

# Physics 112

Wednesday, November 29/17

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## **Blocked Off -> After School: Wednesday Lunch - 1st Half: Thursday**

1. Return -> FA - Impulse-Momentum Theorem
2. Questions re Momentum, Impulse, Impulse-Momentum Theorem?
3. "Explosion" Lab
4. SA - U2 S3 -> Momentum, Impulse and Impulse-Momentum Thm  
MC and Problems  
Friday, December 1/17  
Review Learning Targets!

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5. Unit 3 - Work and Energy - Learning Targets
  6. U1-S3: Work - Concept Sheet
  7. Work
  8. Worksheet - C6 - Work Page 221: PP #1-3
  9. Three Cases - No Work is Done
  10. Worksheet - C6 - Work and No Work Done  
Page 225: PP #4-10
  11. Types of Work: Positive and Negative
  12. Worksheet - C6 - Positive and Negative Work  
Page 235 - PP #14, 15
  13. Work Done by Forces - F vs D Graphs

**Formative Assessment -> Impulse-Momentum**  
**Nov. 27/17**

After a bat strikes a baseball, the baseball has a momentum of 5.0 kgm/s north. If the baseball has a mass of 100.0 g and experienced an impulse of 9.0 kgm/s north when hit, what was the initial velocity of the baseball? **D3.7**

100.0g  $\rightarrow$  0.1000kg

SA -  $F_i \cdot dt$

$$\vec{p} = m\vec{v}$$

$$\vec{J} = \vec{F}t$$

$$\vec{J} = \vec{F}t = \Delta\vec{p}$$

$\vec{F}$	$\vec{F}t = \Delta\vec{p}$
$t$	$\vec{F}t = \vec{p}_f - \vec{p}_i$
$m$	$\vec{F}t = m\vec{v}_f - m\vec{v}_i$
$v_i$	$\vec{F}t = m(\vec{v}_f - \vec{v}_i)$
$v_f$	

$$\vec{p}_f = \checkmark$$

$$m \checkmark$$

$$\vec{J} = +9.0 \text{ kgm/s}$$

$$v_i = ?$$

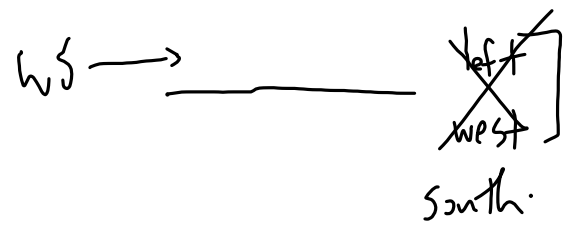
$$\vec{J} = \vec{F}t = \Delta\vec{p}$$

$$\vec{J} = \Delta\vec{p}$$

$$\vec{J} = \vec{p}_f - \vec{p}_i$$

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

$$\vec{v}_i = \ominus \text{ m/s.}$$



## Physics 122

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### **Blocked Off -> After School: Wednesday Lunch - 1st Half: Thursday**

1. Questions?  
Worksheet - Horizontal Projectiles - PP #1-8
  2. Examples - Continue
  3. Worksheets - Projectiles Fired at an Angle and Mixed Problems
  4. SA - U2: S3&4 (SHM and Projectiles)
    - MC and Problems
    - Wed. Dec. 6/17
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## Science 10

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### **Blocked Off -> After School: Wednesday Lunch - 1st Half: Thursday**

1. SA - Physics #1 - Topics

**\*scientific notation, rounding digit\***

2. Review - SA - Physics #1

3. Roller Coasters

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## SA - Physics #1 - Topics

1. definitions: physics, linear motion, physical quantity, significant digits, certainty, exact value, defined value, precision, rounding digit, defining equation
2. SI System - International System of Units
  - know the SI base units for length, time and mass
  - be able to identify a derived unit
3. certainty - identify certain and uncertain digits in a measurement
  - determine the certainty of a measurement by stating its number of significant digits
4. SDs and operation rules - Certainty Rule
  - > multiply and divide
  - > total # of significant digits- Precision Rule
  - > add and subtract
  - > # of digits after the decimal

### **\* scientific notation\***

5. rearrange an equation for a specified variable
6. perform metric conversions using conversion factors