



Energy

# Renewable and non-renewable energy sources

- Renewable sources will last almost forever, non-renewable sources will run out.

<b>Non-renewable</b>	<b>Renewable</b>
<b>Oil</b>	<b>Wind</b>
<b>Coal</b>	<b>Solar</b>
<b>Gas</b>	<b>Nuclear</b>
<b>Turf</b>	<b>Biomass and geothermal</b>

# Advantages of Renewable energy

- Carbon Dioxide is not produced
- Solar energy can supply electricity and hot water
- Supply of energy is endless

# Disadvantages of Renewable energy

- Wind turbines can ruin the look of the country side and make noise
- Solar panels work best in the summer only, dependent on the sun
- Nuclear energy is very dangerous

# Conserving Energy

- Energy can be conserved in the house by
- Insulating the house well
- Turning off appliances
- Using energy saving bulbs

# Energy Types

- Kinetic Energy

Moving energy, eg walking



- Potential Energy

Built up energy, eg in a stretched elastic band. Also called stored energy





potential  
energy



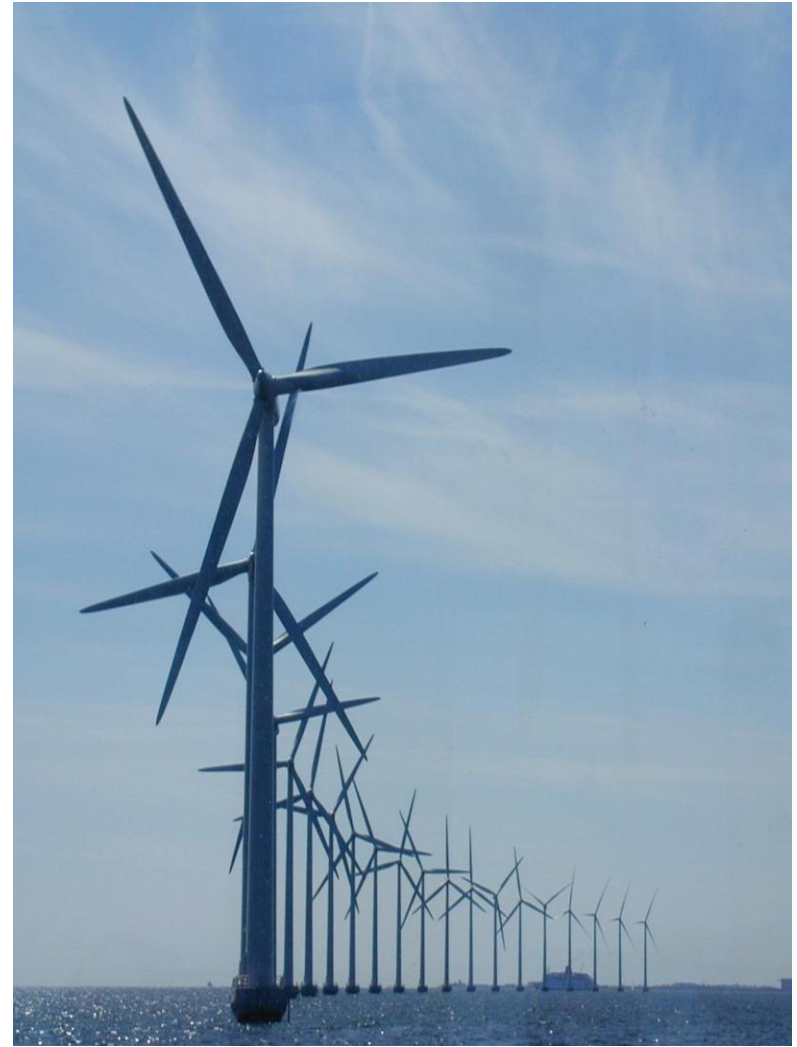
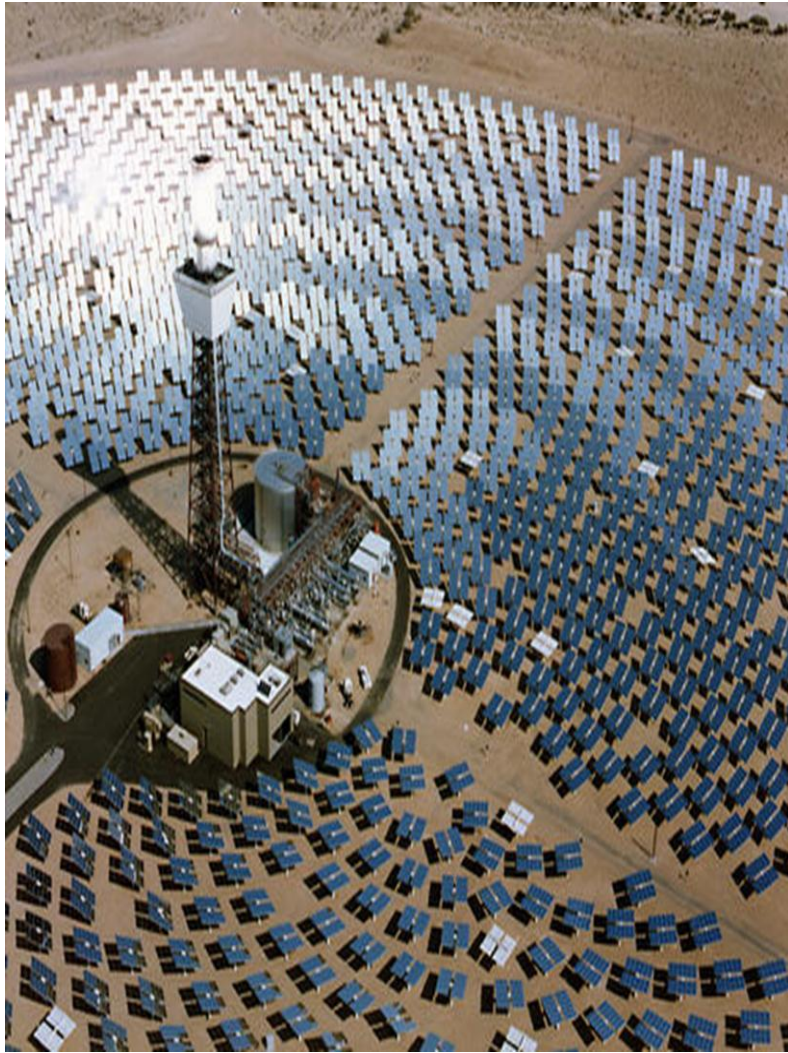
kinetic  
energy



## Other types of Energy

- Heat Energy
- Chemical Energy (battery)
- Electrical Energy
- Sound Energy
- Light Energy
- Magnetic Energy
- Solar Energy
- Nuclear Energy





# Energy Conversions

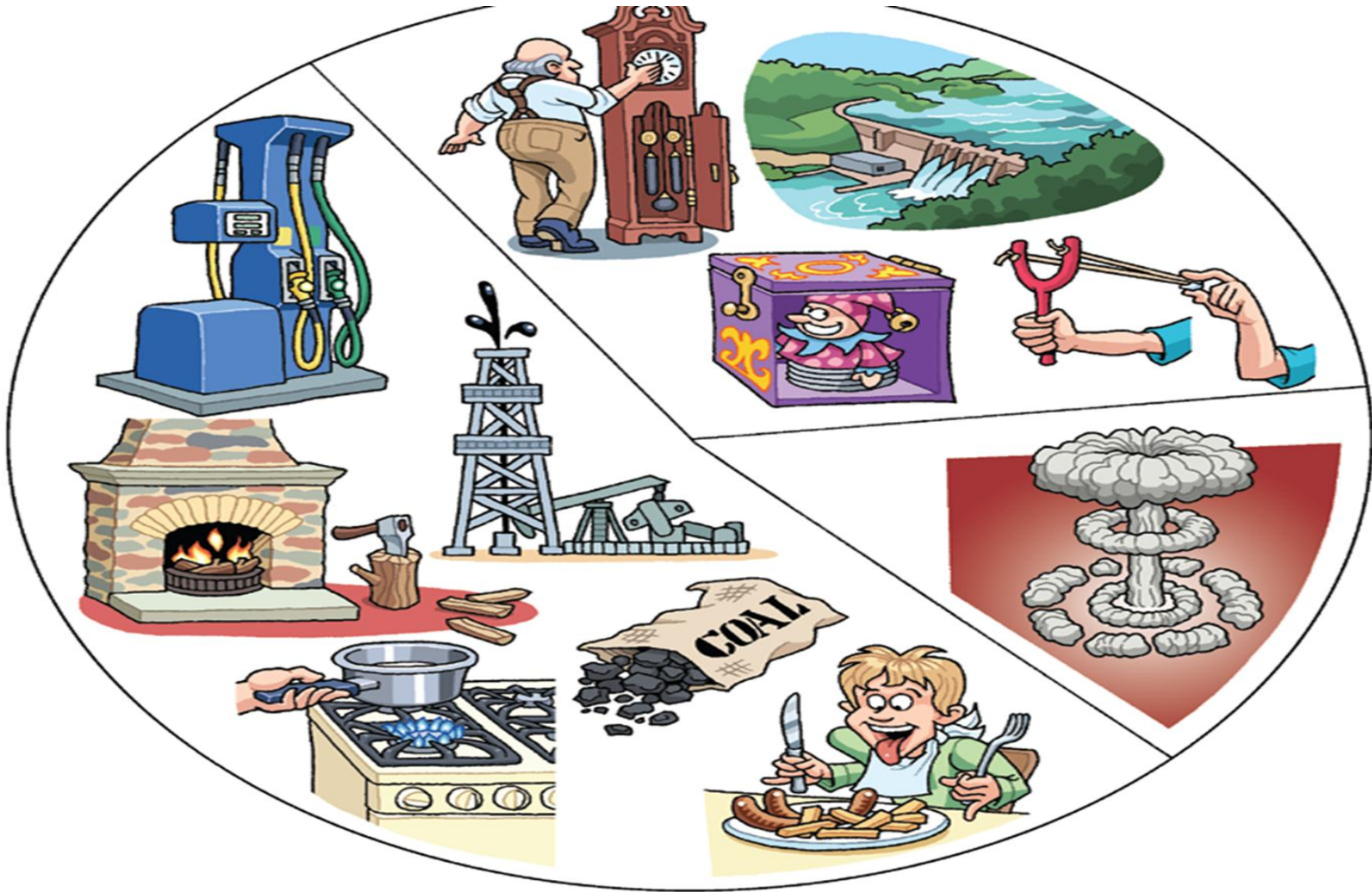
- Energy cannot be created or destroyed, it can only be changed from one form into another
- Energy conversion means energy being changed from one form into another, eg electrical energy in a circuit changing into light energy in a bulb

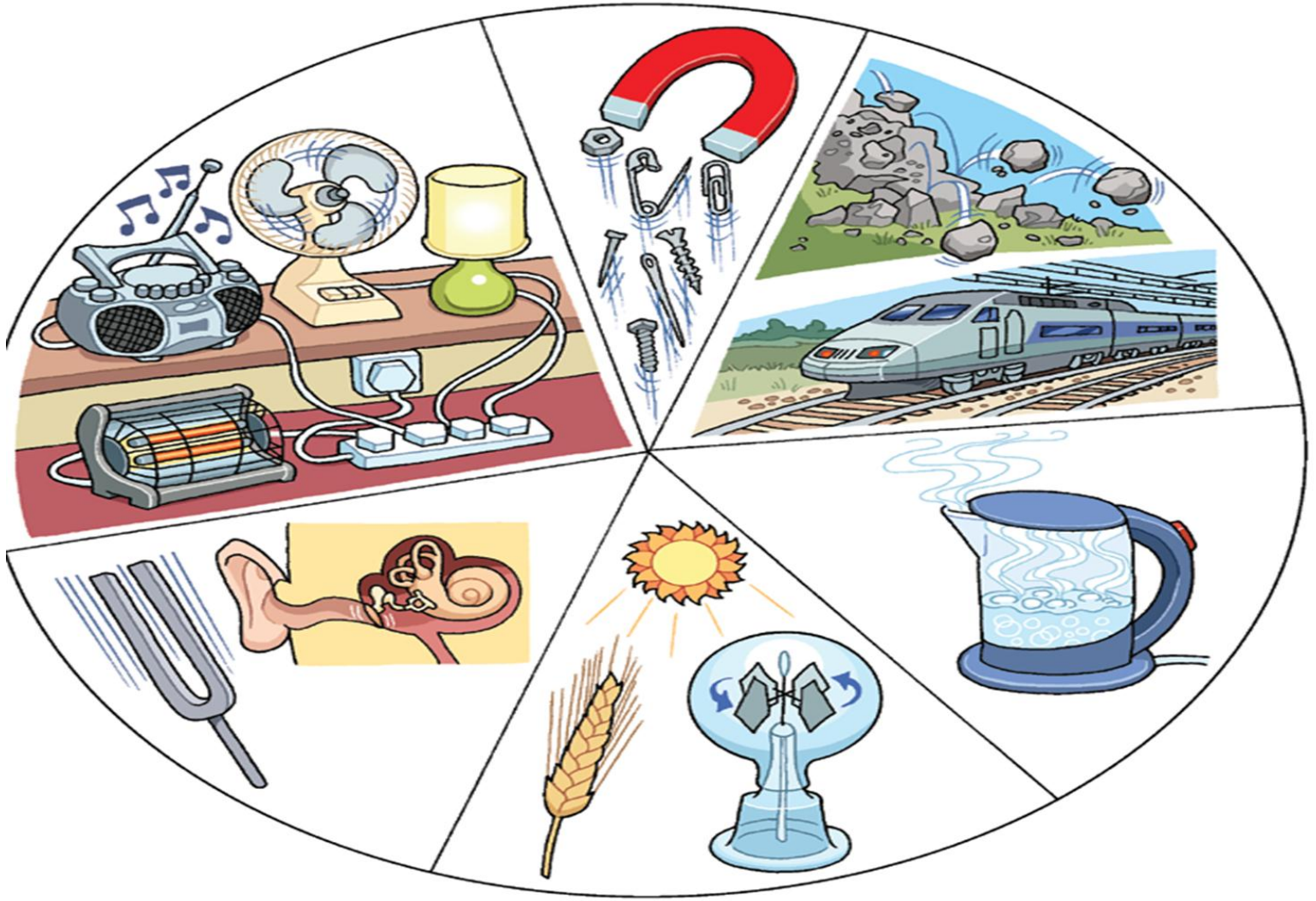
In a battery in a circuit with a bulb

- Chemical energy → electrical energy → light energy and heat energy

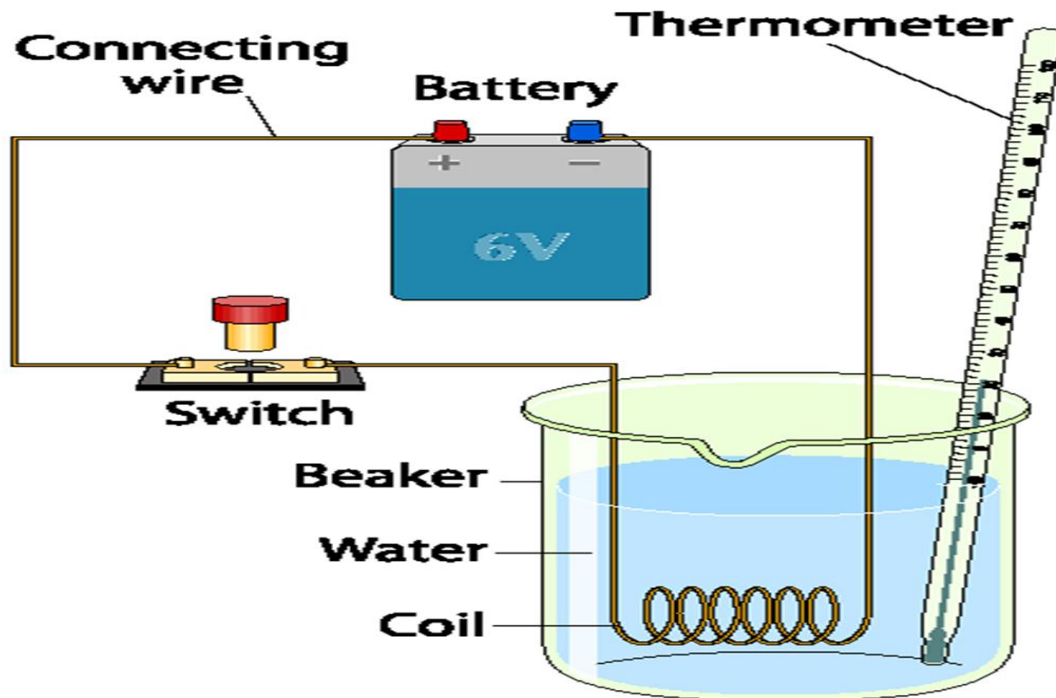
In a solar panel connected to a fan

Light energy → electrical energy → kinetic energy

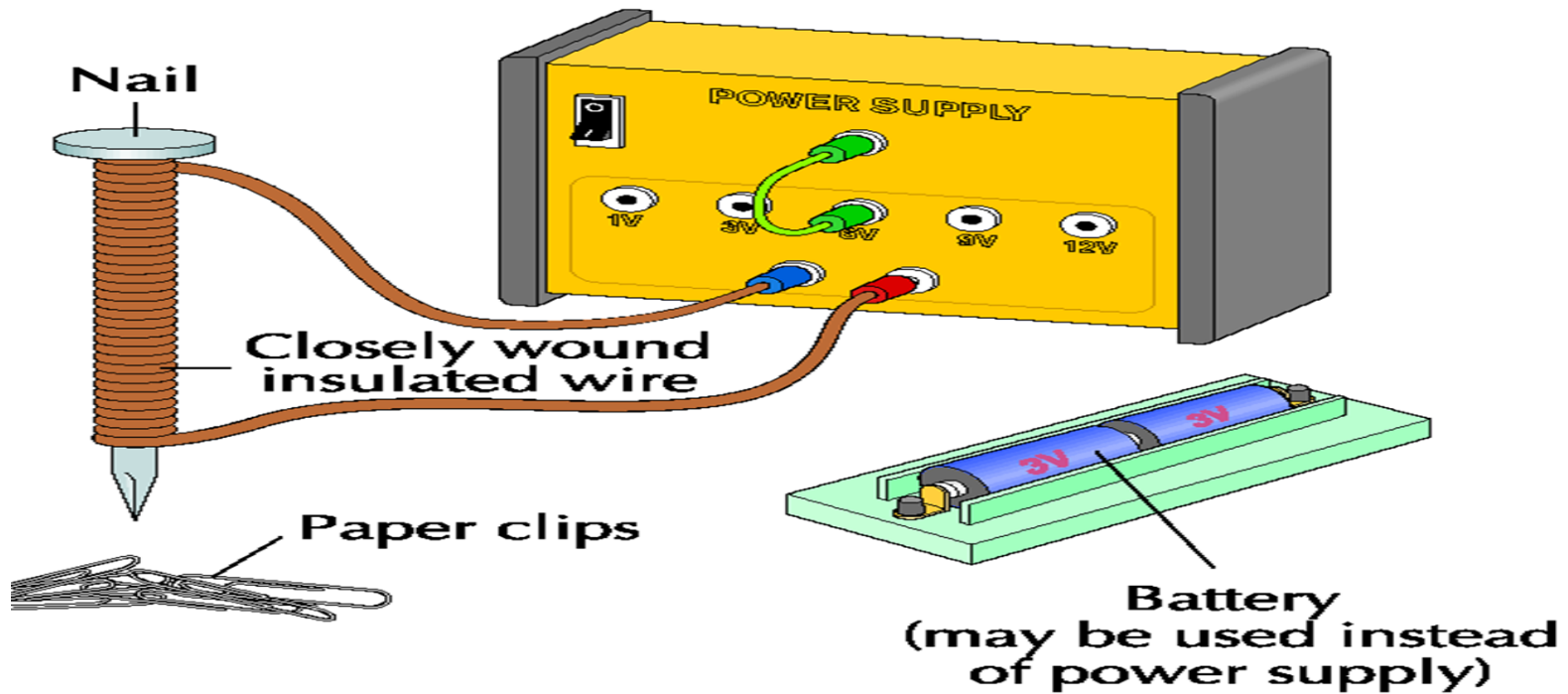




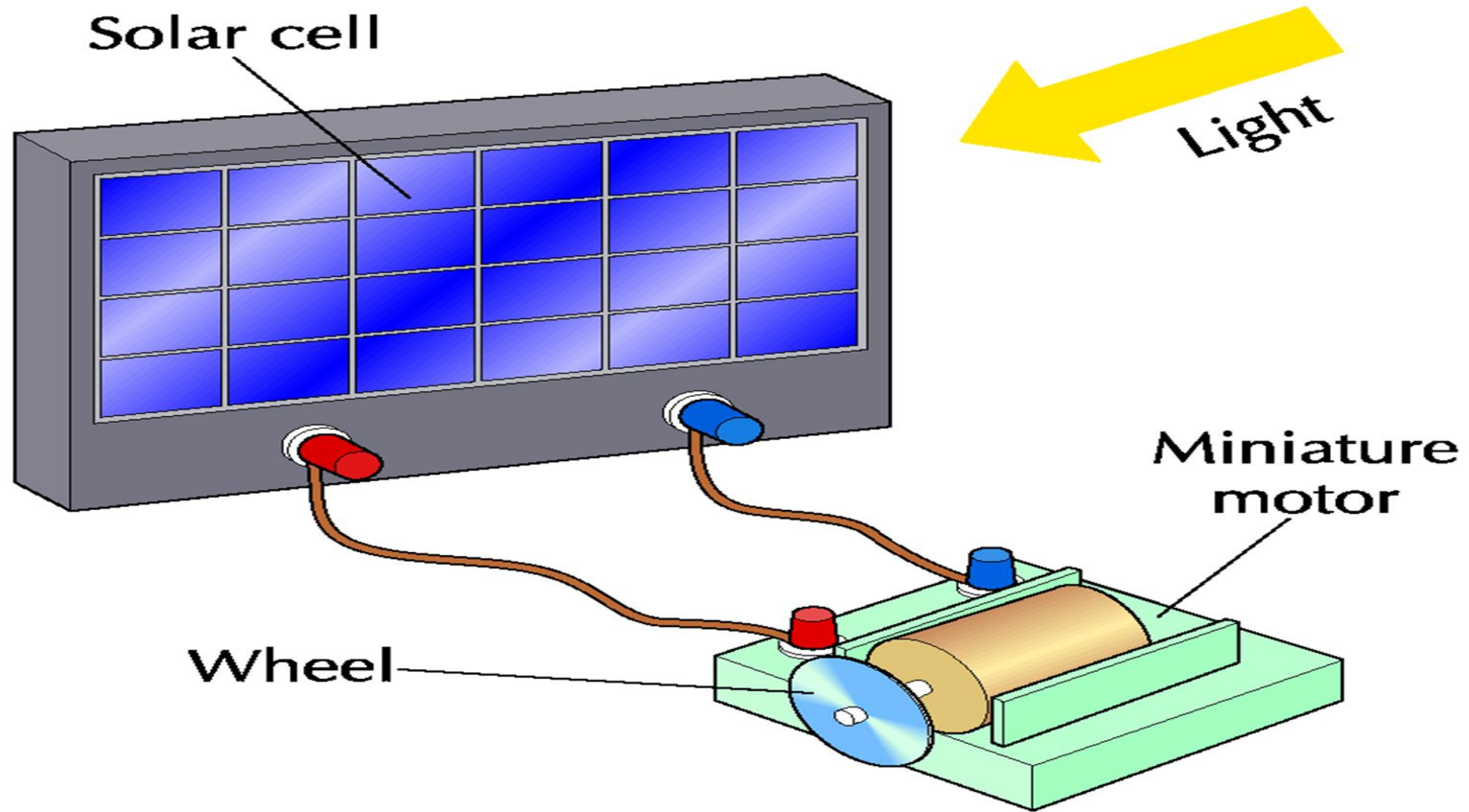
Chemical energy is changed into electrical then into heat



# Electrical energy to magnetic energy to kinetic energy



# Light energy to electrical energy to kinetic energy





# Everyday Energy Conversions

- Hair dryer – Electrical energy in the plug into kinetic energy in the fan into heat energy
- T.V. – Electrical energy in the plug into light energy on the screen

8. What type of energy conversions take place when the following happens:
  1. Hair dryer,
  2. T.V.
  3. Computer