

1) POTENTIAL ENERGY

- **STORED** energy
- 2 types
 - Gravitational potential energy
 - Elastic potential energy

a) GRAVITATIONAL POTENTIAL ENERGY

- Contained in **elevated** objects
 - Airplanes
 - Water falls
 - Elevated rocks

b) ELASTIC POTENTIAL ENERGY

- Contained in **stretched** or **compressed** objects
 - Rubber bands
 - Springs

2) CHEMICAL ENERGY

- A form of potential energy
- Energy stored in foods, fuels, and batteries
- Released during chemical reactions

2) CHEMICAL ENERGY

- Photosynthesis produces chemical energy
 - Carbon dioxide + water $\rightarrow$ glucose + oxygen
- Glucose contains chemical energy

3) NUCLEAR ENERGY

- Produced in 2 ways
 - Nuclear Fission
 - Nuclear Fusion

a) NUCLEAR FISSION

- Heavy elements are broken down to produce lighter elements
- Used to produce electricity
- Releases:
 - Heat, light, harmful rays

b) NUCLEAR FUSION

- Light elements are joined together to produce heavy elements
- Takes place in:
 - Sun
 - Stars

4) ELECTRICAL ENERGY/ ELECTRICITY

- Flow of electrical current
- Made in power stations
- Used widely in homes, schools, industries, factories

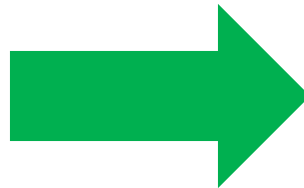
5) HEAT ENERGY

- Energy that goes from a region of high temperature to a region of low temperature



5) HEAT ENERGY

- When a cold object is placed in a warm area, it will pick up heat from the surroundings
 - The cold object will get hotter and melt



5) HEAT ENERGY

- When a warm object is placed in a cold area, heat from the object will go out into the surrounding area
 - The warm object will get cooler

5) HEAT ENERGY

- Sun gives off heat
- Combustion/ burning releases heat
- Electricity/ electrical appliances produce heat – iron, toaster, oven

6) KINETIC ENERGY

- Energy contained in a **moving** object
 - Truck
 - Flying bullet
 - Bird
 - Sprinter

7) RADIANT ENERGY



- Electromagnetic radiation – EMR
- Energy given off from one object to another

7) RADIANT ENERGY

- Energy passes through a vacuum (empty space)
 - Radio waves, microwaves, ultraviolet rays (UV), X-rays

7) RADIANT ENERGY

- Dull, black, and rough surfaces
 - Absorb heat energy
 - Radiate heat energy



7) RADIANT ENERGY

- Shiny, silvery, and smooth surfaces
 - Do not absorb heat energy
 - Do not radiate energy
 - Instead, they reflect heat energy



8) LIGHT ENERGY

- Allows us to see
- Allows plants to make food – photosynthesis

8) LIGHT ENERGY

- Sun
- Stars
- Lightning
- Fire
- Fireflies
- Electricity makes bulbs light up

9) SOUND ENERGY

- Made when objects vibrate
 - Vocal cords
 - Musical instruments

10) MECHANICAL ENERGY

- Energy in the moving parts of objects
- Potential energy + kinetic energy = mechanical energy