Thank you!

Delzer's Dynamite Designs

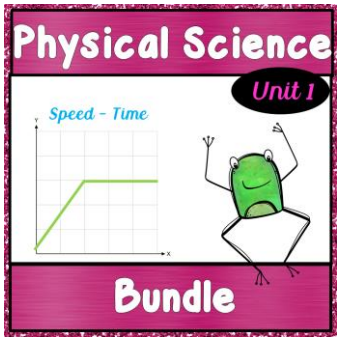
Thank you so much for buying my Energy, Work, and Power Physical Science (IPC) Warm-ups/Exit Tickets. You will find that all my work is always aligned to objectives and those objectives correlate to state standards as best as I can.

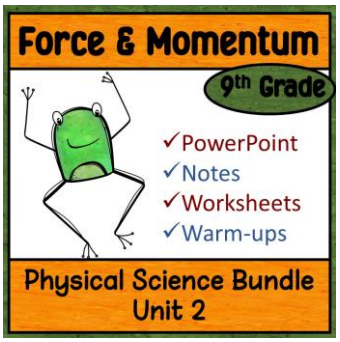
I hope this listing helps you and your students! ☺

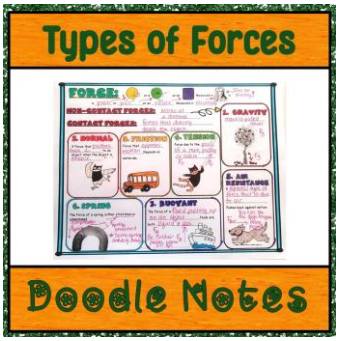
Please check out my other resources at
https://www.teacherspayteachers.com/Store/Delzers-Dynamite-Designs

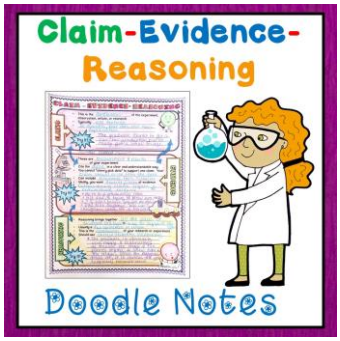
If you have any questions, feel free to email me at:
bcsfamily@gmail.com

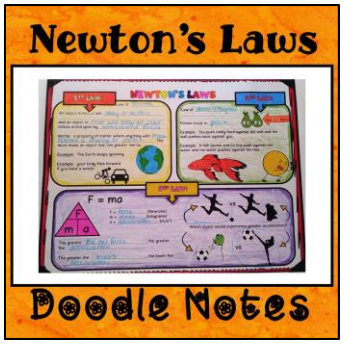
You May Also Like:











Thank You for Respecting My Work!

Delzer's Dynamite Designs

You May	You May NOT
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Store on your computer	Upload to file sharing sites
Upload to a student only, password protected website	Upload to the internet unprotected
Direct your colleagues to my site to purchase their own license	Sell, trade, give, or claim as your own work.

CLIP ART CREDITS:

Just Us Teachers

Work, Energy, and Power Unit
Objectives

Estimated Time: 10 days

1) I can identify 9 types of energy.
2) I can describe and calculate potential energy.
3) I can describe and calculate kinetic energy.
4) I can describe the conservation of energy and I can describe energy transfers between any of the 9 energy types.
5) I can describe and calculate the transformation of potential and kinetic energy (total mechanical energy) in a frictionless system.
6) I can describe and calculate work.
7) I can describe and calculate power.

NGSS

HS-PS3-2 Energy Develop and use models to illustrate that energy at the macroscopic scale can be accounted for as a combination of energy associated with the motions of particles (objects) and energy associated with the relative positions of particles (objects).

Texas TEKS

(5) Science concepts. The student recognizes multiple forms of energy and knows the impact of energy transfer and energy conservation in everyday life. The student is expected to:
A) recognize and demonstrate that objects and substances in motion have kinetic energy such as vibration of atoms, water flowing down a stream moving pebbles, and bowling balls knocking down pins;
(B) recognize and demonstrate common forms of potential energy, including gravitational, elastic, and chemical, such as a ball on an inclined plane, springs, and batteries;
(D) investigate the law of conservation of energy;

Virginia SOL

PS.6 The student will investigate and understand forms of energy and how energy is transferred and transformed. Key concepts include potential and kinetic energy; and mechanical, chemical, electrical, thermal, radiant, and nuclear energy.
PS.5 The student will investigate and understand changes in matter and the relationship of these changes to the Law of Conservation of Matter and Energy. Key concepts include physical changes; chemical changes; and nuclear reactions.

Physical Science Unit 3
Work and Power

Warm-ups & Exit Tickets

Name: _____ Date: _____

Class Period: _____

Energy Introduction

1) Define energy in your own words. How do you know something has energy? How do you know if something does not have energy?

2) Give 3 examples of something that has energy. Write a one sentence explanation for each item (write three complete sentences total)

Name: _____ Date: _____

Class Period: _____

Energy Introduction

1) Define energy in your own words. How do you know something has energy? How do you know if something does not have energy?

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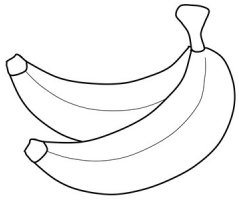
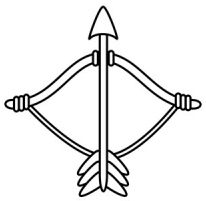
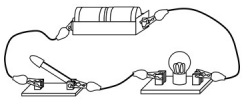
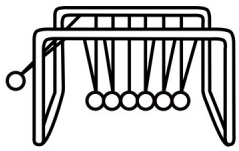
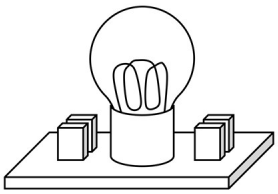
Name: _____ Date: _____

Class Period: _____

Types of Energy

1) What is the definition of energy? What unit is energy measured in?

2) What type of energy is in the following items?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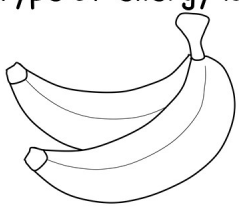
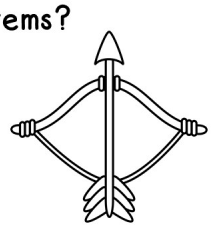
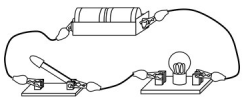
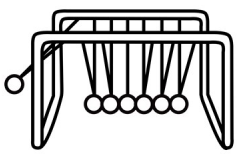
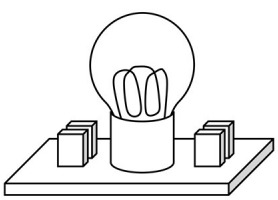


Name: _____ Date: _____

Class Period: _____

Potential Energy # 1

$PE = mgh$

$g = 9.8\ m/s^2$

1) A 7.5 kilogram sloth hangs from a tree branch that is 4.7 meters above the ground. What is the potential energy of this sloth?

Define Variables	Write equation and show work	Answer w/ units
PE = m = g = h =		

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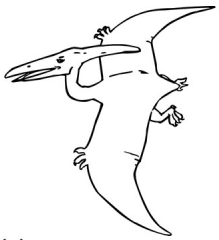

Potential Energy # 2

$PE = mgh$

$g = 9.8\ m/s^2$

1) You are sitting in science class and gazing out the window. Suddenly, you see a Pteranodon fly by! What is the mass of the adult Pteranodon if it has 1,200 Joules of potential energy, and is flying at 8.5 meters up in the air?

Define Variables	Write equation and show work	Answer w/ units
PE = m = g = h =		

Name: _____ Date: _____

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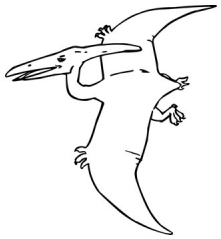

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Kinetic Energy # 1

$KE = \frac{1}{2} mv^2$

1) A zombie kid suddenly runs past your classroom! What is its kinetic energy if it has a mass of 65 kg and a velocity of 3.4 m/s?

Define Variables	Write equation and show work	Answer w/ units
KE = m = v =		

Name: _____ Date: _____

Class Period: _____

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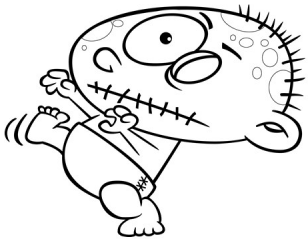


Kinetic Energy # 2

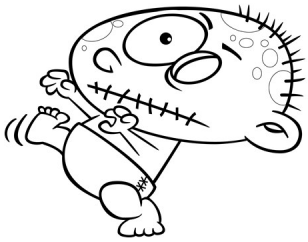
$KE = \frac{1}{2} mv^2$

1) There is a zombie toddler on the loose. Trust me, zombies are bad enough on their own, but a toddler zombie is off the charts! What is the zombie toddler's velocity if it has a mass of 14.8 kg and 346 Joules of energy?

Define Variables	Write equation and show work	Answer w/ units
KE = m = v =		

Name: _____ Date: _____

Class Period: _____



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Define Variables	Write equation and show work	Answer w/ units
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Class Period: _____

Conservation of Energy

1) What is the Law of Conservation of Energy?

Match the following types of energy: Some answers may be used more than once.

_____ 2) A ball rolling on the floor.
_____ 3) Supplies energy to your tv.
_____ 4) Energy from your hot oven.
_____ 5) Energy stored in a cheeseburger.
_____ 6) Energy created in the sun.
_____ 7) A fire's light
_____ 8) A fire's heat
_____ 9) Energy in a battery
_____ 10) Energy in uranium used in a power plant.

a) Thermal
b) Electrical
c) Mechanical
d) Radiant
e) Chemical
f) Nuclear

Name: _____ Date: _____

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a) Thermal
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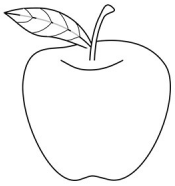
Name: _____ Date: _____

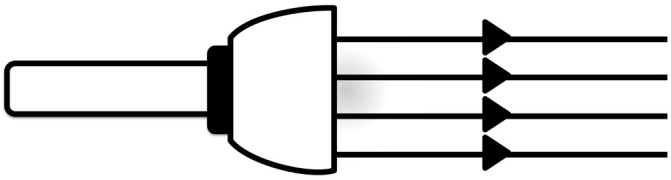
Class Period: _____

Energy Conversions

1) A human eats an apple to gain energy, but where does the energy from the apple come from?



2) What is the energy conversion in a flashlight?



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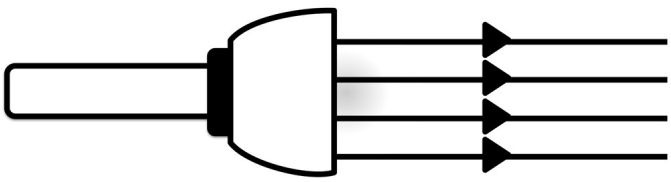


Name: _____ Date: _____

Class Period: _____

Mechanical Energy # 1

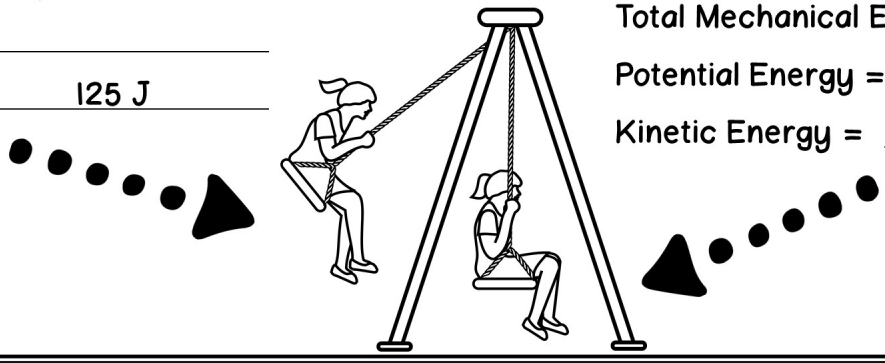
1) What is the definition of mechanical energy?

2) The total mechanical energy of the girl swinging is 375 Joules.

Total Mechanical Energy = _____

Potential Energy = _____

Kinetic Energy = 125 J



Total Mechanical Energy = _____

Potential Energy = 0 J

Kinetic Energy = _____

Name: _____ Date: _____

Class Period: _____

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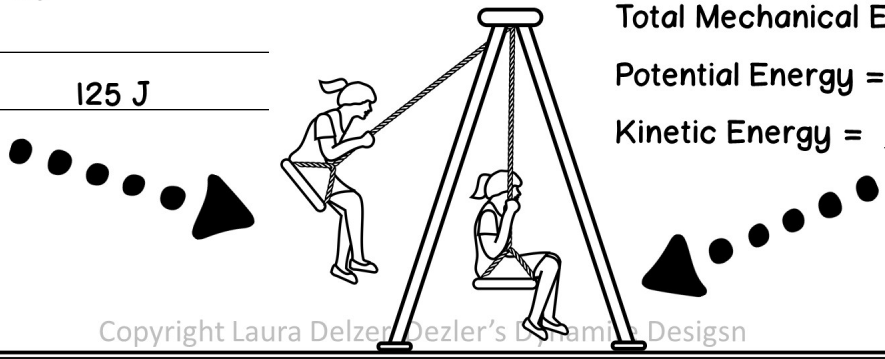


Total Mechanical Energy = _____

Potential Energy = 0 J

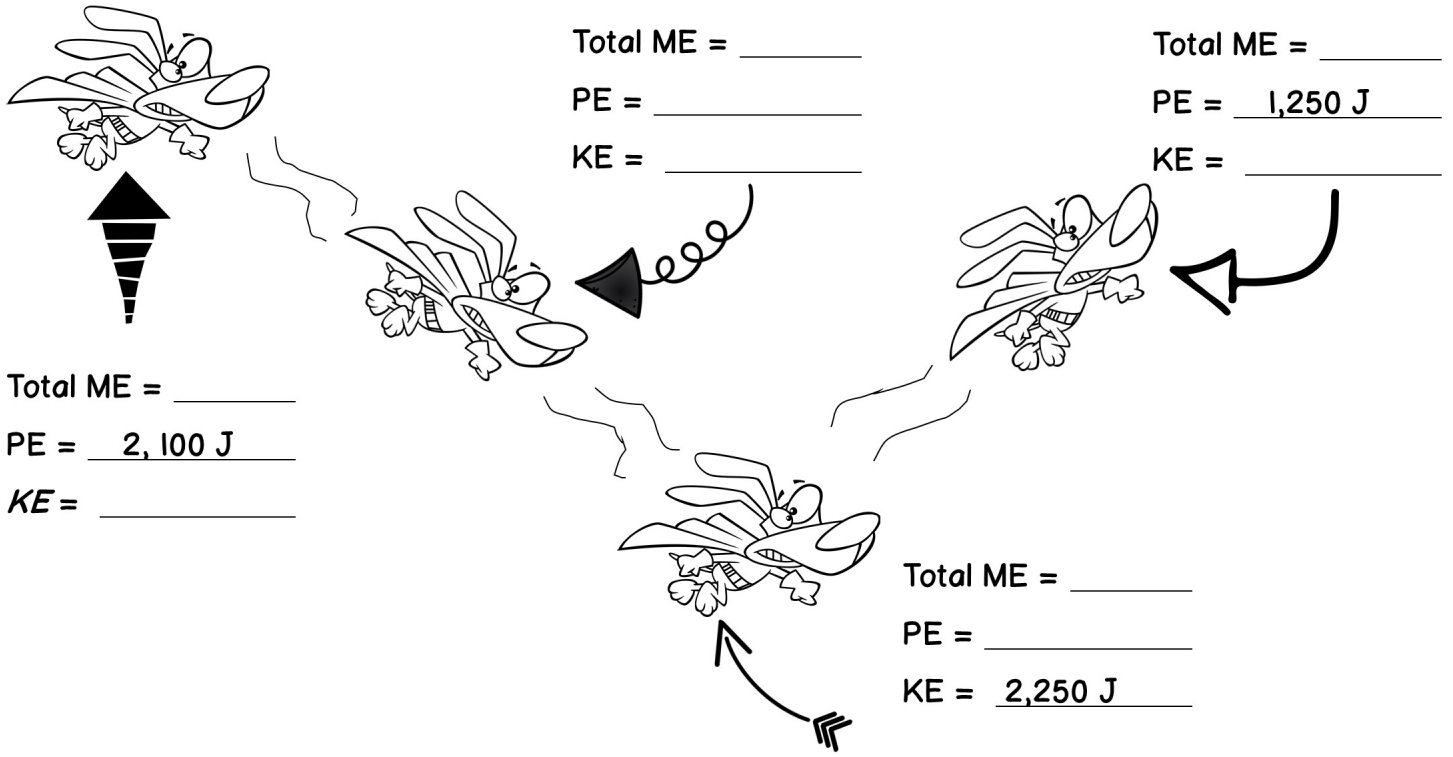
Kinetic Energy = _____

Name: _____ Date: _____

Class Period: _____

Mechanical Energy # 2

1) Super Dog! ™ flies in the pattern shown. The total mechanical energy is 2,500 Joules.



Total ME = _____

PE = _____

KE = _____

Total ME = _____

PE = 1,250 J

KE = _____

Total ME = _____

PE = 2, 100 J

KE = _____

Total ME = _____

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Name: _____ Date: _____

Class Period: _____

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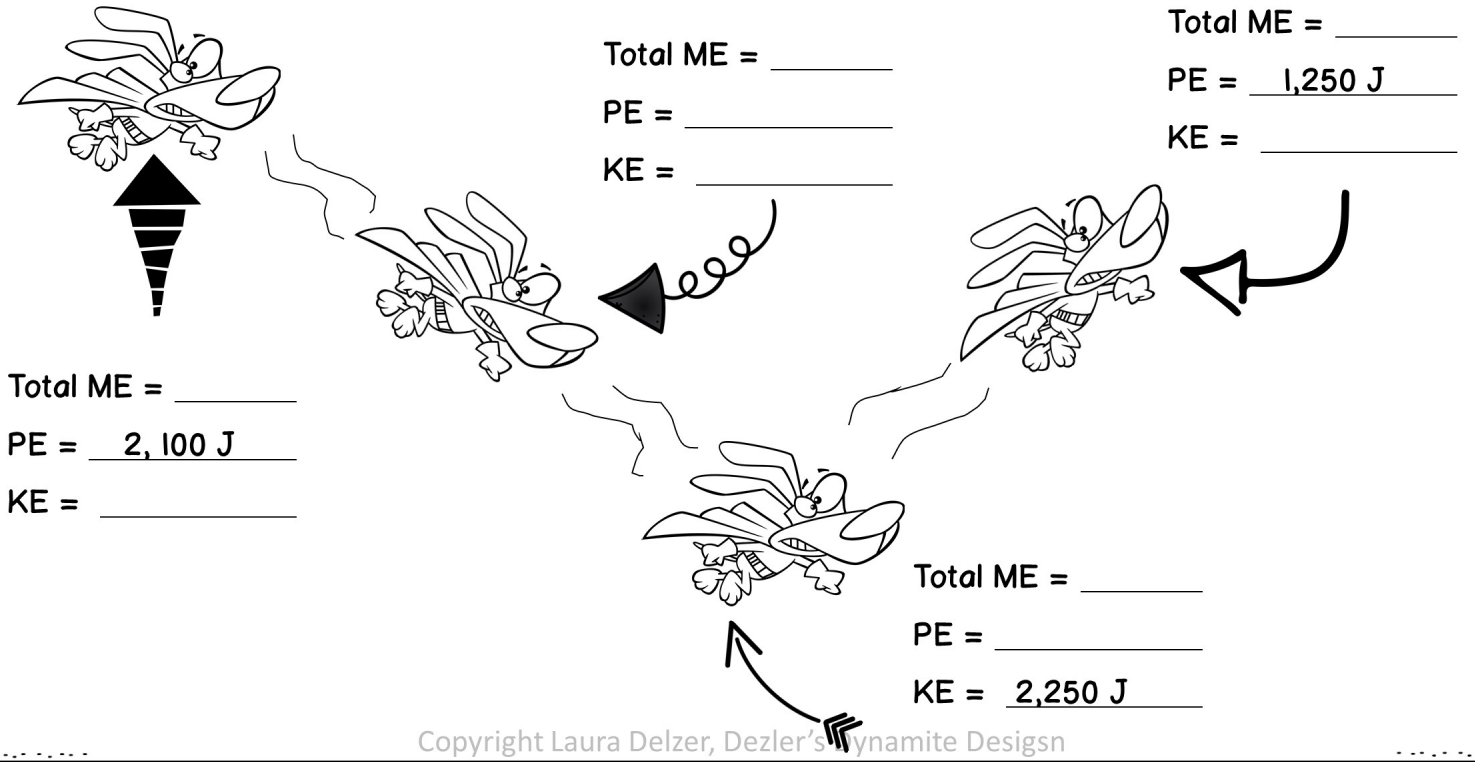

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PE = _____

KE = _____

Total ME = _____

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KE = _____

Total ME = _____

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KE = _____

Total ME = _____

PE = _____

KE = 2,250 J

Name: _____ Date: _____

Class Period: _____

Potential Energy and Kinetic Energy

1) Identify the following as either potential energy or kinetic energy.

_____ A) A person running at 3.4 miles per hour.

_____ B) A person resting at the top of a hill.

_____ C) A zombie standing on the roof of a house.

_____ D) The zombie tripping and rolling down the roof, toward the ground.

2) Which one out of each pair has <u>more</u> kinetic energy? (circle one answer in each of the following pairs)

A) A 75 kg running zombie or a 65 kg running zombie (same velocity)

B) A car at rest or a car rolling down a hill

C) A "heavy" zebra or a "light" zebra (same velocity)

D) A bullet traveling 250 m/s or a bullet traveling 300 m/s

3) Which one out of each pair has <u>less</u> potential energy? (circle one answer in each of the following pairs)

A) A 75 kg zombie on a house or a 65 kg zombie on a house

B) A car at the top of the hill or a car rolling down the hill

C) A plane with passengers or an empty plane (same model at same height)

D) A Pteranodon flying at 200 meters high or at 100 meters high

Name: _____ Date: _____

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Name: _____ Date: _____

Class Period: _____

Work # 1

1) Are you doing work in the following examples?

_____ A) You stand still, waiting for the bus to pick you up for school.

_____ B) You run 34 meters to catch the bus before it leaves for school.

_____ C) You carry your books while you run for the bus. Are you doing work on the books?

_____ D) You push really hard on the door to the bus, but it doesn't budge.

_____ E) You throw your backpack to your friend.

2) What is the formula for work? What are each of the units?

Name: _____ Date: _____

Class Period: _____

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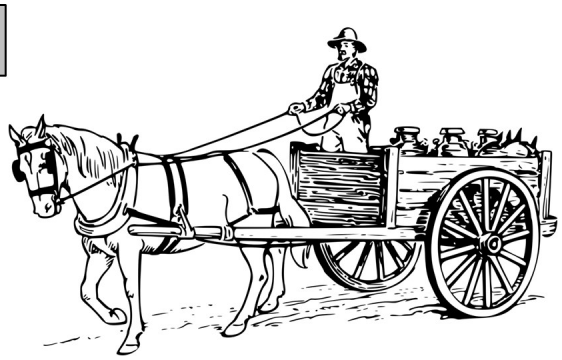
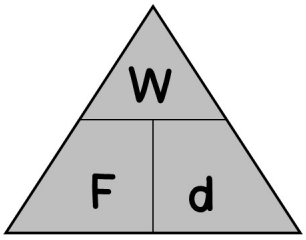
Name: _____ Date: _____

Class Period: _____

Work # 2

Work = Fd





1) A horse pulls a wagon with a force of 6,500 Newtons over a distance of 18,500 meters. What is the work the horse exerts on the wagon?

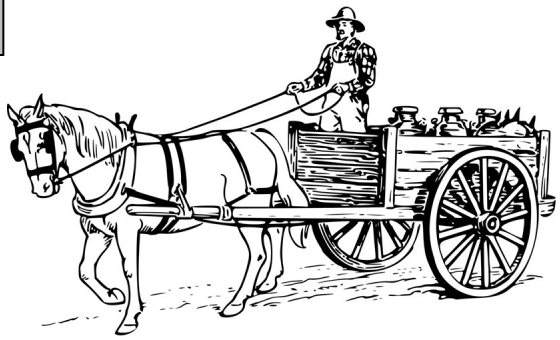
Define Variables	Write equation and show work	Answer w/ units
W = F = d =		

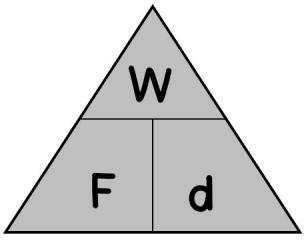
Name: _____ Date: _____

Class Period: _____

Work # 2

Work = Fd





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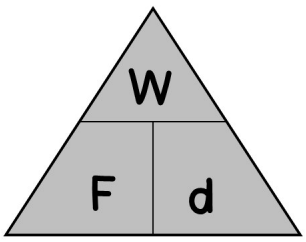
Name: _____ Date: _____

Class Period: _____

Work # 3

Work = Fd



1) A car performs 757,000 Joules of work with a force of 12,000 Newtons. How far did the car move?

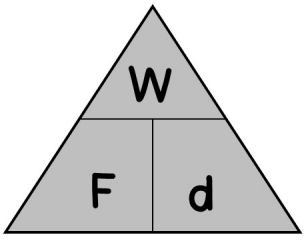
Define Variables	Write equation and show work	Answer w/ units
W = F = d =		

Name: _____ Date: _____

Class Period: _____

Work # 3

Work = Fd



1) A car performs 757,000 Joules of work with a force of 12,000 Newtons. How far did the car move?

Define Variables	Write equation and show work	Answer w/ units
W = F = d =		

Name: _____ Date: _____

Class Period: _____

Power # 1

1) What is the formula for power? What are the units for each of the variables?

2) Circle <u>one</u> out of each pair. Which one has <u>more</u> power?

A) A 60 second elevator ride	or	A 120 second elevator ride	(same # stories)
B) Walking up the stairs	or	Running up stairs	(1 flight of stairs)
C) Doing 150 Joules of work	or	Doing 500 Joules of work	(in same time)
D) 75 watts	or	30 watts	
E) A kid thinking really hard	or	a kid walking	

Name: _____ Date: _____

Class Period: _____

Power # 1

1) What is the formula for power? What are the units for each of the variables?

2) Circle <u>one</u> out of each pair. Which one has <u>more</u> power?

A) A 60 second elevator ride	or	A 120 second elevator ride	(same # stories)
B) Walking up the stairs	or	Running up stairs	(1 flight of stairs)
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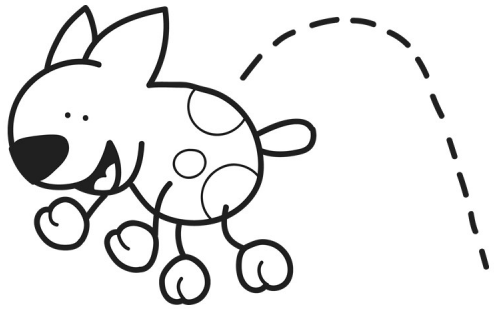
D) 75 watts	or	30 watts	
E) A kid thinking really hard	or	a kid walking	

Name: _____ Date: _____

Class Period: _____



Power # 2

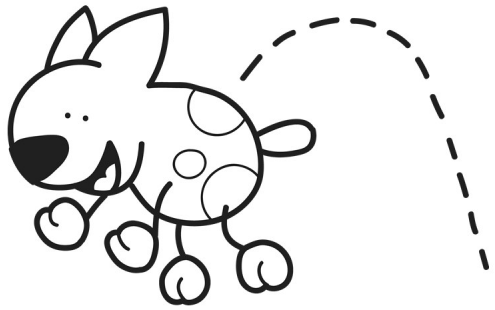
$$P = \frac{W}{t}$$

1) You do 150 Joules of work by carrying your dog's bag of food into your apartment on the 3rd floor. It took you 28 seconds to climb the stairs. What power did you exert?

Define Variables	Write equation and show work	Answer w/ units
P = W = t =		

Name: _____ Date: _____

Class Period: _____



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Define Variables	Write equation and show work	Answer w/ units
P = W = t =		

Name: _____ Date: _____

Class Period: _____

Power # 3

$$P = \frac{Fd}{t}$$

1) Your dog loves to play soccer! She goes running by you, kicking the soccer ball as she goes. (sounds like she needs her own tv show!) If she exerts 75 Newtons of force for 12 seconds, and travels 21 meters, what power did she exert?

Define Variables	Write equation and show work	Answer w/ units
P = W = F= d = t =		

Name: _____ Date: _____

Class Period: _____

Power # 3

$$P = \frac{Fd}{t}$$

1) Your dog loves to play soccer! She goes running by you, kicking the soccer ball as she goes. (sounds like she needs her own tv show!) If she exerts 75 Newtons of force for 12 seconds, and travels 21 meters, what power did she exert?

Define Variables	Write equation and show work	Answer w/ units
P = W = F= d = t =		

Physical Science Unit 3
Work and Power

Answer Key

Name: _____ Date: _____

Class Period: _____

Energy Introduction

1) Define energy in your own words. How do you know something has energy? How do you know if something does not have energy?

Answers vary.

They might write something about motion, light, etc.

2) Give 3 examples of something that has energy. Write a one sentence explanation for each item (write three complete sentences total)

Answers vary. I definitely push for complete sentences and complete thought expression.

Name: _____ Date: _____

Class Period: _____

Energy Introduction

1) Define energy in your own words. How do you know something has energy? How do you know if something does not have energy?

2) Give 3 examples of something that has energy. Write a one sentence explanation for each item (write three complete sentences total)

Name: _____ Date: _____

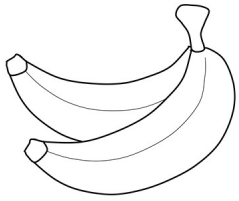
Class Period: _____

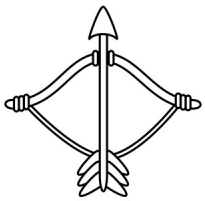
Types of Energy

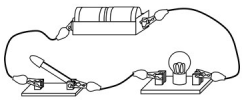
1) What is the definition of energy? What unit is energy measured in?

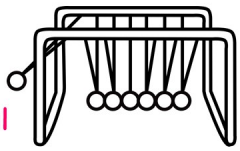
Energy is the ability to cause motion and create forces.
It is measured in Joules

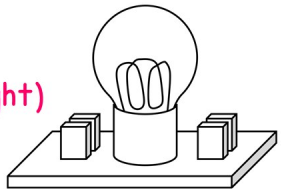
2) What type of energy is in the following items?

Chemical 

Elastic 

Electrical 

mechanical 

Radiant (light) 

Sound 

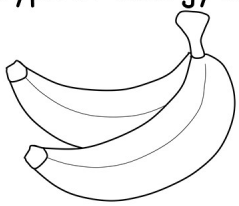
Name: _____ Date: _____

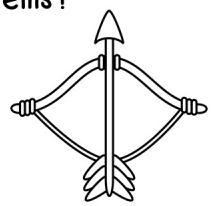
Class Period: _____

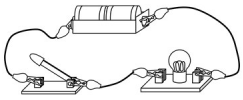
Types of Energy

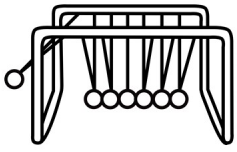
1) What is the definition of energy? What unit is energy measured in?

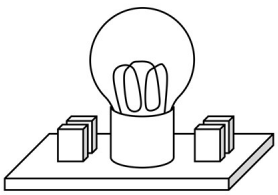
2) What type of energy is in the following items?











Name: _____ Date: _____

Class Period: _____

Potential Energy # 1

$PE = mgh$

$g = 9.8\ m/s^2$

1) A 7.5 kilogram sloth hangs from a tree branch that is 4.7 meters above the ground. What is the potential energy of this sloth?

Define Variables	Write equation and show work	Answer w/ units
PE = ? m = 7.5 kg g = 9.8 m/s² h = 4.7 m	PE = mgh PE = (7.5)(9.8)(4.7) PE = 345.45	PE = 350 J

Name: _____ Date: _____

Class Period: _____

Potential Energy # 1

$PE = mgh$

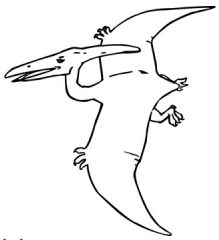
$g = 9.8\ m/s^2$

1) A 7.5 kilogram sloth hangs from a tree branch that is 4.7 meters above the ground. What is the potential energy of this sloth?

Define Variables	Write equation and show work	Answer w/ units
PE = m = g = h =		

Name: _____ Date: _____

Class Period: _____



Potential Energy # 2

$PE = mgh$

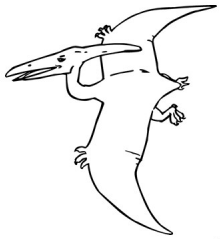
$g = 9.8\ m/s^2$

1) You are sitting in science class and gazing out the window. Suddenly, you see a Pteranodon fly by! What is the mass of the adult Pteranodon if it has 1,200 Joules of potential energy, and is flying at 8.5 meters up in the air?

Define Variables	Write equation and show work	Answer w/ units
PE = 1,200 J m = ? g = 9.8 m/s² h = 8.5 m	PE = mgh 1,200 = (m)(9.8)(8.5) m = 14.4057623	m = 14 kg

Name: _____ Date: _____

Class Period: _____



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Define Variables	Write equation and show work	Answer w/ units
PE = m = g = h =		

Name: _____ Date: _____

Class Period: _____

Kinetic Energy # 1

$KE = \frac{1}{2} mv^2$

1) A zombie kid suddenly runs past your classroom! What is its kinetic energy if it has a mass of 65 kg and a velocity of 3.4 m/s?

Define Variables	Write equation and show work	Answer w/ units
KE = ? m = 65 kg v = 3.4 m/s	$KE = \frac{1}{2} mv^2$ $KE = \frac{1}{2} (65) (3.4^2)$ KE = 375.7	KE = 380 J

Name: _____ Date: _____

Class Period: _____

Kinetic Energy # 1

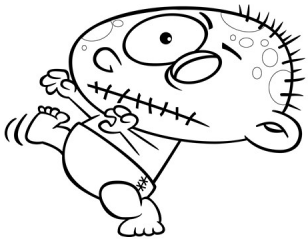
$KE = \frac{1}{2} mv^2$

1) A zombie kid suddenly runs past your classroom! What is its kinetic energy if it has a mass of 65 kg and a velocity of 3.4 m/s?

Define Variables	Write equation and show work	Answer w/ units
KE = m = v =		

Name: _____ Date: _____

Class Period: _____



Kinetic Energy # 2

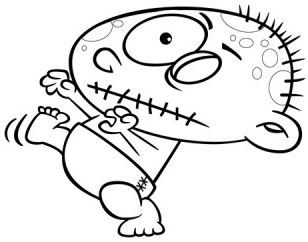
$KE = \frac{1}{2} mv^2$

1) There is a zombie toddler on the loose. Trust me, zombies are bad enough on their own, but a toddler zombie is off the charts! What is the zombie toddler's velocity if it has a mass of 14.8 kg and 346 Joules of energy?

Define Variables	Write equation and show work	Answer w/ units
KE = 346 J m = 14.8 kg v = ?	$KE = \frac{1}{2} mv^2$ $346 = \frac{1}{2} (14.8) (v^2)$ KE = 6.83789	KE = 6.84 J

Name: _____ Date: _____

Class Period: _____



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Define Variables	Write equation and show work	Answer w/ units
KE = m = v =		

Name: _____ Date: _____

Class Period: _____

Conservation of Energy

1) What is the Law of Conservation of Energy?

Energy is neither created nor destroyed. It is simply converted from one form to another.

Match the following types of energy: Some answers may be used more than once.

C 2) A ball rolling on the floor.
B 3) Supplies energy to your tv.
A 4) Energy from your hot oven.
E 5) Energy stored in a cheeseburger.
F 6) Energy created in the sun.
D 7) A fire's light
A 8) A fire's heat
E 9) Energy in a battery
F 10) Energy in uranium used in a power plant.

a) Thermal
b) Electrical
c) Mechanical
d) Radiant
e) Chemical
f) Nuclear

Name: _____ Date: _____

Class Period: _____

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_____ 9) Energy in a battery
_____ 10) Energy in uranium used in a power plant.

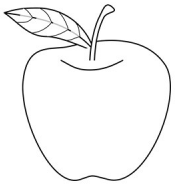
a) Thermal
b) Electrical
c) Mechanical
d) Radiant
e) Chemical
f) Nuclear

Name: _____ Date: _____

Class Period: _____

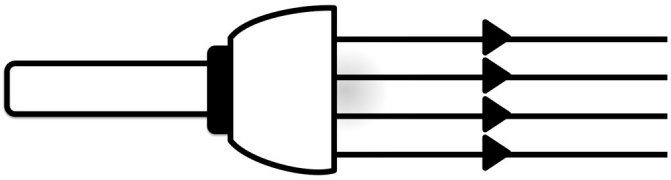
Energy Conversions

1) A human eats an apple to gain energy, but where does the energy from the apple come from?



An apple tree captures radiant energy (light energy) and converts it in to chemical energy.

2) What is the energy conversion in a flashlight?



A flashlight converts chemical energy from a battery into radiant (light) energy.

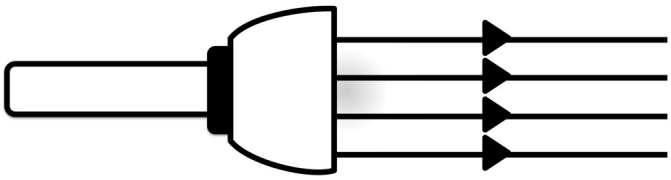
Name: _____ Date: _____

Class Period: _____

Energy Conversions

1) A human eats an apple to gain energy, but where does the energy from the apple come from?

2) What is the energy conversion in a flashlight?



Name: _____ Date: _____

Class Period: _____

Mechanical Energy # 1

1) What is the definition of mechanical energy?

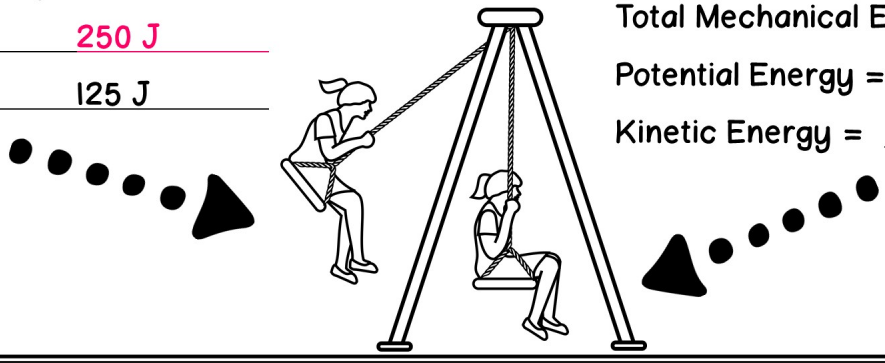
Mechanical energy is both kinetic and potential energy of a particular object. It is both energy of motion and energy of position.

2) The total mechanical energy of the girl swinging is 375 Joules.

Total Mechanical Energy = 375 J

Potential Energy = 250 J

Kinetic Energy = 125 J



Total Mechanical Energy = 375 J

Potential Energy = 0 J

Kinetic Energy = 375 J

Name: _____ Date: _____

Class Period: _____

Mechanical Energy # 1

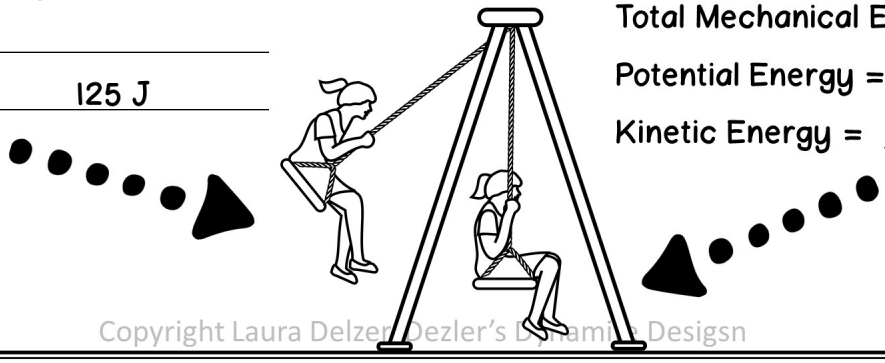
1) What is the definition of mechanical energy?

2) The total mechanical energy of the girl swinging is 375 Joules.

Total Mechanical Energy = _____

Potential Energy = _____

Kinetic Energy = 125 J



Total Mechanical Energy = _____

Potential Energy = 0 J

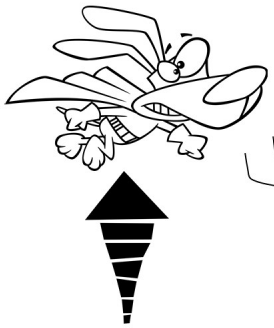
Kinetic Energy = _____

Name: _____ Date: _____

Class Period: _____

Mechanical Energy # 2

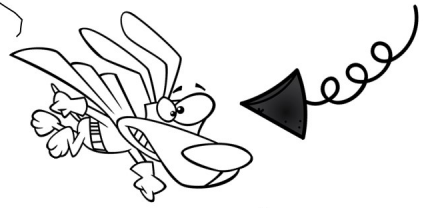
1) Super Dog! ™ flies in the pattern shown. The total mechanical energy is 2,500 Joules.



Total ME = 2,500 J

PE = 1,250 J

KE = 1,250 J



Total ME = 2,500 J

PE = 1,250 J

KE = 1,250 J

Total ME = 2,500 J

PE = 2,100 J

KE = 400 J

Total ME = 2,500 J

PE = 250 J

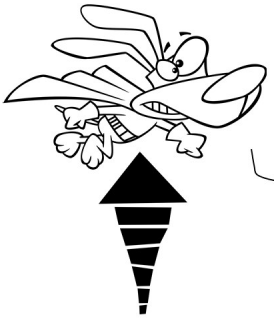
KE = 2,250 J

Name: _____ Date: _____

Class Period: _____

Mechanical Energy # 2

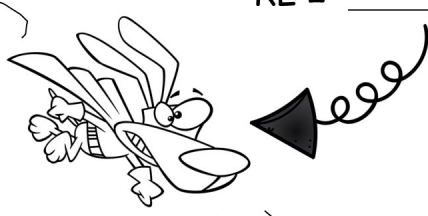
1) Super Dog! ™ flies in the pattern shown. The total mechanical energy is 2,500 Joules.



Total ME = _____

PE = _____

KE = _____



Total ME = _____

PE = 1,250 J

KE = _____

Total ME = _____

PE = 2,100 J

KE = _____

Total ME = _____

PE = _____

KE = 2,250 J

Name: _____ Date: _____

Class Period: _____

Potential Energy and Kinetic Energy

1) Identify the following as either potential energy or kinetic energy.

Kinetic Energy A) A person running at 3.4 miles per hour.
Potential B) A person resting at the top of a hill.
Potential C) A zombie standing on the roof of a house.
Kinetic energy D) The zombie tripping and rolling down the roof, toward the ground.

2) Which one out of each pair has more kinetic energy? (circle one answer in each of the following pairs)

A) A 75 kg running zombie or a 65 kg running zombie (same velocity)
B) A car at rest or a car rolling down a hill
C) A "heavy" zebra or a "light" zebra (same velocity)
D) A bullet traveling 250 m/s or a bullet traveling 300 m/s

3) Which one out of each pair has less potential energy? (circle one answer in each of the following pairs)

A) A 75 kg zombie on a house or a 65 kg zombie on a house
B) A car at the top of the hill or a car rolling down the hill
C) A plane with passengers or an empty plane (same model at same height)
D) A Pteranodon flying at 200 meters high or at 100 meters high

Name: _____ Date: _____

Class Period: _____

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Name: _____ Date: _____

Class Period: _____

Work # 1

1) Are you doing work in the following examples?

No work A) You stand still, waiting for the bus to pick you up for school.

Yes B) You run 34 meters to catch the bus before it leaves for school.

No Work C) You carry your books while you run for the bus. Are you doing work on the books?

No work D) You push really hard on the door to the bus, but it doesn't budge.

Yes E) You throw your backpack to your friend.

2) What is the formula for work? What are each of the units?

Work = Fd

W = work = Joules
F = force = Newtons
d = distance = meters

Name: _____ Date: _____

Class Period: _____

Work # 1

1) Are you doing work in the following examples?

_____ A) You stand still, waiting for the bus to pick you up for school.

_____ B) You run 34 meters to catch the bus before it leaves for school.

_____ C) You carry your books while you run for the bus. Are you doing work on the books?

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_____ E) You throw your backpack to your friend.

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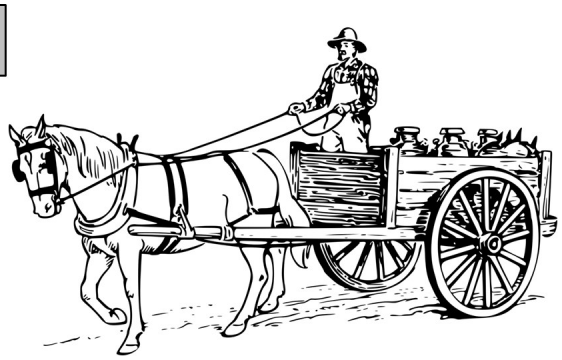
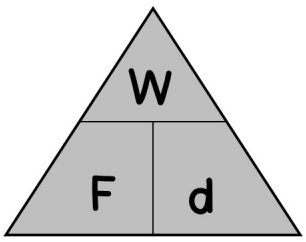
Name: _____ Date: _____

Class Period: _____

Work # 2

Work = Fd





1) A horse pulls a wagon with a force of 6,500 Newtons over a distance of 18,500 meters. What is the work the horse exerts on the wagon?

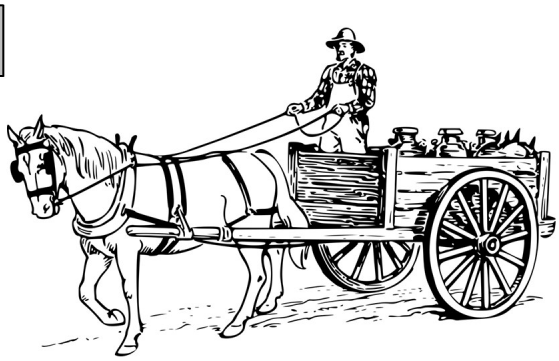
Define Variables	Write equation and show work	Answer w/ units
W = ? F = 6,500 N d = 18,500 n	W = Fd W = (6,500) 18,500 W = 120,250,000 J	W = 120,000,000 J

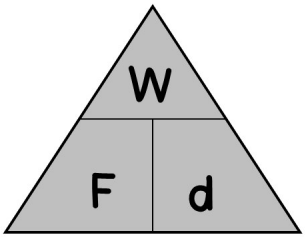
Name: _____ Date: _____

Class Period: _____

Work # 2

Work = Fd





1) A horse pulls a wagon with a force of 6,500 Newtons over a distance of 18,500 meters. What is the work the horse exerts on the wagon?

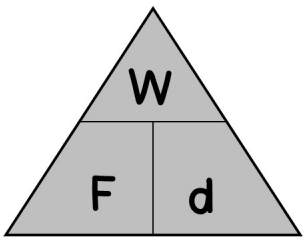
Define Variables	Write equation and show work	Answer w/ units
W = F = d =		

Name: _____ Date: _____

Class Period: _____

Work # 3

Work = Fd



1) A car performs 757,000 Joules of work with a force of 12,000 Newtons. How far did the car move?

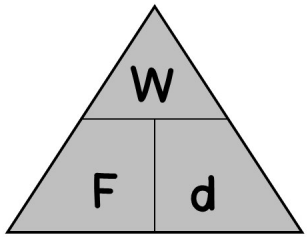
Define Variables	Write equation and show work	Answer w/ units
W = 757,000 J F = 12,000 N d = ?	W = Fd 757,000 = (12,000) d d = 63.0833 m	d = 63 m

Name: _____ Date: _____

Class Period: _____

Work # 3

Work = Fd



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Define Variables	Write equation and show work	Answer w/ units
W = F = d =		

Name: _____ Date: _____

Class Period: _____

Power # 1

1) What is the formula for power? What are the units for each of the variables?

$$P = \frac{W}{t}$$

P = power = watts
W = work = Joules
T = time = seconds

2) Circle one out of each pair. Which one has more power?

A) A 60 second elevator ride	or	A 120 second elevator ride	(same # stories)
B) Walking up the stairs	or	Running up stairs	(1 flight of stairs)
C) Doing 150 Joules of work	or	Doing 500 Joules of work	(in same time)
D) 75 watts	or	30 watts	
E) A kid thinking really hard	or	a kid walking	

Name: _____ Date: _____

Class Period: _____

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Name: _____ Date: _____

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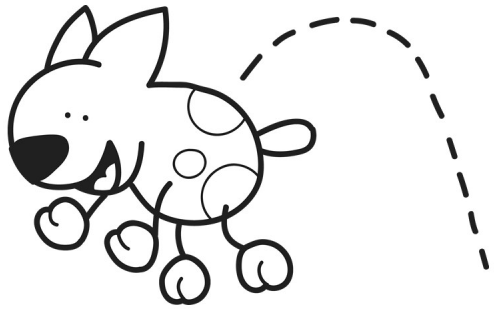


Power # 2

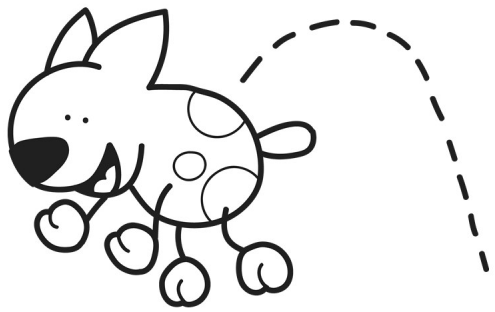
$$P = \frac{W}{t}$$

1) You do 150 Joules of work by carrying your dog's bag of food into your apartment on the 3rd floor. It took you 28 seconds to climb the stairs. What power did you exert?

Define Variables	Write equation and show work	Answer w/ units
P = ? W = 150 J t = 28 s	$P = \frac{w}{t} = \frac{150}{28}$ P = 5.35714 w	P = 5.6 w

Name: _____ Date: _____

Class Period: _____



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P = W = t =		

Name: _____ Date: _____

Class Period: _____

Power # 3

$$P = \frac{Fd}{t}$$

1) Your dog loves to play soccer! She goes running by you, kicking the soccer ball as she goes. (sounds like she needs her own tv show!) If she exerts 75 Newtons of force for 12 seconds, and travels 21 meters, what power did she exert?

Define Variables	Write equation and show work	Answer w/ units
P = ? W = x F= 75 N d = 21 m t = 12 s	$P = \frac{F\,d}{t}$ $756 = \frac{(75)(21)}{12}$ P = 131.25 w	P = 130 w

Name: _____ Date: _____

Class Period: _____

Power # 3

$$P = \frac{Fd}{t}$$

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Define Variables	Write equation and show work	Answer w/ units
P = W = F= d = t =		