The POWER of...

Energy is the ability to do work. Energy appears in many forms. Energy associated with motion is called **mechanical energy**. Water in a waterfall has a great amount of mechanical energy. So does a car traveling down the interstate. Mechanical energy is always associated with motion or something that is moving.

Heat energy is caused by the motion of particles that make up matter. When you rub your hands together, you are converting mechanical energy into heat energy.

Chemical energy is the energy released when atoms bond together. The fuel in a rocket engine has stored chemical energy. When the fuel is ignited the fuel's stored chemical energy becomes heat energy and mechanical energy. In nature, only green plants can combine carbon dioxide with water to produce hydrocarbon compounds such as sugar. This process is photosynthesis and is energized by the sun. When we eat green plants, the combustion of food in our body is simular to the combustion of rocket fuel. We convert the chemical energy from plants to heat and mechanical energy. Remember, the reaction rate of the rocket fuel is much faster.

Nuclear energy is the energy produced in the nucleus of an atom. When the nucleus of an atom splits, nuclear energy is produced in the form of heat, sound, and light energy. Nuclear energy is also released when nuclei collide at high speeds and fuse together; this is how the sun produces its heat and light energy.

Electromagnetic (light) energy is the energy moving electrons give off in the form of light. Power lines carry electromagnetic energy in the form of electricity into your home to power your lights and appliances.

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