

Physics 112

Tuesday, November 7/17

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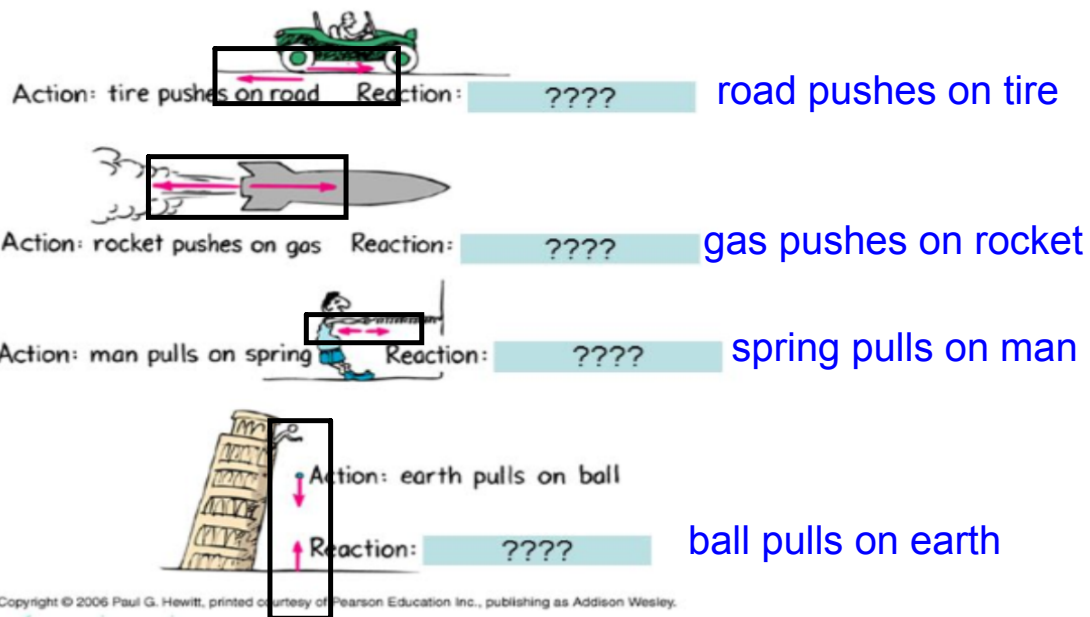


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1. FA - Newton's Third Law
 2. Questions Re Newton's Laws?
 3. SA: U2 - S1&2: Wed., Nov. 8
Format: MC and Problems

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4. U2 - S3: Introduction to Momentum
 5. Momentum
 6. Impulse
 7. Worksheet - Momentum (PP #29) and Impulse (PP #30-32)

FA - Newton's Third Law (N7/17) D2.8

1.



Action: tire pushes on road Reaction: road pushes on tire

Action: rocket pushes on gas Reaction: gas pushes on rocket

Action: man pulls on spring Reaction: spring pulls on man

Action: earth pulls on ball
Reaction: ball pulls on earth

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2. A child is standing on the floor. If the action force is the force of gravity of Earth pulling down on the child, then the reaction force is:

- (a) the force of the floor pushing up on the child.
- (b) the force of gravity of the child pulling up on the Earth.
- (c) the force of the child pushing down on the floor.
- (d) a net force causing the child to accelerate.

Physics 122

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1. Return -> FA - Kepler's Third Law Problem
2. Investigation 12-A: Orbital Speed of Planets

3. Geosynchronous Orbit
4. Periods of Orbiting Bodies
5. Worksheets - Kepler, Universal Gravitation, Etc.

Formative Assessment - Kepler's Third Law

There is a region beyond Neptune known as the Kuyper Belt, which includes a lot of small objects, including Pluto. Pluto is itself 39.8 AU from the Sun. How long, in Earth years, does it take to orbit the sun once?

$$\begin{array}{l} T_p = ? \\ r_p = 39.8 \text{ AU} \\ T_E = 1.00 \text{ yr} \\ r_E = 1.00 \text{ AU} \end{array} \quad T_p = 251 \text{ yr.}$$

Science 10

Tuesday, November 7/17

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1. SA: Chem #3 - Date: Thursday, Nov. 9/17
2. Review - SA - Chem #3
3. Roller Coasters and/or Practice/Help

Topics - SA: Chem #3

- be able to identify ionic compounds and molecular compounds
 - ionic compounds begin with a metallic ion or ammonium
 - molecular compounds begin with a nonmetal or metalloid
- be able to write the formulas and names for:
 - (a) simple binary ionic compounds
 - ie/ NaCl - sodium chloride
 - (b) ionic compounds containing polyatomic ions
 - ie/ $\text{Mg}(\text{ClO}_3)_2$ - magnesium chlorate
 - (c) ionic compounds containing multivalent metals
 - ie/ FeBr_3 - iron (III) bromide
 - (d) ionic compounds containing multivalent metals and polyatomic ions
 - ie/ Cu_3PO_4 - copper (I) phosphate
 - (e) binary molecular compounds (prefixes are required for these compounds)
 - ie/ P_2O_5 - diphosphorous pentoxide
 - (f) binary acids (anions do not contain oxygen)
 - ie/ HF - **hydrofluoric acid**
 - (g) oxyacids (anions do contain oxygen)
 - ie/ H_2SO_4 - sulfuric acid [sulfate -> sulfuric]
 - ie/ HClO_2 - chlorous acid [chlorite -> chlorous]
- recognize the 7 elements that form diatomic molecules (H_2 , N_2 , O_2 , F_2 , Cl_2 , Br_2 and I_2), S_8 , and P_4
- identify acids, bases and salts
- identify reactants and products
- be able to identify **six** types of reactions (formation, decomposition, single replacement reactions, double replacement reactions, combustion reactions, and neutralization reactions)
- be able to balance chemical reactions using numerical coefficients
- be able to translate word equations
- be able to predict products