

Name: _____

Period: _____ Date: _____

GIANCOLI READING ACTIVITY

Sections 3-1 to 3-3

1. Big Idea(s):
 - a. Big Idea 3: The interactions of an object with other objects can be described by forces.
2. Enduring Understanding(s):
 - a. Enduring Understanding 3.A: All forces share certain common characteristics when considered by observers in inertial reference frames.
 - b. Enduring Understanding 3.B: Classically, the acceleration of an object interacting with other objects can be predicted by using $\vec{a} = \frac{\sum \vec{F}}{m}$.
3. Essential Knowledge(s):
 - a. Essential Knowledge 3.A.2: Forces are described by vectors.
 - i. Forces are detected by their influence on the motion of an object.
 - ii. Forces have magnitude and direction.
 - b. Essential Knowledge 3.B.1: If an object of interest interacts with several other objects, the net force is the vector sum of the individual forces.
4. Learning Objective(s):
 - a. Learning Objective (3.A.2.1): 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.
 - b. Learning Objective (3.B.1.2): The student is able to design a plan to collect and analyze data for motion (static, constant, or accelerating) from force measurements and carry out an analysis to determine the relationship between the net force and the vector sum of the individual forces.
5. Read section(s) 3-1 to 3-3 in your textbook.
6. Write a question regarding some aspect or characteristic of each of the terms listed below. The questions must start with either the word “How” or “Why”. Then write the answer to your question. For example,

Q. How do I do this assignment?

A. With zest, zeal, and an inextinguishable fervor for exploring the intricacies of vectors and scalars.
7. *One of your own personal goals should be to learn to use the Microsoft Equation function (may not be available for older versions of MS Word).*
8. Terms:
 - a. Vector

Q. _____

A. _____

b. Scalar

Q. _____

A. _____

c. Graphical Method for Addition of Vectors

Q. _____

A. _____

d. Resultant

Q. _____

A. _____

e. Tail-to-Tip Method for Addition of Vectors

Q. _____

A. _____

f. Parallelogram Method for Addition of Vectors

Q. _____

A. _____

g. Subtracting Vectors

Q. _____

A. _____

h. Multiplying a Vector by a Scalar

Q. _____

A. _____

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. If you submit this assignment electronically, the filename must be in the following format, "LastnameFirstinitialPerXReadActX-X".*