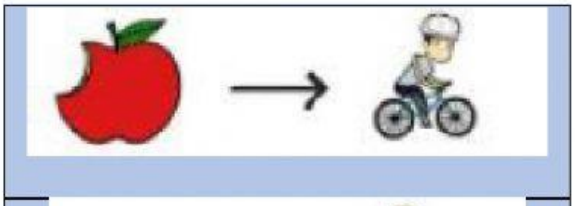
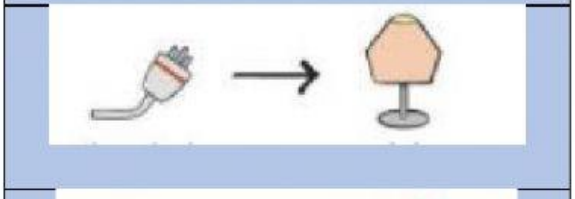
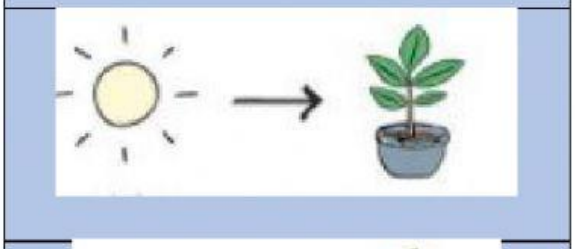
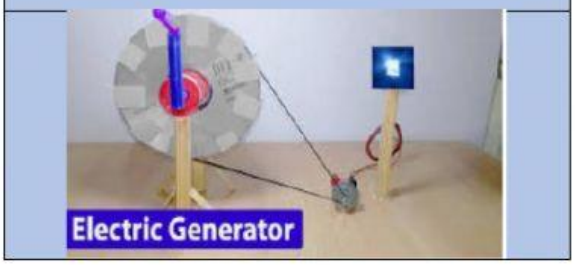
First Name: _____	Last Name = _____	Period: _____	Date: _____	School_____

Force, Motion, Energy Resources and Transformation

Bassett Test Review II

Question 1

Instructions: Join with the line the picture with correct energy transformation

Picture	Energy Transformation
	>Chemical to mechanical
	>Radiant Light to chemical
	>Electrical to heat
	>Mechanical to light
	>Electrical to light

Question 2

The law of Conservation of energy:

The law of conservation of energy states energy cannot be created or destroyed but may be changed from one form to another.

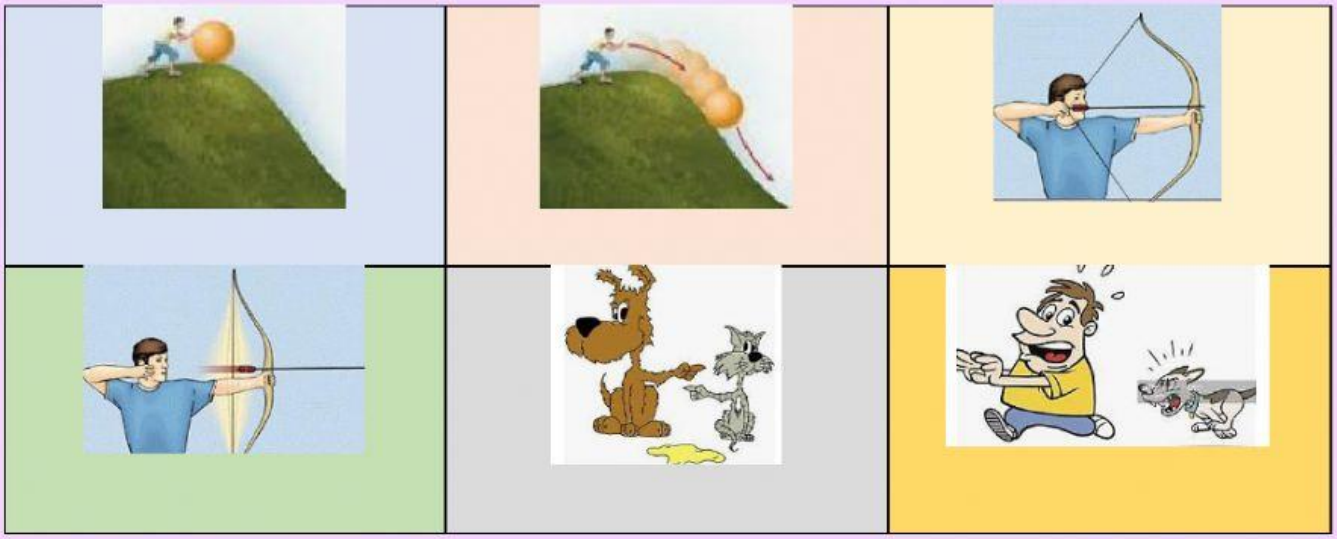
Instructions: **Use the above statement to complete the missing parts.**

The law of _____ of _____states _____ _____ be created or _____ but may be _____ from one _____ to _____.

Question 3

Potential Energy:	Kinetic Energy:
▪ Stored energy ▪ The higher an object is at, the more Potential energy	▪ Released energy ▪ The faster an object is going, the more Kinetic energy

Instructions: **Label "potential energy" or "kinetic energy"**



Question 4

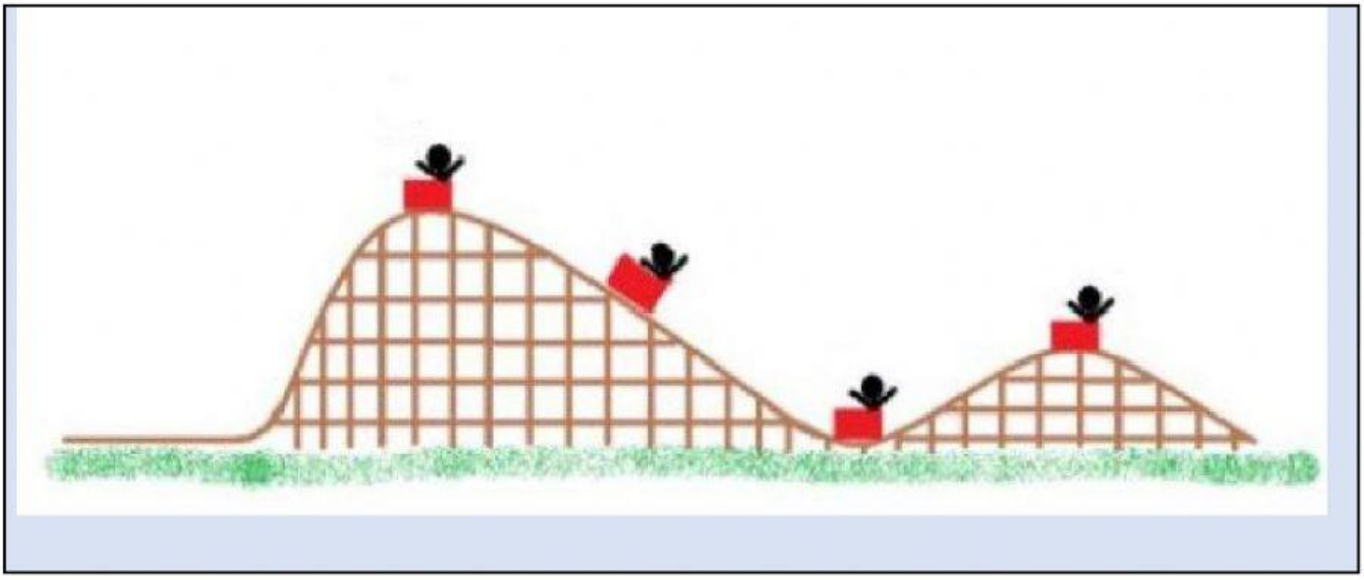
Hint:

>The higher the more PE

> the faster the more KE

Instructions: Use the labels **A, B, C and D** to label the correct Potential and kinetic energy "amount" on the picture

A	B	C	D
KE=100 max PE = none	KE = none PE=100 max	KE= 50% PE=50 %	KE= 75% or ¾ PE= 25% or 1/4



Questions 5 **(from yesterday)**

***Inertia*: the bigger – the more difficult to stop-the more inertia**
***Energy*: the bigger – the more energy- the more inertia**

4-1. Which object has more energy -Inertia and more difficult to stop?
a) huge truck b) bike c) toy car

4-2. Which object would be more difficult to move from start because it has more inertia)?
a) huge truck b) bike c) toy car

4-3. Which is true
a) Heavy objects have less inertia b) heavy object have more inertia

4-4. Which object have less Inertia
a) real airplane b) paper airplane

4-5. Which object would have more Potential energy?

a) an airplane flying 2 miles above b) an airplane flying 7 miles above

$$Speed = \frac{d}{t}$$

Example

Instructions: Plug in the numbers inside the boxes and divide to find the answer

Find the Speed (S) ----- **Scalar quantity** **(It has no direction)**

S (Speed) = ?

d (distance) = 40 meters

t (time) = 5 seconds

$$S = \frac{d}{t} = \frac{40 \text{ meters}}{5 \text{ seconds}} = 8 \text{ meters/second}$$

Question 6

Plug in the numbers inside the boxes and divide to find the answer

Evaluate the Speed (S)

S (Speed) =?

d (distance) = 800 miles

t (time) = 5 hours

$$S = \frac{d}{t} = \frac{\quad}{\quad} = \quad$$

Question 7

Plug in the numbers inside the boxes and divide to find the answer

Evaluate the Speed (S)

S (Speed) = ?

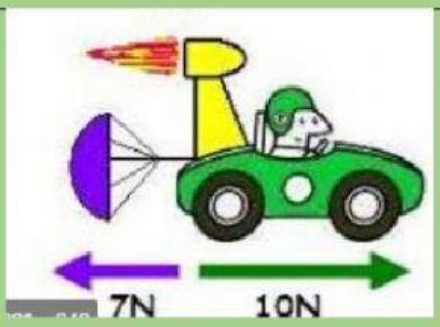
d (distance) = 48 meters

t (time) = 8 seconds

$$S = \frac{\square}{\square} = \frac{\square}{\square} = \square$$

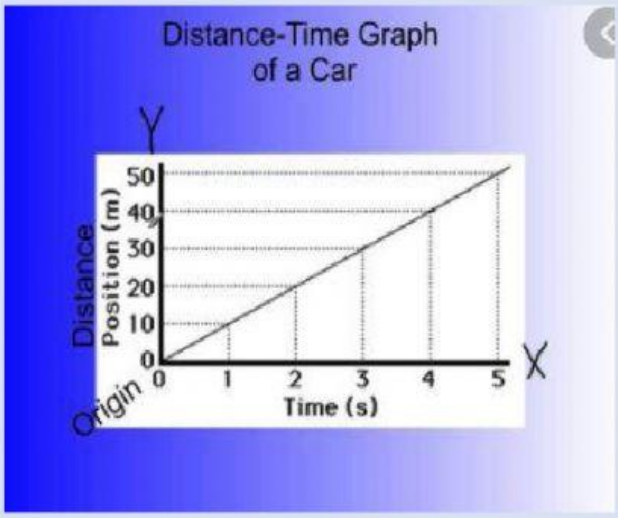
Question 8

Write "*balance*" or "*unbalance*" forces



Question 9

Use graphs to find the distance, the time, and the speed



Find the average speed

Step 1 : Distance at 5 sec

Step 2: Time at 50 meters

Step 3:

$$\text{speed} = \frac{\text{distance}}{\text{time}}$$

Question 10

Which path-trajectory of the cannon ball is correct?

a) first the ball speeds up and it never stops

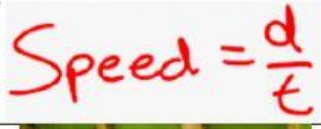
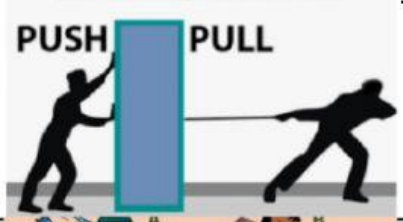
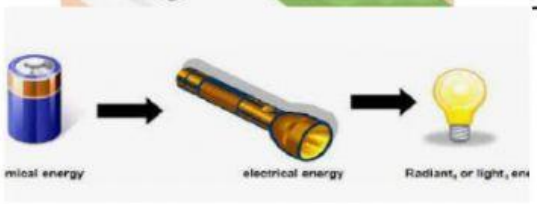
b) first speeds up, then it slows down at the top, change direction, and finally speeds up until it hits the ground.

C) Ask Alexa, Google, Siri or your teacher

Question 11

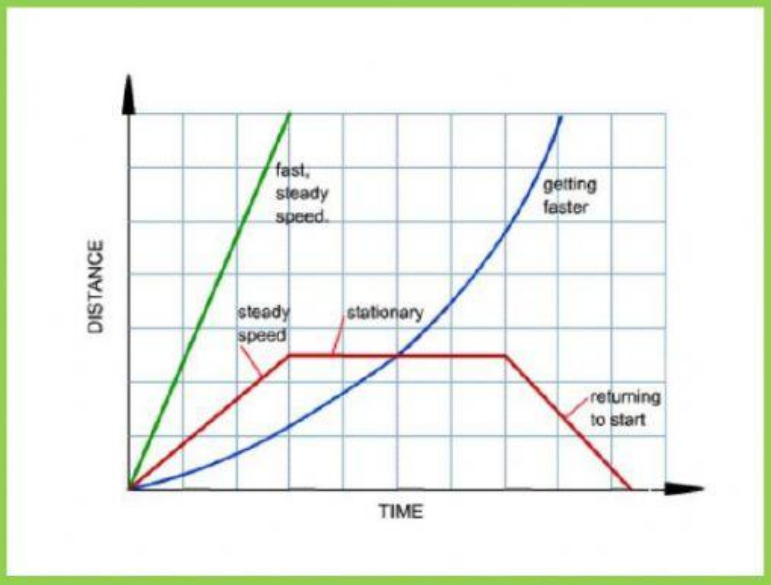
Vocabulary

Match the word with the definition by writing the correct letter

Word	Definition
1. X-axis	Vertical Line
2. Force	Energy stored
3. Y axis	Energy of motion
4. Unbalanced	
5. Friction	Horizontal line
6. Energy transformation	
7. Potential Energy	
8. Kinetic Energy	
9. Inclined plane	
10. Speed formula	

Question 12

Practice: Understanding the distance vs time graph



Instructions: **Use the graph on top to label the missing parts**