

Potential Energy

- I could teach it
- I somewhat get it
- I need to learn this



Glue this side into your notebook



The things I should know before 8th grade:

- Energy is the ability to cause motion or create change
- There are two types of energy, kinetic and potential, and the forms of energy can be classified under them (e.g., electrical, heat, light, sound, magnetic)
- Energy can be transferred but it never lost
- Energy from the sun is the main source of energy on Earth and energy is transferred through Earth's processes and resources

The most basic things I should know after this unit:

- There are different types of potential energy
- Types of potential energy are gravitational potential energy, elastic potential energy, chemical potential energy, electrical potential energy, and magnetic potential energy
- Potential energy is stored and waiting to be used (has the potential to move or change something)

I know...

- a. that potential energy is not just stored; it has the potential to be used and is waiting to be used
- how **mass** of an object and its **height** above a reference point change the amount of gravitational potential energy
- b. how the amount of **stretch or compression an object (change in position) has** and **how easy or hard it was to stretch or compress it** change the amount of elastic potential energy
- how energy transfers in springs
- c. how the **position** of magnetic objects relative to each other, depending on their poles, changes the amount of magnetic potential energy
- how the **position** of electrically charged particles, the **magnitude** of charge they have, and the types of charges interacting change the amount of electrical potential energy
- that the **position** and **arrangements of atoms** in an object change the amount of chemical potential energy
- how energy transfers in magnets and in static electricity

I can...

- a. predict how **gravitational potential energy** will change based on BOTH the **mass** of an object and its **height** above a reference point
- b. predict how elastic potential energy will change based on **how stretched or compressed an object (change in position) is** and **how easy or hard it was to stretch or compress**
- c. predict how magnetic potential energy will change based on the **position** of magnetic objects relative to each other, depending on their poles
- identify if the electrical potential energy has changed based on evidence (e.g. the **position** of charged particles relative to each other)
- identify if chemical potential energy has changed or not based on evidence (e.g. evidence of **new substances** and **resulting thermal energy**)

Vocabulary to Master

<input type="checkbox"/> energy	<input type="checkbox"/> potential energy	<input type="checkbox"/> thermal energy
<input type="checkbox"/> kinetic energy	<input type="checkbox"/> gravitational potential energy	<input type="checkbox"/> chemical reaction
<input type="checkbox"/> elastic potential energy	<input type="checkbox"/> chemical potential energy	<input type="checkbox"/> charged particle
<input type="checkbox"/> electrical potential energy	<input type="checkbox"/> magnetic potential energy	<input type="checkbox"/> Law of Conservation of Energy
<input type="checkbox"/> reference point	<input type="checkbox"/> mass	<input type="checkbox"/> transfer of energy
<input type="checkbox"/> static electricity	<input type="checkbox"/> spring	<input type="checkbox"/>