

GET MOVING!

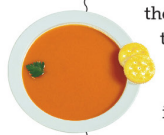
As you GET MOVING!, get your lightbulb

Energy is the ability to do work. It's what's needed to move things from one place to another or to change things from one form to another. There are two basic forms of energy: kinetic energy and potential energy.

Kinetic Energy

The energy of motion, whether waves, wind, atoms, electrons, or objects, like a swing or a jump rope.

Thermal Energy, or heat, is also kinetic energy. It's the internal energy in substances. The thermal energy of food is increased when it is heated on the stove. The stove's heat is transferred to the soup and the internal energy of the soup increases.



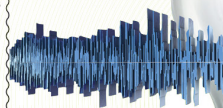
Electrical Energy is the movement of electrical charges. Electrical charges moving through wire is called current. Lightning is also electrical energy. Lightning occurs when there is a discharge of electricity, frequently between clouds and the ground.



Radiant Energy is the energy of electromagnetic waves, such as visible light, x-rays, and radio waves. Solar energy from the sun is also radiant energy.



Sound Energy is the energy of waves traveling through air and other materials that we interpret as sound. Bang on a metal pot, and the vibrations set up waves that enter our ears.



glowing... on all kinds of energy!

Potential Energy

Stored energy that is ready to be used and changed into another form. A stretched rubber band has potential energy. So does a roller coaster at the top of the track. They both have the potential or the ability to change without any added energy; the rubber band can shrink to its original size and the roller coaster can coast down the track.

Chemical Energy, the energy that is stored in the bonds between atoms, is potential energy. A battery has potential energy to make electrical energy to run a CD player or TV remote control.



Stored Mechanical Energy is another type of potential energy. It's the energy stored in objects that came from an applied force. Squished and stretched springs have stored mechanical energy.



Gravitational Energy, like that in a sled at the top of a hill, is a third type of potential energy. So is the energy in water held behind a dam. When water from a dam flows downhill, that's the energy of hydropower.



Nuclear Energy is also potential energy. It's the energy in the nucleus of an atom that holds the nucleus together. When nuclear fission happens, the nucleus splits into smaller parts, giving off lots of energy.



Ride the wave

We see the color red when light waves bounce off an apple. We hear music when sound waves shake our eardrums. Our bodies turn high-calorie milkshakes into heat waves. Gamma rays from exploded stars pass through us like we aren't even here. See where your human energy fits into the cosmic flow.

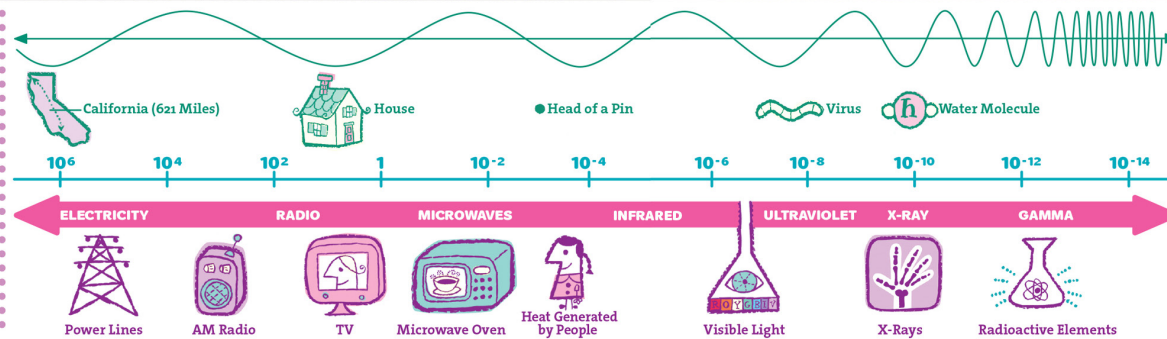
Size of Wavelength

Wavelength compared to objects

Wavelength in meters

Name of waves

Sources



How's Your ENERGY?

Do you have potential energy stored up inside you? What are your hidden potentials that are ready to help you achieve your goals?