

Weekly Sheet for PHY\$IC\$ 1

Michael Dixon (MD²) mdixon@parksideca.org

Physics 1

Week #T2-9 More Momentum With Some Bio thrown in

February School Wide Memory Verse:

Romans 5:1-5 New International Version (NIV)

¹ Therefore, since we have been justified through faith, we have peace with God through our Lord Jesus Christ, ² through whom we have gained access by faith into this grace in which we now stand. And we boast in the hope of the glory of God. ³ Not only so, but we also glory in our sufferings, because we know that suffering produces perseverance; ⁴ perseverance, character; and character, hope. ⁵ And hope does not put us to shame, because God's love has been poured out into our hearts through the Holy Spirit, who has been given to us.

Homework/Classwork: (All homework is due the next class day unless indicated.)

	<u>In Class</u>	<u>Homework Due in this Class</u>
<u>This Monday</u>	<u>Momentum, Thermo Practice</u>	#32
<u>Tuesday</u>		#33 Finish Punch-line Packet
<u>Wednesday</u> Not HS1	<u>Lab/Demo TBA</u> <u>Practice for Test</u>	#34
<u>Thursday</u> HS1 Double	<u>Test Thermo</u>	#34(HS1) #35
<u>Friday</u>	<u>No Class on Fridays</u>	<u>NA</u>
<u>Next Week</u>		#36

Tests/Due Dates: Momentum Quiz Thursday

Topics/Content/Skills: Collisions, Momentum, Kinetic Energy, Begin Life Science

Skills:

Review- Momentum:

- Remember Temperature is the average kinetic energy of the molecules of a what makes up something- like the air, a tree, an ice cube, etc. When you get to absolute zero you get _____
- Kinetic Energy = $\frac{1}{2} \text{ Mass } \times (\text{velocity})^2$ A scalar (just a quantity with a unit); Momentum (p)= **Mass x Velocity** A vector (a _____ with a _____)
- Elastic (bounce) and Inelastic (Stick) Collisions
- Recoil (Collisions in reverse)
 - How Rockets work
 - How Shotguns work


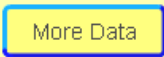


Life Science Month- February- Have a Heart... (an advanced Organizer)

- What is Biology? _____
- What are Genetics? _____

- Deoxyribonucleic acid is what? _____
 - Why is it important? _____
 - What are some Interesting Issues we face today regarding Life Science? _____
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- What are some Controversies? _____
 - The 19th Century- The Century of Thermodynamics- The steam engine, etc.
 - The 20th Century was the Century of Atomic Physics- The Nuclear age, and semi-Conductor- The microchip
 - The 21st Century is looking to be the Century of Biology and genetics- Cloning, Stem Cells, The human genome, etc.
 - People to Know: Dolly, Mendel, Punnet (squares), Darwin (We will discuss in class) If Parents want to know what we teach about Evolution... At this point we do not discuss this in detail.
 - Things to Know, Genetic Probability, Weighted probability
 - Parts of a Cell.

Projects-Science Olympiad Topic Challenge.

1. Inelastic Collisions Go to PHET site and look up the collision Sim. 1-D

Perfectly *Inelastic* Collisions:   To begin a collision:  To restart a collision: 

- Take some time to familiarize yourself with 1D **inelastic** collisions. Play. Investigate. Learn.
- Contrast an inelastic collision with an elastic collision. _____
- Complete the below table without the simulation and **check your work in the simulation**.

m_1	m_2	v_1	v_2	p_{total}	v_{12}'
1. kg	1. kg	+1.50 m/s	0 m/s		
2.40 kg	4.80 kg	+1.30 m/s		7.00 kgm/s	
1.50 kg	5.50 kg	+3.20 m/s	+0.800 m/s		
2.50 kg		1.20 m/s			0.0 m/s