



Weekly Sheet for PHYSICS 2
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Physics 2

Week #T2-10 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, Optics</u> | #36 Punch-line Packet, Momentum Practice etc. |
| <u>Tuesday</u> | Update on Physics Projects/ Rubric | #37 Optics Practice |
| <u>Wednesday</u> Not HS1 | <u>Practice for Quiz</u> | #38 |
| <u>Thursday</u> HS1 Double | <u>Quiz Momentum/ Bio Basics</u> | #38(HS1) #39 |
| <u>Friday</u> | <u>No Class on Fridays</u> | <u>NA</u> |
| <u>Next Week</u> | | #40 Some Punch line practice |

Tests/Due Dates: Momentum Quiz Thursday

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

Skills:

Review- **Momentum(mv=P), Kinetic Energy(KE=1/2mv²), Potential Energy(PE=MGH):**

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

- Things to Know, Magnification d_i/d_o , Snell's law $n_1 \sin \theta_1 = n_2 \sin \theta_2$, Polarization, Refraction, Reflection, Diffraction, virtual, real images, focal length, Concave and convex lenses.

Projects-Science Olympiad Topic Challenge.

Name: _____

#37 Optics Practice

Punnett Square Practice:

1. **Read this:** <http://www.hobart.k12.in.us/jkousen/Biology/psqprac.htm> (Or just look up Punnett square practice and click on the glencoe link (it should be 3rd)).
2. **Try this:** http://glencoe.mcgraw-hill.com/sites/0078778066/student_view0/chapter5/math_practice.html (Or just look up Punnett square practice and click on the glencoe link (it should be 2nd)).
3. **Punnett Square Practice Sheet Pages 1 & 2 #'s 1,2,&3**

Name: _____

#38 More Punnett Square Practice, With Some Momentum and Energy Added in

Punnett Square Practice:

1. ***What are the 2 types of collisions?*** _____
2. ***Mechanical Energy is conserved in which type of collision?*** _____
3. **Try this:** What is the kinetic energy of a 3 kg ball moving at 10 m/s? _____
4. **What is the: *Potential energy of a 3kg ball on the edge of a 10m cliff (with respect to the bottom of the cliff)?*** _____
5. **In a recoil problem the momentum in one direction is _____ the momentum in the other.**
6. ***Momentum is a _____ because it has _____ and Direction.***
7. ***Energy is _____ because it cannot have a direction.***
8. ***A boy named J is on the ice holding a bowling ball. He weighs 80 lbs. and the ball weighs 20 lbs. He pushes the ball away with a speed of 10 mi/hr. How fast does he go in the other direction just after he pushes the ball away.***
 - a. ***Draw a picture of before and after***
 - b. ***Solve for J's Speed:*** _____

4. **Punnett Square Practice Sheet Page 3 #'s 4&5**

#39 Practice for Quiz

Punnett Square Practice:

1. What are the 2 types of Mechanical Energy we have talked about so far and what are their equations?
2. Is energy always conserved?
3. Try this: What is the kinetic energy of a 5 kg ball moving at 4m/s? _____
4. What is the: Potential energy of a 5kg ball on the edge of a 20m cliff (with respect to the bottom of the cliff)?
5. In a problem where the momentum before does not equal the momentum after, then there is a net _____, which means a force had to act on the object for some length of time.
6. How to airbags work? They make the _____ last longer so the _____ on the object is less.
7. What is a vector?
8. A girl named J is on the ice holding a bowling ball. She weighs 90 lbs. and the ball weighs 10 lbs. She pushes the ball away with a speed of 20 mi/hr. How fast does she go in the other direction just after she pushes the ball away.
 - c. Draw a picture of before and after
 - d. Solve for J's Speed: _____

5. Punnett Square Practice

In pigs, curly tails are dominant over straight tails. If a curly tailed **Cc** pig is crossed with a straight taile, **cc** pig, what are the possible genotypes and phenotypes of their offspring and the percent chance of each?

Fill in the tables:

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|--|--|
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| | |

| Genotype | Phenotype | Chance |
|----------|-----------|--------|
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