certain common characteristics when considered by observers in inertial reference frames.
- 3. Essential Knowledge(s):
  - a. An observer in a particular reference frame can describe the motion of an object using such quantities as position, displacement, distance, velocity, speed, and acceleration.
    - i. Displacement, velocity, and acceleration are all vector quantities.
    - ii. Displacement is change in position. Velocity is the rate of change of position with time. Acceleration is the rate of change of velocity with time. Changes in each property are expressed by subtracting initial values from final values.
    - iii. A choice of reference frame determines the direction and the magnitude of each of these quantities.
  - b. Forces are described by vectors.
    - i. Forces are detected by their influence on the motion of an object.
    - ii. Forces have magnitude and direction.
- 4. Learning Objective(s):
  - a. The student is able to express the motion of an object using narrative, mathematical, and graphical representations.
  - b. The student is able to analyze experimental data describing the motion of an object and is able to express the results of the analysis using narrative, mathematical, and graphical representations.
  - c. The student is able to represent forces in diagrams or mathematically using appropriately labeled vectors with magnitude, direction, and units during the analysis of a situation.
- 5. Read section(s) 3-7 to 3-8 in your textbook.
- 6. 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 a hardcopy, or
    - ii. You can upload your assignment to FOCUS. If you choose this option, you must use a filename in the format, "LastnameFirstinitialPerXAsgnmtName". For example, "SmithKPer4ReadActT9-3.doc"
  - c. You can take notes on notebook paper using the Cornell Notes format and submit the hardcopy.
- 7. 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
- 8. As a minimum, you must include notes on the following topics:
  - a. Parabolic path of a projectile
  - b. Relative velocity
  - c. Reference frame
  - d. Use of subscripts
- 9. 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.
- 10. 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.

| <b>CORNELL NOTES</b> and the 5 R's                                                 | Name:  |
|------------------------------------------------------------------------------------|--------|
| <i>Record</i> – the most important or emphasized information                       |        |
| <i>Reduce</i> – and synthesize information wherever possible, making it as concise | Date:  |
| as you can                                                                         |        |
| <i>Recite</i> – read your notes out loud                                           | Topic: |
| <i>Reflect</i> – and consider how this information is connected to your personal   |        |
| experiences and what you already know                                              |        |
| <i>Review</i> – look over your notes more than once                                |        |

| Questions/Key Points | Notes |
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Graphic Organizers for Note Taking and Study Skills

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