

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

# Physics 112

Wednesday, May 11/16

<http://mvhs.nbed.nb.ca/>

<http://mvhs-sherrard.weebly.com/>

\*Library Books

Adopt a Family


## Explain That Stuff - May 13/16

1. Investigation: Atwood's Machine - 3 Days Late
2. Test Unit 2
3. 

Worksheet: Text - Page 221, PP #1-3	} Work Done and Not Done
Worksheet: Text - Page 225, PP #4-10	

## Science 122

Wednesday, May 11/16

 <http://mvhs.nbed.nb.ca/>

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1. Test - Wednesday, May 11/16
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## Science 10

Wednesday, May 11/16

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1. Questions? -> Review: Physics Unit - Multiple Choice
  2. **Test - Physics Unit - Friday, May 13/16**
  3. Roller Coasters - Deadline: Thursday, May 26/16
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## Physics 122

Wednesday, May 11/16

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## Explain That Stuff - May 13/16

1. Assignment: Experiment 8.1 - Kepler's Laws - Page 49  
**5 Days Late**
  2. Return -> Formative Assessment - Planetary Motion
  3. FA - Gravitational Force
  4. Worksheet: Text: Page 614, PP #5-8  
Text: Page 623, PFU #28, 29 } pendulums
  5. Review: Hooke's Law
  6. Review: Types of Energy
  7. Energy of a Mass on a Horizontal Spring
  8. Maximum Speed of a Mass on a Spring
  9. Velocity Of A Mass On A Spring At Any Point
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10. Worksheet: Text - Page 608, #1-4  
Page 623, #23-27, 30

## Formative Assessment - Planetary Motion

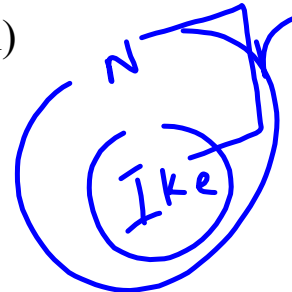
Tuesday, May 10/16

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The asteroid "197 Ike" has its own small moon, Nacyl.

- a) Find the mass of "197 Ike" given that the orbital radius of Nacyl is 65 km and its period is 12 h. ( $8.7 \times 10^{16}$  kg)
- b) How far would a UFO be from the center of "197 Ike" if the UFO has an orbital speed of 648 km/h? ( $1.8 \times 10^2$  m)

↓ m/s.



## Formative Assessment - Gravitational Force

### Wednesday, May 11/16

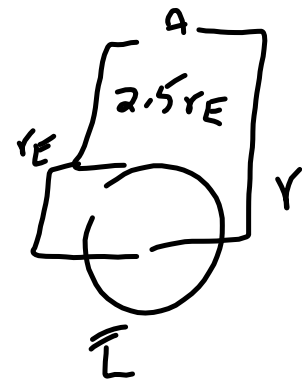
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What force does Earth ( $5.98 \times 10^{24}$  kg) exert on an 80.0 kg astronaut at an altitude equivalent to 2.5 times Earth's radius ( $6.371 \times 10^6$  m)?

$$F = \frac{G m_1 m_2}{r^2}$$

$$F = \frac{G M_E m_a}{r^2}$$

$$F = \frac{G M m_a}{r^2}$$



$$r = 3.5 r_E$$

OR

$$W = m_a g$$

$$W = 64.2 \text{ N}$$

$$g = \frac{G M \leftarrow M_E}{r^2}$$

$r = 3.5 r_E$

$$g = 0.8622 \text{ m/s}^2$$