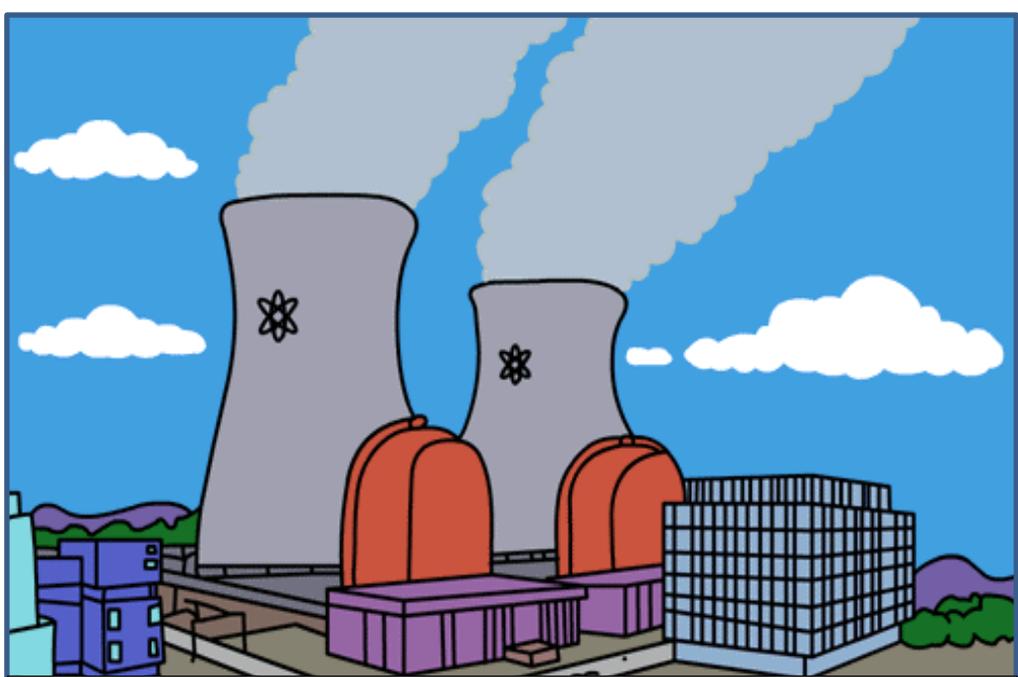




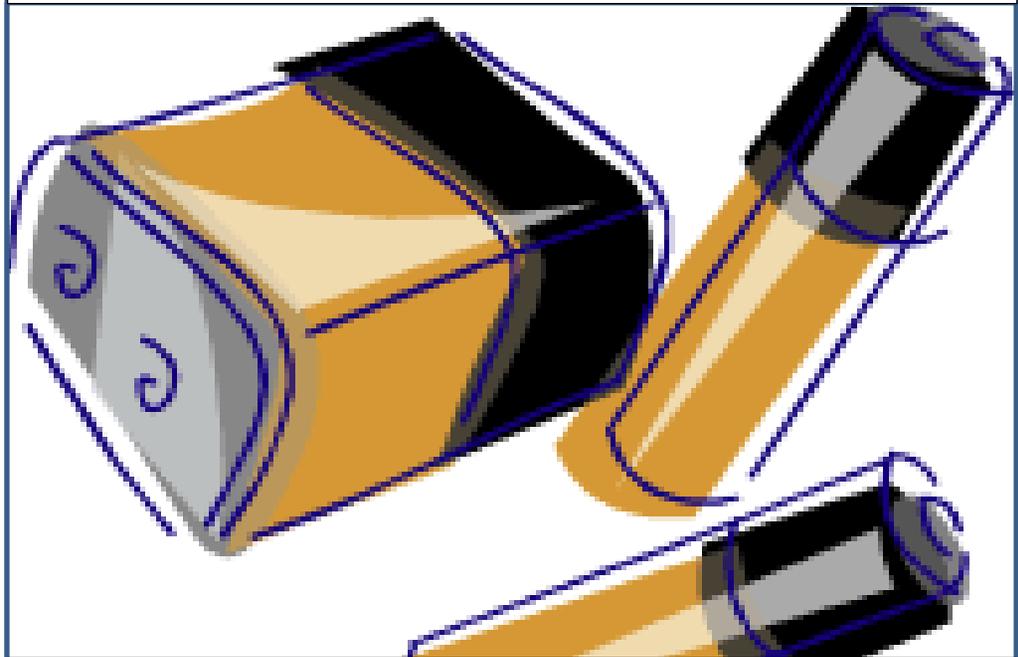
**Bicycle**



**Power Plant**



**Bat**



**Batteries**



**Bowling Pins and Ball**

**Bell**



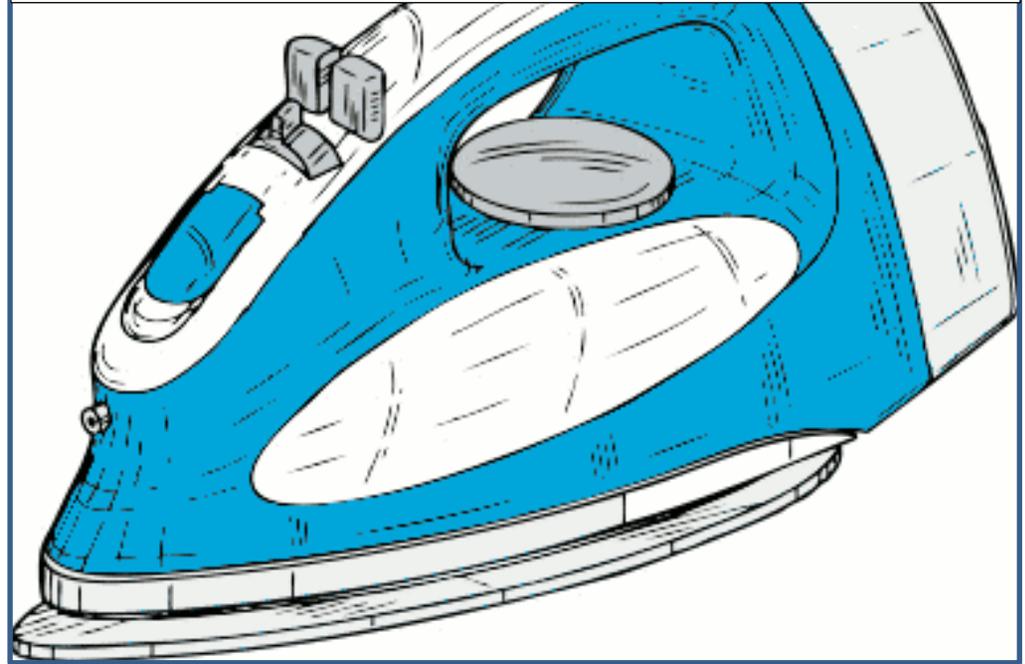
**X-ray**



**Car**



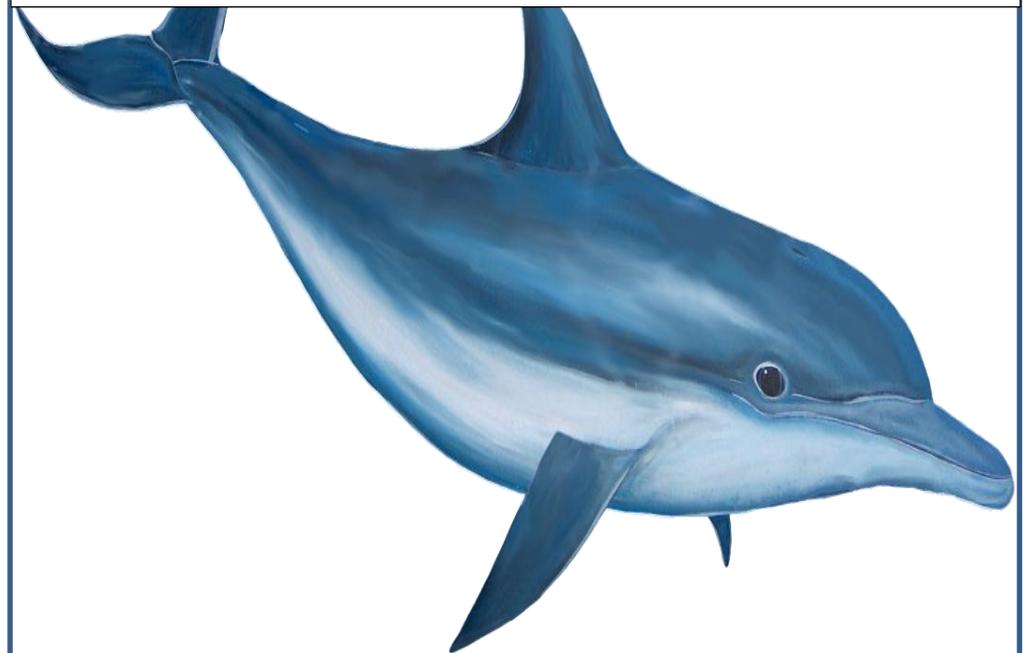
**Iron**



**Geiger counter**



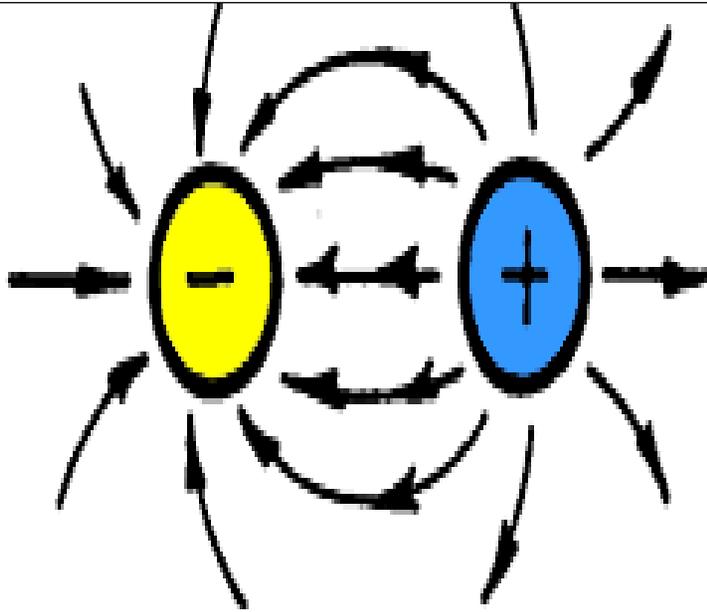
**Dolphin**



**Coal**

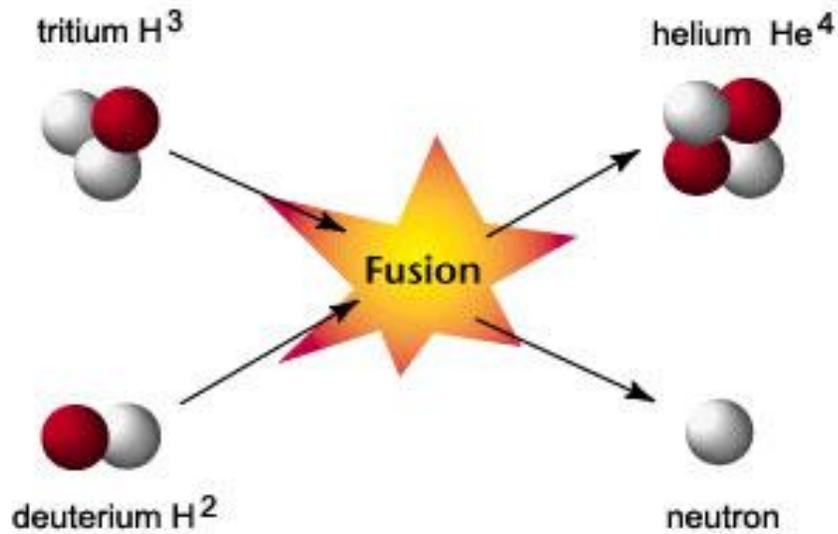


# Electrons



# Fishing

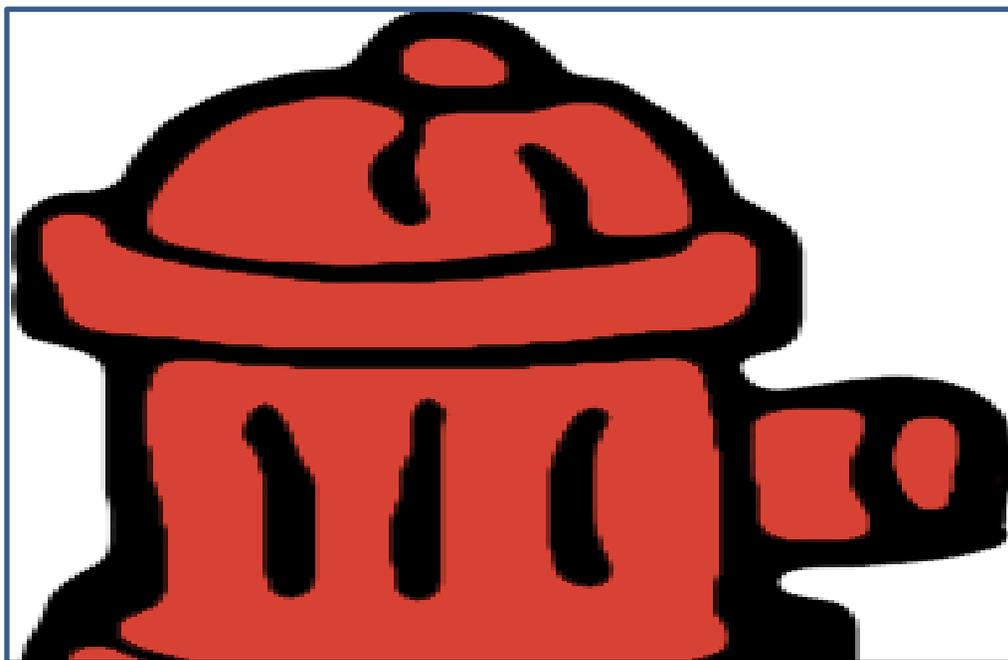
# Gas Stove (on)



# Atoms Fusing



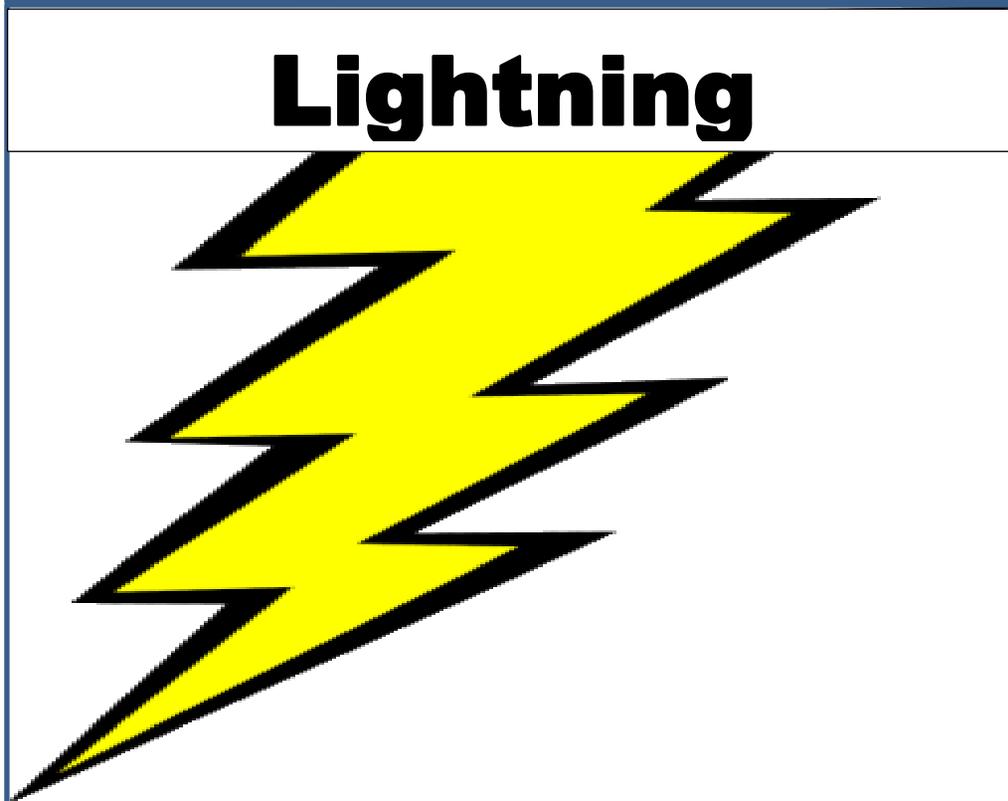
**Sun light rays**



**Fire Hydrant**



**Playing Instruments**



**Lightning**

**Lit Match**



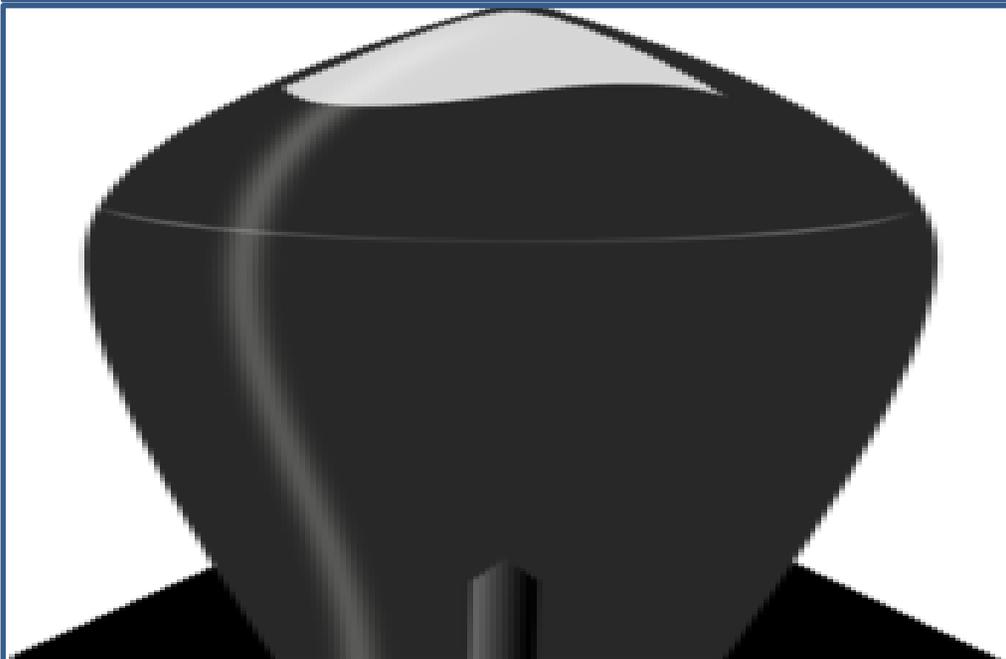
**Pencil Sharpener**

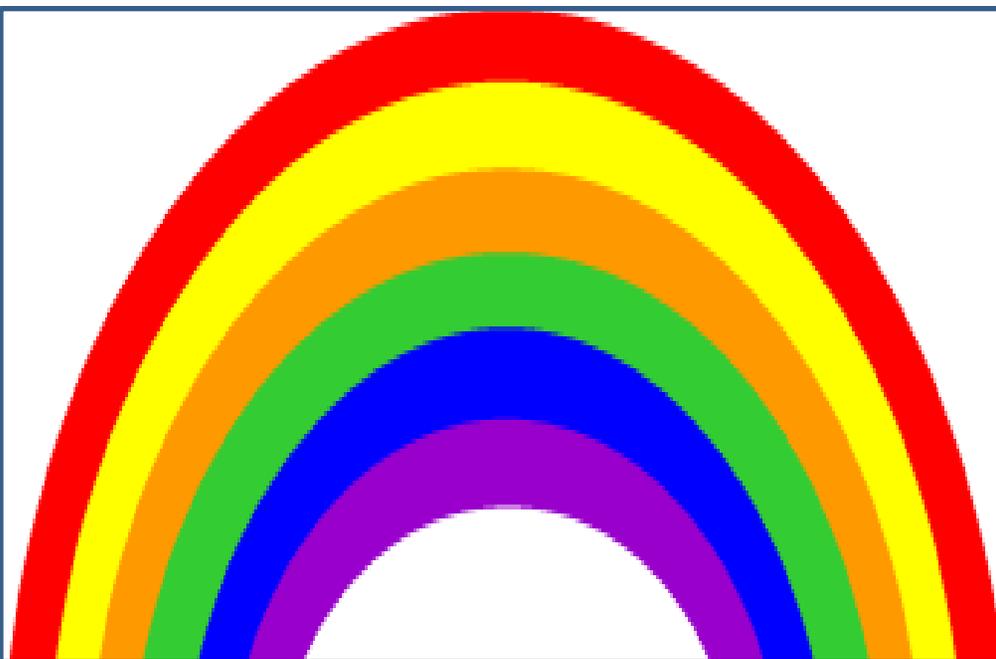


**Gasoline**



**Atomic Bomb**



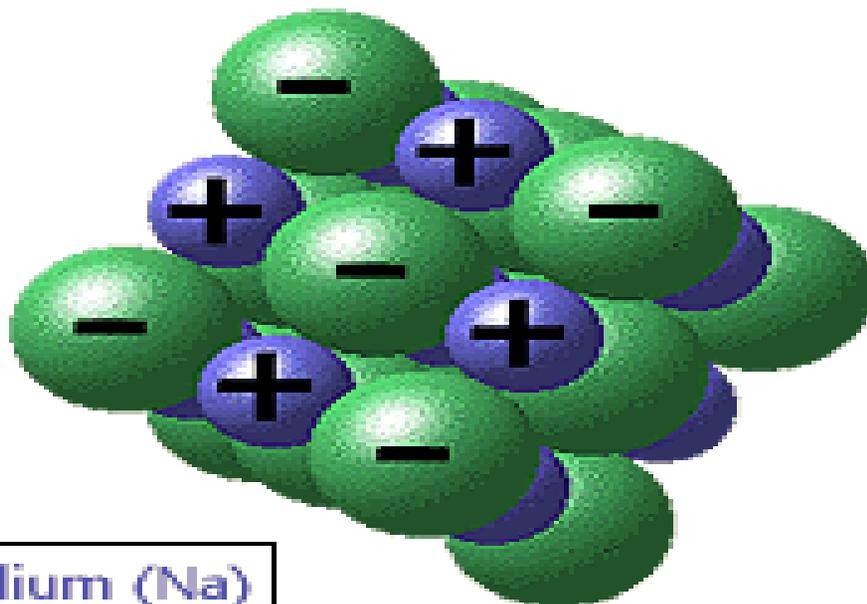


**Rainbow**



**Roller Coaster**

Ionic bonding in  
sodium chloride (NaCl)



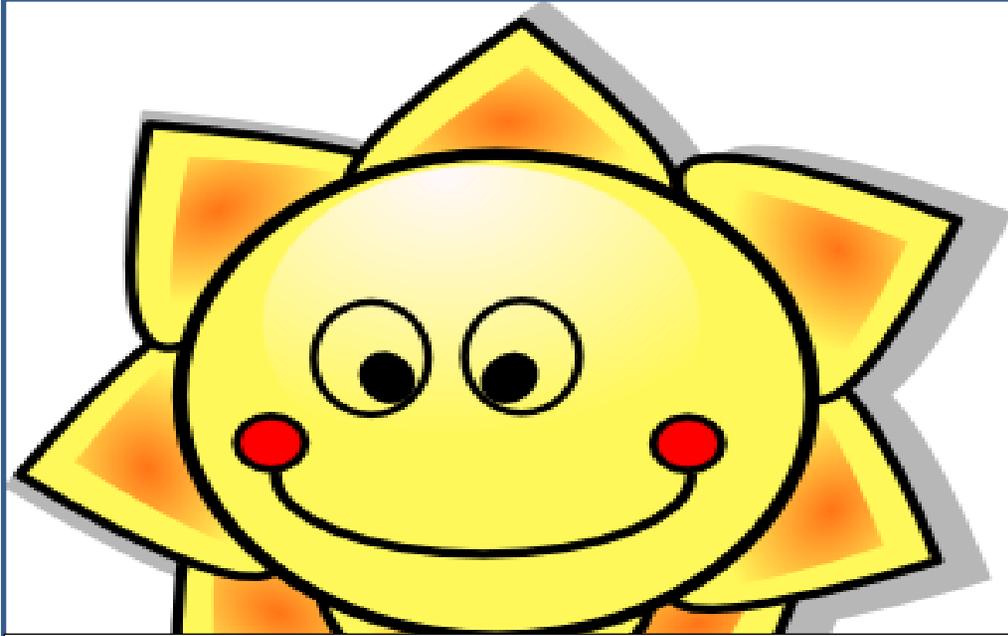
sodium (Na)  
chlorine (Cl)



**Satellite Dish**



**Soup**



**Sun**



**Hair Standing Up**



**Telephone (ringing)**



**Erupting Volcanoes**



**Power Lines**



**Tree**

## Instructions

With your partner, sort the cards on your lab table into groups.

- You may have as many groups or as few groups as you like.
- Be able to explain your reasoning for the groups.
- Each group must contain more than one card.
- All the cards must be used.

\*\* You and your partner will have time to observe other groups sorting, please wait until told to do so\*\*

## **Instructions (part two)**

With your partner, re-sort your cards on your lab table into seven groups.

- Be able to explain your reasoning for the groups.
- Each group must contain more than one card.
- All the cards must be used.

### **Instructions (part three)**

With your partner, re-sort the cards on your lab table into two groups.

- Be able to explain your reasoning for the groups.
- Each group must contain more than one card.
- All the cards must be used.

## Part Four

With your partner, sort the cards on your lab table into the seven types of energy. Use the definitions below to help you sort the cards. Once again all cards must be used and do belong in a category.

### Energy Definitions

**Mechanical Energy:** related to the movement of objects or its position in gravity.

**Sound Energy:** relates to the repetitive compression (squeezing) and rarefaction (letting out) of molecules in a substance (solid, liquid, gas).

**Chemical Energy:** related to the potential energy stored in the bonds between atoms in a compound.

**Radiant (Light) Energy:** related to the vibrations of an electrical charge or magnetic field that produces electromagnetic waves that can travel through a vacuum such as space.

**Electrical Energy:** related to the movement or flow of electrons which carry a charge.

**Thermal (Heat) Energy:** related to the motion of atoms or molecules in a substance.

**Nuclear Energy:** related to the potential energy stored in bonds between particles in the nucleus of an atom.

## Part Five

With your partner, re-sort the cards on your lab table into two groups. One group will be potential energy and the other group will be kinetic energy.

- Each group must contain more than one card.
- All the cards must be used.
- Hint: In general, most cards will stay with other cards from the same energy.

**Potential Energy** - stored energy and the energy of positional gravitational energy. There are several forms of potential energy.

**Kinetic Energy** – energy of motion – of waves, electrons, atoms, molecules, substances, and objects.