

# Alternative Energy Resources

9.2

A. Renewable resources – energy that can be recycled or replaced

B. Solar Energy – uses energy from the Sun

1. Solar Cells – change light into electricity

2. Enough energy reaches Earth in one hour to supply world for a year

### 3. Disadvantages:

- a. Available only when the Sun is shining
- b. No technology to harness all the sun's energy

## C. Wind energy – uses windmills

1. Wind farms – many windmills in one area
2. Disadvantages
  - a. Not steady
  - b. Only a few regions with strong enough winds
  - c. Wind farms dangerous to birds

## D. Hydroelectric power – using moving water

### 1. Sources of moving water

- a. Natural waterfalls
- b. Concrete dams

### 2. Disadvantages

- a. Increased erosion downstream
- b. Wildlife habitats disturbed
- c. Some places not near flowing water

E. Geothermal energy – uses the magma and hot rocks beneath Earth's surface

1. When magma close to Earth's surface – geyser erupts

2. Disadvantages:

a. Can be harmful to environment

b. Few places have magma near Earth's surface

c. Places with no magma near the surface need deep wells.

F. Nuclear Energy – produced by splitting nuclei of certain elements

1. Fission – name for the splitting process
2. Most common element (**ore**) used in nuclear plants – uranium
3. Disadvantages:
  - a. Produces radioactive nuclear waste
  - b. Possible problems in storing nuclear waste