Name: _____

STATIC ELECTRICITY KEY

1. What is matter?

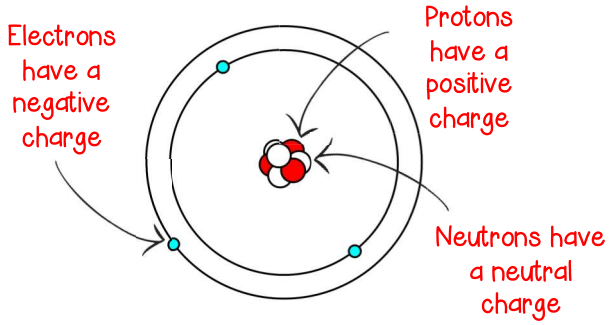
    a. Anything that has mass and takes up space.

2. What makes up matter?

    b. Atoms

3. What are the three particles in an atom?

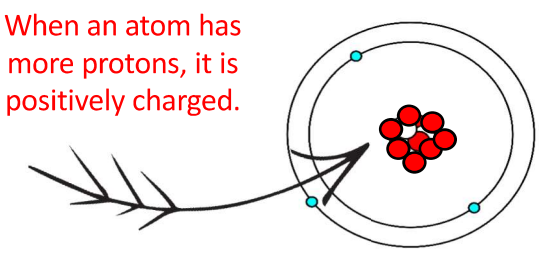
    c. Protons, neutrons, and electrons

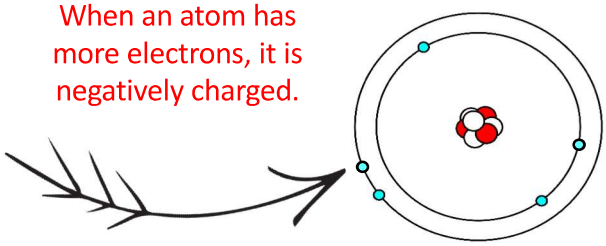


Since protons and neutrons are located inside the nucleus of the atom, they are held there very tightly. Electrons can jump from one atom to another because they are located outside of the nucleus.

4. Some objects like glass, plastic, and cloth do not give up their electrons very easily. They are called insulators.

5. Other objects like metals, water, and dry air hold their electrons very loosely. They are called conductors.





6. Static Electricity – the buildup of electric charge on an object.

    a. Static electricity does not flow through wires

    b. Static means "not moving"

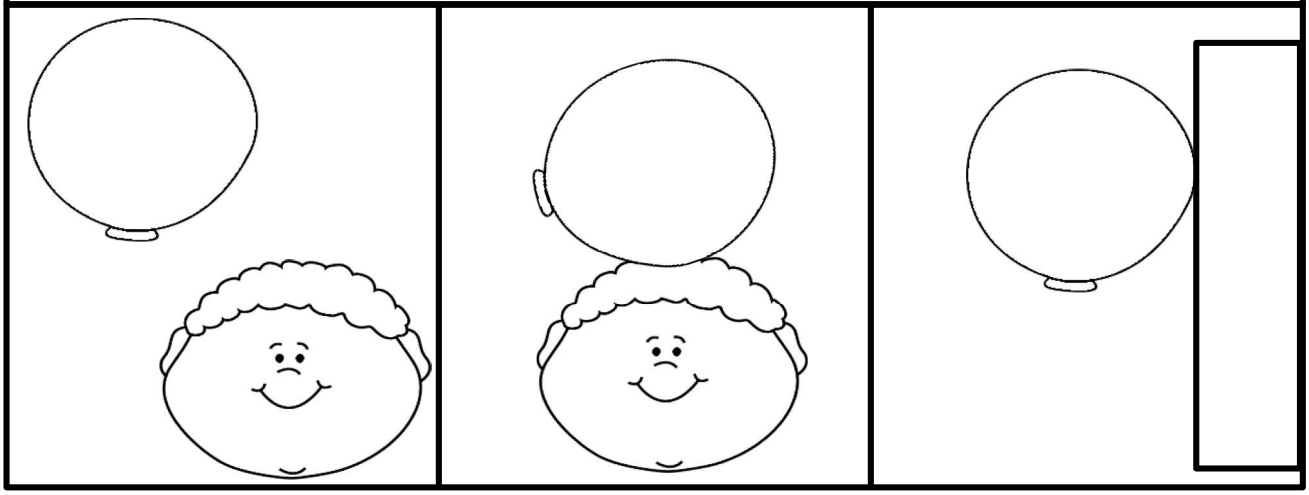
7. If the charge is strong enough, static electricity "jumps" from one object to another.

8. Static electricity is the buildup of an electric charge on an object.

9. Electric discharge – when electrons move quickly from one object to another.

STATIC ELECTRICITY EXAMPLES

Friction causes electrons to jump from one object to another



- Your hand (negative charge) will now attract to the protons on a metal doorknob
  - Electrons will jump from your hand to the doorknob and you will feel a shock
  - This is called electric discharge: when electrons move quickly from one object to another
  - You now have a neutral charge again

- Lightning is an example of electric discharge.
  - The bottom of the cloud gains a negative charge
  - This creates a positive charge on the ground
  - When the charge is strong enough, the charge jumps from the cloud to the ground (lightning).

- When you go down a slide, your hair gives off electrons leaving behind a positive charge
  - Your hair sticks straight up because the positive charges do not want to touch each other.