May 5 - NBTA Meetings (Thursday)

May 6 - NBTA Council Day (Friday)

May 23 - Victoria Day (Monday)

May 27 - Professional Learning Day (Friday)

Physics 112

Wednesday, May 4/16

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*Library Books

Kind Words

Adopt a Family

1. Investigation: Atwood's Machine - Due Today

2. Worksheet -> Textbook: Page 197, #29 (C5) [Momentum]
   Textbook: Page 200, #30-32 (C5) [Impulse]
   Worksheet -> Textbook: Page 203, PP #33-34
   Textbook: Page 209, #37-45
   Worksheet -> Multiple Choice: Impulse and Momentum

   HW

3. Test Unit 2 - Topics and Format
   - Wednesday, May 11/16

Physics 112
Topics -> Test: Unit 2 - Dynamics

1. definitions -> dynamics, force, net force
2. types of forces -> contact and non-contact
   -> examples
3. five specific forces -> **W, F_A, N, T, F_f**
4. force of friction -> static and kinetic
   coefficient of friction -> static and kinetic
5. FBDs -> draw and label
   -> interpret
6. static equilibrium -> $\mathbf{F}_{net}$ = 0 N, **a** = 0 m/s^2 "State of eq."
   -> objects at rest
   -> objects moving with constant velocity
7. inertia and mass
8. Newton's First Law of Motion -> Law of Inertia
   -> objects at rest or moving with constant velocity
9. Newton's Second Law of Motion -> Law of Force, Mass and Acceleration
   -> accelerating objects
   -> Atwood's Machine Problems
10. Newton's Third Law of Motion -> Law of Action and Reaction
    -> action and reaction forces
11. momentum
12. impulse
13. impulse-momentum theorem

Science 122

Wednesday, May 4/16

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1. Bernoulli's Equation - Continue
2. Worksheet - Text (C&J) Equation of Continuity and Bernoulli's Eq
3. Test - Fluid Mechanics
   - Topics and Format
   - Wednesday, May 11/16

Science 122
Topics -> Test: Fluid Mechanics

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1. mass density
2. specific gravity
3. pressure
4. fluid
5. fluid mechanics
6. hydrostatics - hydrostatic equation
   - Pascal's Principle → hydraulic lift
   - Archimedes' Principle
     - buoyancy $F_B = W_{ha} + W_L$
     - fraction, % submerged $\frac{\square}{\square} = \frac{\square}{\square} = \frac{\square}{\square}$
     - apparent weight $W_{app} = W - F_B$
7. hydrodynamics - types of fluid flow: steady or streamline/unsteady
   compressible/incompressible
   viscous/nonviscous
   - mass flow rate
   - Equation of Continuity
   - volume flow rate
   - 3 characteristics of ideal fluid flow
   - Bernoulli's Equation

Science 10

Wednesday, May 4/16

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1. Check -> Worksheet: Freely Falling Bodies

2. Assignment: Accelerating Bodies -> Monday, May 9/16

3. Test - Physics Unit - Topics and Format
   - Date TBA

4. Roller Coasters

Physics 122

Wednesday, May 4/16

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1. Experiment 10.2 - Torques (Page 67)
   Experiment 9.1 - Conservation of Momentum (Page 55)
   3 Days Late

2. Assignment: Experiment 8.1 - Kepler's Laws - Page 49
   2 Days Late

3. Worksheets - HW

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4. Unit 2 - Section 3: SHM (Simple Harmonic Motion)