Science 10

Friday, April 27/18

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1. SA - Physics #1

2. Roller Coasters - Due Date: Friday, June 1/18

Physics 112

Friday, April 27/18

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Midterm - Monday, April 30

1. Check
   Worksheets - 1st and 2nd Law Problems
   FA - Newton's Laws of Motion
   Midterm - Nov. 2017

2. Concepts: U2 S3 - Introduction to Momentum

3. Momentum

4. Impulse

5. Worksheet: C5 - Momentum -> Page 197: PP #29
   C5 - Impulse -> Page 200: PP #30-32

6. Impulse-Mometum Theorem

7. Worksheets:
   C5 - Impulse-Momentum Page 203: PP #33-35
   C5 - Momentum and Impulse-Momentum Page 209: PFU #37-45

Physics 122

Friday, April 27/18

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1. Check:
   Worksheet - Current -> Textbook - C15 - Page 696, PP #4-10
   Worksheet - Resistance -> Textbook: C15, Page 708, #16-20
   Worksheet - Ohm's Law -> Textbook: C15, Page 714, #21-25

2. Power - Continue

3. Worksheet - Textbook: Page 737, #40-42
   Page 744, #46-50

4. Series Circuits

5. The VIR Chart

6. Worksheet - (Series) Textbook: Page 719, #27-31

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7. Parallel Circuits

8. Worksheet - (Parallel) Textbook: Page 724, C15 - PP#32-35

9. Combination/Complex Circuits

10. Worksheet - (Complex) Textbook: Page 728, #36-37
    Textbook: Page 749, #33-34

11. Worksheets - Circuit #1
    Circuit #2

Science 122
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Midterm - April 30/18

Presentation - D. Howe

1. Check
   Worksheet - Worksheet - Energy of Photons, Work Function, de Broglie Wavelength, Etc.
   Worksheet - Energy Levels
   FA - Photoelectric Effect and Energy Levels

2. Optional -> Two More Types of Nuclear Reactions: Fission and Fusion

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3. Topic - Magnetism
4. Electric Charge Versus Magnetic Poles
5. Lodestone and Ferromagentic Materials
6. Magentic Domains
7. Magnetic Field Lines
8. Electromagnetism
9. Right-Hand Rule #1
10. Solenoid/Electromagnet
11. Right-Hand Rule #2
12. Right-Hand Rule #3
13. Two Current-Carrying Wires
14. Electric Motors

Science 122 - Midterm

1. Optics → Spherical Mirrors
   - Concave + convex
   → Lenses
   → Convex and concave
   → Double (1)

2. Fluid Mechanics
   - Hydrostatics
   → $P_2 = P_1 + \rho g h$
   → $W_{app} = W - F_B$ OR
   → $F_{net} = 0\ N$
   ie $F_B = W_B + W_L$ (1)

   - Hydrodynamics
   → $m = \rho A v_1$, $Q = V = A v_1$, $A_1 v_1 = A_2 v_2$
   $\frac{m}{t}$ $\frac{V}{t}$

   → $P_1 + \frac{1}{2}\rho v_1^2 + \rho g y_1 = P_2 + \frac{1}{2}\rho v_2^2 + \rho g y_2$ (1)
   $A_1 v_1 = A_2 v_2$

   * reference levels

3. Nuclear
   → $A = \lambda N$ $N = N_0 e^{-\lambda t}$ (1)
   $m = m_0 e^{-\lambda t}$
   $\lambda = \frac{\ln 2}{T_{1/2}}$ $A = A_0 e^{-\lambda t}$

   → Photoelectric effect
   $K_{max} = \frac{1}{2}mv^2$ $E = hf$ (1)
   $K_{max} = hf - \phi$
   photoelectron photon surface
   * $c = f\lambda$
   * $1nm = 10^{-9} m$
   $hf_c = \phi$ $hf_t = \phi$
   $V_s = \frac{K_{max}}{q}$

   → Energy Level Diagrams
   $E_n = -13.6 \frac{Z^2}{n^2}$ (1)
   $|\Delta E| = E_f - E_i$

   - de Broglie [1 *]
   $\lambda = \frac{h}{mv}$
   λ wavelength of particle