Science 10

Monday, May 14/18

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Roller Coaster: Due: Friday, June 1/18
Optional Assignment - Graphing Characters (Max. 2)
- Due: Friday, June 1/18

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1. Sample Problems - Continue

2. Worksheets - Average Speed Problems

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3. SA - Physics #2 -> Thursday, May 17/18
-> Topics

4. Review - SA: Physics #2

Topics - SA: Physics #2

1. Plot and label points in the four quadrants.

2. Write the coordinates of a plotted point.

3. Determine the slope of a line using:

$$m = \frac{\text{rise}}{\text{run}} \quad \text{OR} \quad m = \frac{y_2 - y_1}{x_2 - x_1}$$

4. Draw and label a distance vs. time graph.

5. Be able to determine the speed of an object from a distance vs. time graph.

6. Match a graph to a story/interpret a graph.

7. Answer questions about distance vs. time graphs.

8. Solve average speed problems.

Physics 112

Monday, May 14/18

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1. Submit Justifications -> FA - Momentum, Impulse and Impulse-Momentum Theorem
2. Return:
   SA - U2S3 (Momentum, Impulse, Momentum-Impulse Theorem)
3. Worksheet - Work
4. Three Cases - No Work is Done
5. Worksheet - Work is Done and Not Done (PP #4-10)

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6. Positive and Negative Work
7. Worksheet - Positive and Negative Work
8. SA - U3 S1 -> To Be Determined
9. U3 - S2: Types of Energy and Work-Energy Theorems
10. Concepts U3S2
11. Types of Energy
12. Kinetic Energy
13. Work-Kinetic Energy Theorem
14. Worksheet: C6 PP #19-21 -> Kinetic Energy
    C6 PP #22-25 -> E_k and Work- E_K Theorem

Physics 122

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1. Check:
   Worksheet - Horizontal Projectile Problems: PP #1-8

2. Projectile Fired at an Angle

3. Trajectory of a Projectile Fired at an Angle

4. Formulas: Projectile Launched At an Angle

5. Worksheet - C11, Text 543, PP #9-12
   Worksheet - Text: Page 549, PP #13
   Page 570, Prob. #17, 19, 20 (omit graph)
   Worksheets - Mixed Problems

Science 122

Monday, May 14/18

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1. Check:
   Worksheet - Magnetic Field Produced by a Wire
   Worksheet - Force on a wire in a Magnetic Field
   Worksheet - Magnetic Force on a Single Charged Particle
   Worksheet - Magnetic Fields and Circular Paths
   Worksheet - Circular Trajectories and Applications

2. FA - Magnetic Fields and Forces

3. Electromagnetic Induction

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4. Worksheet - Red Text: PP, Applying Concepts and Problems

5. Worksheet - Conducting Rods and Lenz's Law

6. Self-Inductance and Mutual Inductance

7. Transformers

8. Worksheet - Transformers

FA - Magnetic Fields and Forces

1. A 40.0 cm long solenoid 1.56 cm in diameter is to produce a field of 0.412 T at its center. How much current should the solenoid carry if it has 1200 turns of wire?

2. What magnetic field strength is required to produce a force of 3.9×10^{-3} N on a charge of 6.98×10^{-4} C moving perpendicularly across it at 24 m/s?