**Electricity and Energy**

**What is energy?**

**There are different types of energy, but they tend to fall into a two categories**

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| **Examples:** | **Examples:** |

Electrical energy is *\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_*. That means it is a form of *\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_*.

What happens when we directly interact with moving electrons?

How useful is it for us to directly interact with moving electrons?

For us to use electrical energy effectively we have to convert it from electric energy into a different form of energy.

Energy can convert from one form to another, but it always has to follow a very important rule:

**Law of Conservation of Energy:**

**Examples**:

**Units of Energy:**

The units of energy are \_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_. But there are some other units that can be used depending on the situation.

**Power**

Since we are constantly using energy on electrical devices, it is often more useful to find out how much energy we are using per second.

Power is the energy used in one unit of time:

The unit we give for power (rather than saying joules per second) is \_\_\_\_\_\_\_\_\_ \_\_\_\_\_.

We can calculate the power a load is converting by using the voltage and current that is in the system.

or

**Examples:**

A 50” TV uses about 150W of power. Electrical plugs in our houses usually supply 120V to appliances. How much electric current will a TV use?

A blow dryer plugged into a 120V source will draw 11A of current. How much power does a blow dryer use?