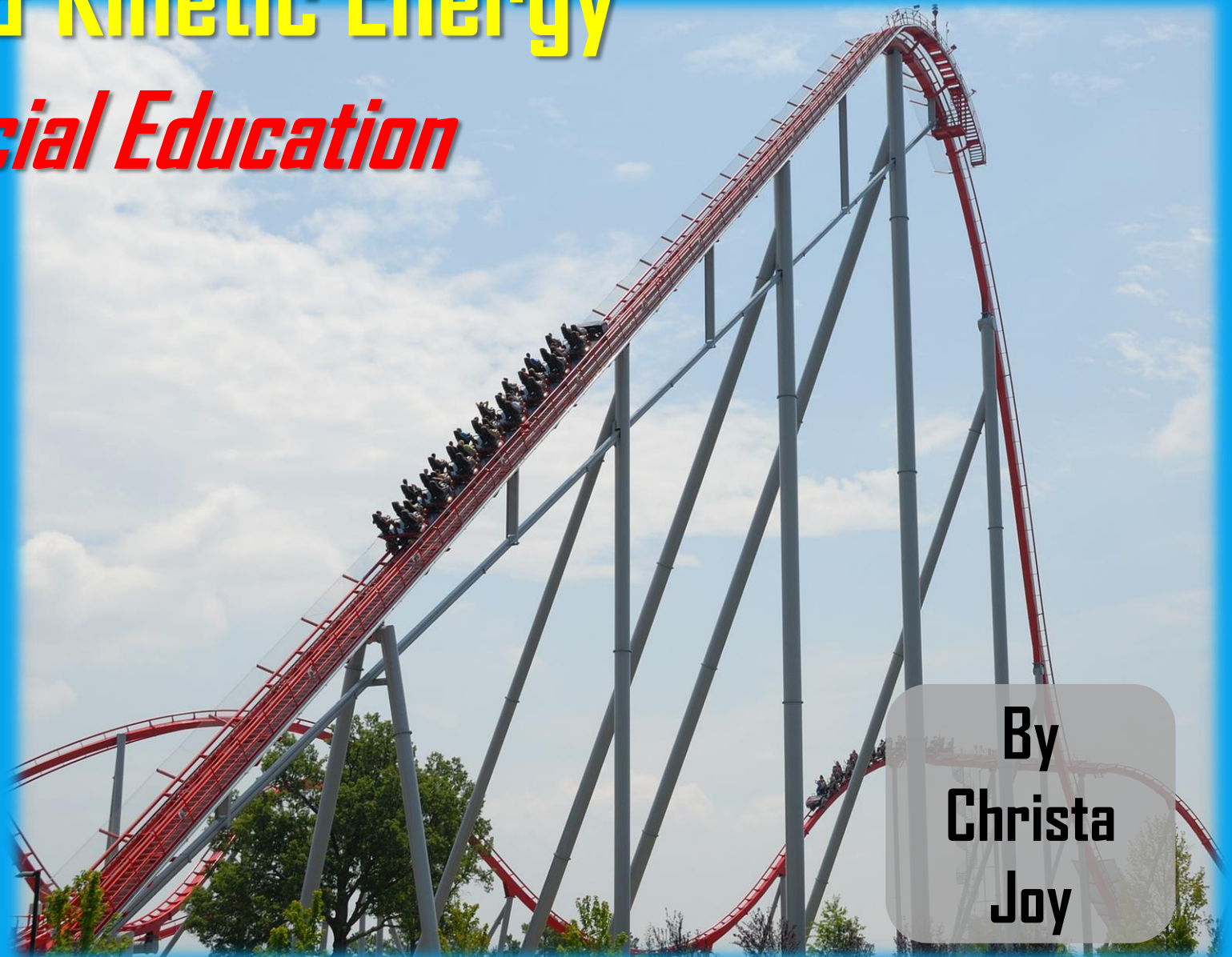


Potential & Kinetic Energy

For Special Education

Preview

I have included a voice recorded power point show that has automatic slide advancement. Please leave feedback if you find this helpful, and I will go back and add it to my other units.



By
Christa
Joy

Energy is the ability of something to do work. Still seems kind of unclear, huh?



The faster something is moving, the more kinetic energy it has. A train would have more kinetic energy than a bicycle.



More

Less

67 page book

Some common things that have kinetic energy would be: rivers, the wind, an apple falling from a tree, or a horse galloping across a field.



Translational kinetic energy is the energy an object has as it moves through space. Like the football that the quarterback threw down the field.

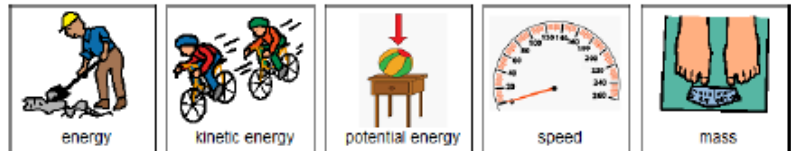


Unlike kinetic energy, potential energy is the energy an object has that is NOT moving. It is stored energy.



A bow and arrow, a trampoline, and a spring are all good examples of things that have elastic potential energy.

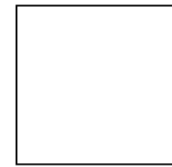




Vocabulary board

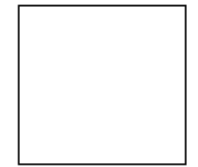
energy

Ability to do work.



Law of Conservation of Energy

Energy cannot be created or destroyed. It can only change.



kinetic energy

Energy of things in motion.

Lord Kelvin

First scientist to use the term kinetic energy in 1849.



joules

Unit of measurement for energy.



speed

How fast an object is moving.



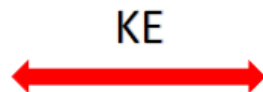
mass

How much an object weighs.



Translational kinetic energy

Movement through space from one point to another.

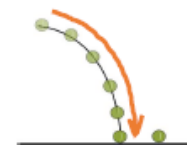


14 vocab cards



Cut & paste

gravitational potential



elastic potential energy



Unit of measurement for energy.

Spinning movement around an axis.

Stored energy in a stretch object like a rubber band or spring.

First scientist to use the term potential energy in 1800's.

Ability to do work.

How fast an object is moving.

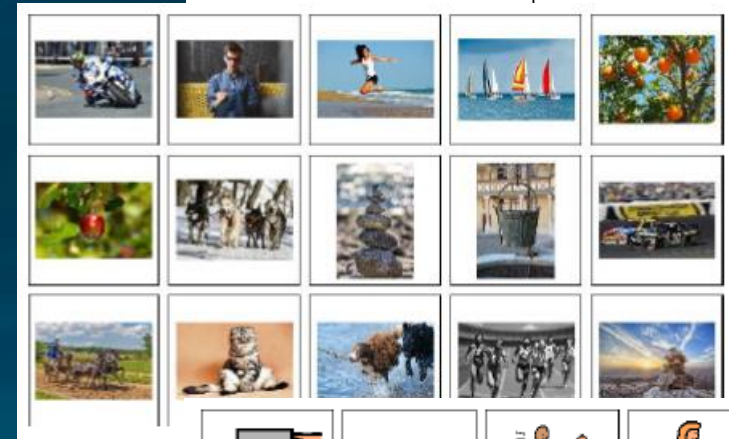
24 flash cards

KINETIC ENERGY 	POTENTIAL EN
TRANSLATIONAL ENERGY KE 	ROTATIONAL ENERGY KE
GRAVITATIONAL ENERGY 	ELASTIC ENERGY

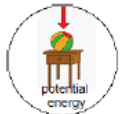


Sorting activity

 kinetic	 potential



Circle maps



 energy	 gravitational	 auto race	 joules	 on top of
 stored	 trampoline	 spring	 fall	 bow
 rotational	 flying	 elastic	 William Rankine	 bounce


 energy	 gravitational	 elastic	 joules	 on top of
 stored	 trampoline	 spring	 William Rankine	 bow

 stored energy	 trampoline	 chase	 sit	 translational
 gravitational	 Lord Kelvin	 lamp on dresser	 energy in motion	 hiking
 William Rankine	 rotational	 spin	 bowling pins	 elastic

















Errorless version



Objects with more mass have more kinetic energy. Circle the one that has **MORE** kinetic energy in each box. Assume each object is in motion and they are going the **same speed**.

Objects with less mass have less potential energy. Circle that has **LESS** potential energy in each box. Assume each is **NOT** in motion and positioned at the same height.

2 Experiments

Teacher instructions and pictures included

Potential Energy Experiment #1

The Incline Roll

People on my team: _____

Materials needed:











Potential Energy Experiment #1

The Incline Roll

The Experiment:

- Place the objects at the top of the ramp
- Let them go all AT THE SAME TIME
- Record which object is first and last.

Results:

1 st	<input type="text"/>
2 nd	<input type="text"/>
3 rd	<input type="text"/>

Potential Energy Experiment #1

The Incline Roll

Data collection

Objects chosen (3)

Record weights

<input type="text"/>	_____
<input type="text"/>	_____
<input type="text"/>	_____

Potential Energy Experiment #1

The Incline Roll

Testing my hypothesis:

	Prediction	
1 st	<input type="text"/>	<input type="text"/>
2 nd	<input type="text"/>	<input type="text"/>
3 rd	<input type="text"/>	<input type="text"/>

Potential Energy Experiment #1

The Incline Roll

Place the objects in order from lightest to heaviest

My hypothesis

I think will get to the bottom first because it is .

More or Less

Potential Energy Experiment #1

The Incline Roll

What I learned

The something weighs, the it goes.

The something weighs, the it goes.

4 Close worksheets

assessments

Kinetic Energy

- Kinetic energy is energy in .
- The more something has the more kinetic energy it has.
- The in a tornado has a lot of kinetic energy.
- A train has more kinetic energy than a bike because it goes and has more .
- Objects that move through space have energy.

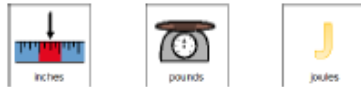
- The definition of energy is the ability to:



- The Law of Conservation of Energy says the amount of energy an object has is always the:



- Energy (kinetic and potential) is measured in:



- Kinetic energy is energy that is in:



- Rotational energy measures movement around an:

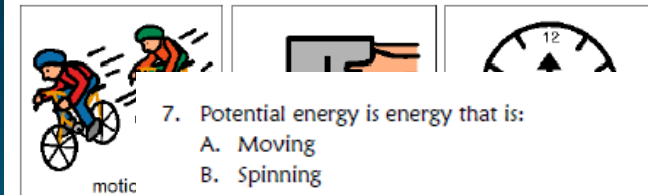


Print onto cardstock or mount on index cards. Cut pictures apart and show student answer choices for each question.

Q.3



Q.4



- Potential energy is energy that is:

- Moving
- Spinning
- Stored

- If two objects weigh the same, the one that is _____ has more potential energy.

- Faster
- Higher
- Shorter

- True or False. Elastic energy is a form of potential energy.

- True
- False
- I don't know

- True or False. Kinetic energy can be transferred to an object that has potential energy and cause it to move.

- True
- False
- I don't know

