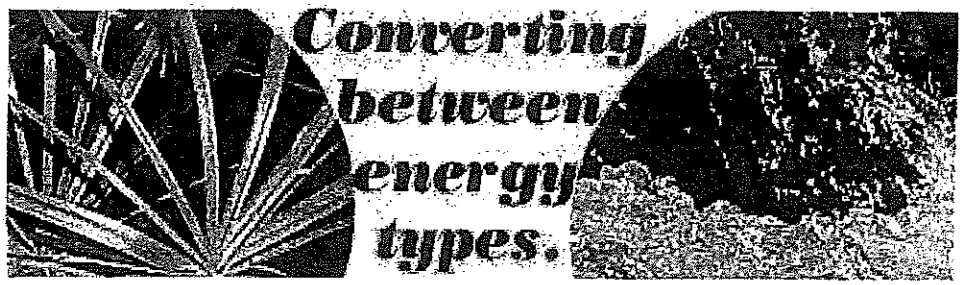
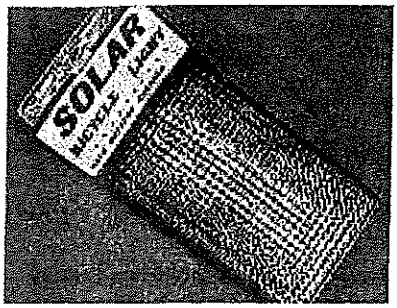
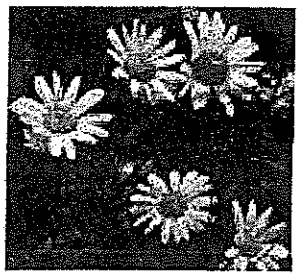



Some forms of energy can be converted to other forms.



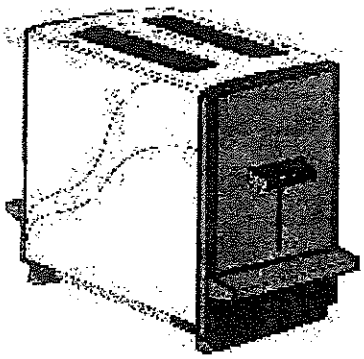

For example, solar panels are used to capture light energy from the sun and convert it to electricity.

Green plants undergo photosynthesis to convert light energy into chemical energy in the form of food.

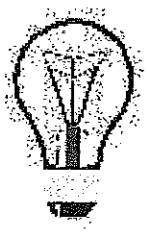


The mechanical energy of a waterfall can be converted to electromagnetic energy in a generator. Generators convert other types of mechanical energy into electromagnetic energy. The bicycle generators turn with the bicycle tires and cause the light to turn on. Due to changes in the speed of the bicycle, these lights often change from bright to dim!

Many times it takes a whole series of energy conversions to do a certain job. For example, just to get the energy to make a piece of toast, there are several energy conversions involved.



Chemical energy stored in coal is released as heat and light energy when the coal is burned. The heat energy is used to produce steam and is changed into mechanical energy in a generator. The generator converts mechanical energy into electric energy that travels through power lines into your home. When you use your toaster, that electric energy is again changed into heat energy.



Have you ever touched a lightbulb when it was on? Or tried to change it when it burnt out after being on? What you have discovered is the conversion process of energy? When you turn on a light, not all of the electricity is converted to light energy. Some of the energy is converted to heat. Although some energy is changed to heat and does not help do the work, the energy is not lost. In fact, energy is never lost; it is only converted from one form to another. This is stated in the **law of conservation of energy, energy can not be created nor destroyed by ordinary means.**