

Energy Flashcards, page 1



SGT. STEPHEN DECATUR, U.S. ARMY



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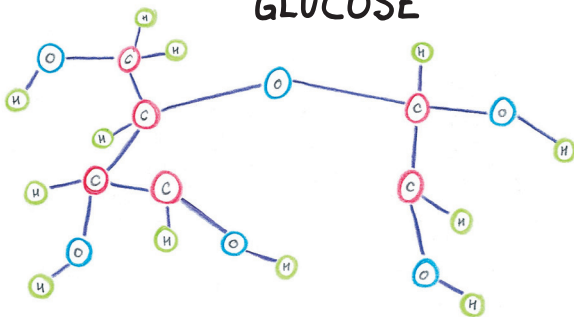


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CHEMICAL

Chemical energy is stored in the bonds between atoms and molecules. Food and fuels are made up of chemicals that store energy in their bonds. Batteries, corn, petroleum, and wood all possess chemical energy.

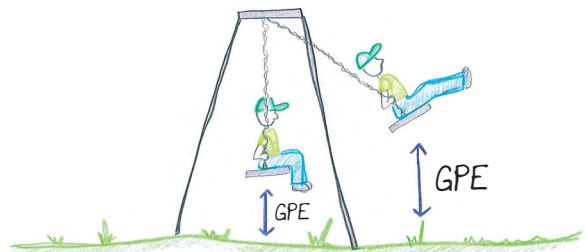
GLUCOSE



C CARBON
 O OXYGEN
 H HYDROGEN
 — ENERGY

GRAVITATIONAL POTENTIAL

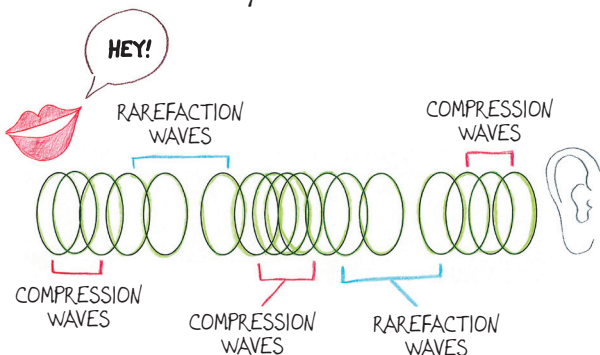
Gravitational potential energy is stored in an object due to its height above Earth. The larger the mass of an object and the higher it is above Earth, the greater the gravitational energy of the object.



$$\text{GPE} = \text{MASS} \times \text{G FORCE} \times \text{HEIGHT}$$

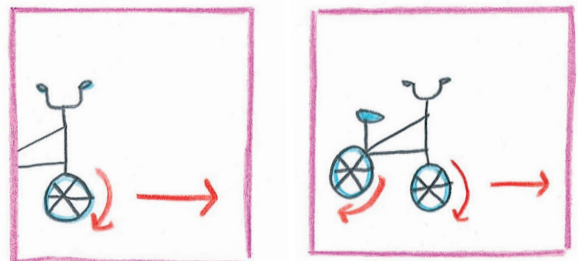
SOUND

Sound energy travels by longitudinal waves through substances like air and water, causing them to vibrate. For example, when you speak air moves past your vocal cords, causing vibrations that make the sound you hear.

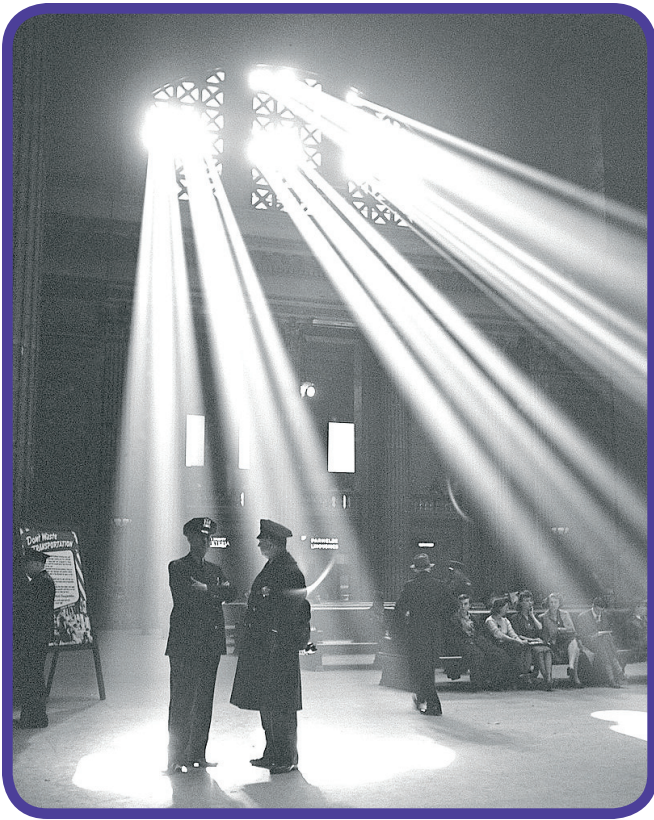


MOTION

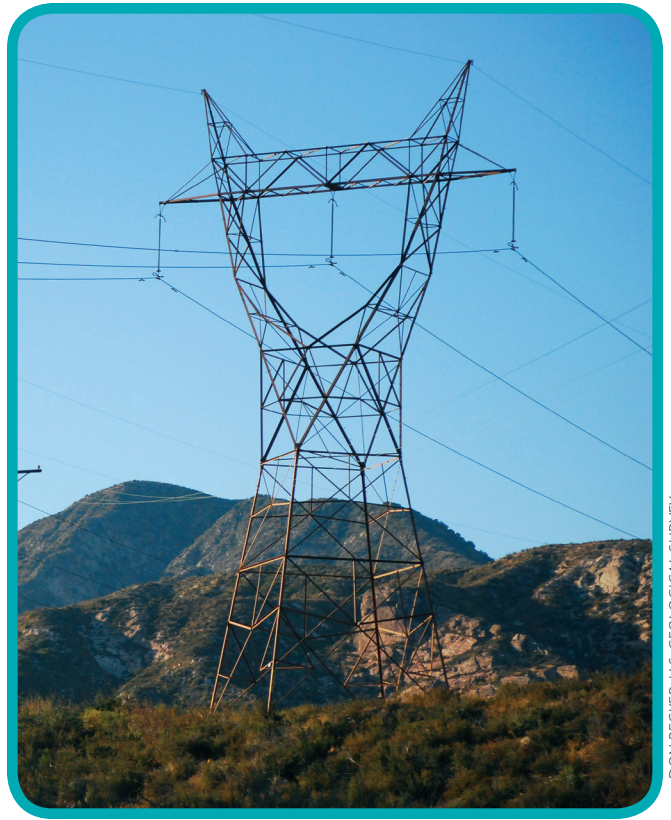
Motion energy is the energy of a moving object. The faster an object moves, the more motion energy it has. A bike speeding down the street and an arrow flying through the air are both examples of motion energy.



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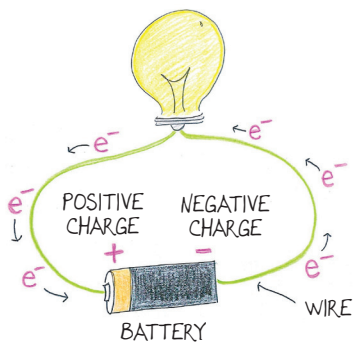
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JEFFERSON S. ROGERS

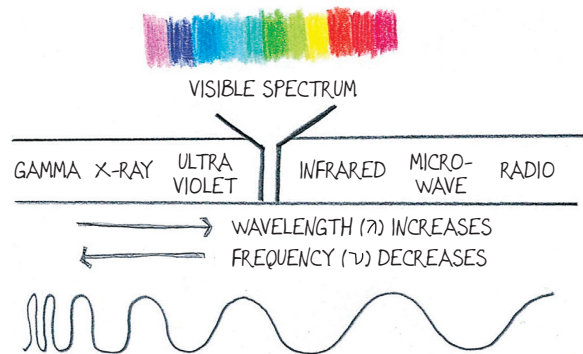
ELECTRICAL

Electrical energy is carried by electrons—negatively charged particles found in atoms. If an electron is separated from an atom, it can move through wires and other materials that conduct electricity. Even air can be conductive. Lightning is an example of electrical energy moving through air.



RADIANT

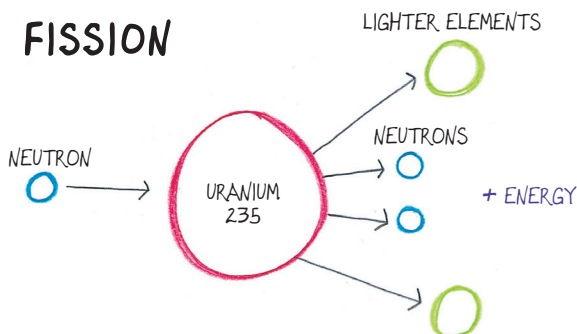
Radiant energy is electromagnetic energy traveling in transverse waves. Some forms of radiant energy such as light are visible, while other forms such as infrared, ultraviolet, x-ray, gamma ray, and radio waves are not.



NUCLEAR

Nuclear energy is stored within the nucleus of an atom. The force that holds together the nucleus of an atom is one of the strongest in the universe! This energy may be released when an atom is either split (fission) or fused with another atom (fusion).

FISSION



THERMAL

Thermal energy is the internal energy of a system or substance caused by the random movement or vibration of molecules. When a substance (such as water) is at a high temperature, the particles of that substance move faster and the substance has a greater amount of thermal energy. Friction is one source of thermal energy—just rub your hands together to feel it!

