

Vocabulary: Energy Conversions



Vocabulary

- Chemical energy – energy stored in the bonds that hold molecules together.
- Electrical current – energy that results from the movement of charged particles.
- Energy – the ability to cause changes, exert forces or do work. (In other words, energy is the ability to make things happen!)
 - Energy can exist in many forms. It can be stored or expressed actively.
 - Energy can be converted to another form, but can never be created or destroyed.
- Fossil fuel – a fuel formed deep in Earth’s crust from the remains of plants and animals.
 - Fossil fuels include coal, oil, and natural gas.
- Global warming – a gradual rise in Earth’s average temperature.
- Gravitational energy – stored energy that is due to an object’s position.
 - The higher an object is, the greater its gravitational energy.
- Hydroelectricity – electrical current produced by water flowing through a turbine.
- Kinetic energy – energy of motion. The faster an object moves, the greater its kinetic energy. Kinetic energy also includes sound and thermal energy:
 - Sound – energy of vibrating materials or air molecules.
 - Thermal energy – energy that comes from the movement of tiny particles. As an object heats up its particles move faster, increasing thermal energy.
- Light – a form of *electromagnetic radiation* that is visible to the eye.
 - Other forms of electromagnetic radiation include gamma rays, x-rays, ultraviolet light, infrared radiation, and radio waves.
- Nonrenewable resource – a natural resource that cannot be replaced reasonably soon.
- Nuclear energy – energy released by changes to the nuclei of atoms.
 - In *nuclear fission*, atoms are split apart. It is used in power plants and weapons.
 - In *nuclear fusion*, atoms are joined together. This occurs deep inside the Sun. There is hope that we will soon be able to harness this type of energy, essentially solving the energy supply problem.
- Renewable resource – a natural resource that can be replaced in a reasonable amount of time.
 - Wind power, solar power, hydroelectricity, and ethanol are renewable resources.