

{ May 23 - Victoria Day (Monday) }
{ May 27 - Professional Learning Day (Friday) }

Physics 112

Monday, May 9/16

<http://mvhs.nbed.nb.ca/><http://mvhs-sherrard.weebly.com/>***Library Books**

Explain That Stuff - May 13/16

Adopt a Family

1. **Investigation: Atwood's Machine - 1 Day Late**
 2. Check:
 - 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
 3. **Test Unit 2 - Wednesday, May 11/16**
 4. Unit 3 - Work and Energy - Section 1: Work
 5. Three Cases When No Work is Done
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6. Worksheet: Text - Page 221, PP #1-3
Worksheet: Text - Page 225, PP #4-10
 7. Positive and Negative Work
 8. Worksheet: Text - Page 235, PP #14-15
 9. Assignment: U3-S1 - Date TBA

MC .

1. D	6. B	11. C	16. C
2. C	7. C	12. D	17. C
3. B	8. A	13. D	18. C
4. A	9. D	14. C	19. D
5. B	10. C	15. B	20. C

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 -> \mathbf{W} , \mathbf{F}_A , \mathbf{N} , \mathbf{T} , \mathbf{F}_f
4. force of friction -> static and kinetic
coefficient of friction -> static and kinetic
5. FBDs -> draw and label
-> interpret
6. static equilibrium -> $\mathbf{F}_{\text{net}} = 0 \text{ N}$, $\mathbf{a} = 0 \text{ m/s}^2$ "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

$$\boxed{\vec{J} = \vec{F}t} \quad \boxed{\vec{p} = m\vec{v}} \quad \boxed{\vec{J} = \Delta\vec{p}}$$

$$\vec{J} = \vec{F}t = \Delta\vec{p} = \vec{p}_f - \vec{p}_i = m\vec{v}_f - m\vec{v}_i$$

$$= m(\vec{v}_f - \vec{v}_i)$$

$$= m \boxed{\Delta\vec{v}}$$

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Science 122

Monday, May 9/16

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1. Check

Worksheet - Text (C&J) Equation of Continuity and Bernoulli's Eq

2. Worksheet: Bernoulli's Eq and Equation of Continuity

3. Test - Wednesday, May 11/16

4. Topic 5 - Nuclear Physics

5. Review: Atoms and Isotopes

6. Radioactive Decay: Alpha, Beta and Gamma Decay

7. Decay Series

Science 122

Topics -> Test: Fluid Mechanics

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 $F_B = W_{he} + W_L$
 - fraction, % submerged $\boxed{-} \rightarrow \boxed{-} = \boxed{-}$
 - apparent weight $W_{app} = W - F_g$
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

Monday, May 9/16

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1. Assignment: Acceleration Problems
 2. [Review: Physics Unit - Multiple Choice - HW](#)
 3. Test - Physics Unit - Friday, May 13/16
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1. Experiment 10.2 - Torques (Page 67)
Experiment 9.1 - Conservation of Momentum (Page 55)
4 Days Late
 2. Assignment: Experiment 8.1 - Kepler's Laws - Page 49
3 Days Late
 3. Check -> Worksheets (Kepler's Laws, Etc.)
 4. Unit 2 - Section 3: SHM (Simple Harmonic Motion)
 5. Review: Vibration, Amplitude, Period and Frequency
 6. Two Requirements for SHM
 7. Pendulums
 8. Worksheet: Text: Page 614, PP #5-8
Text: Page 623, PFU #28, 29 } Given - Not HW
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