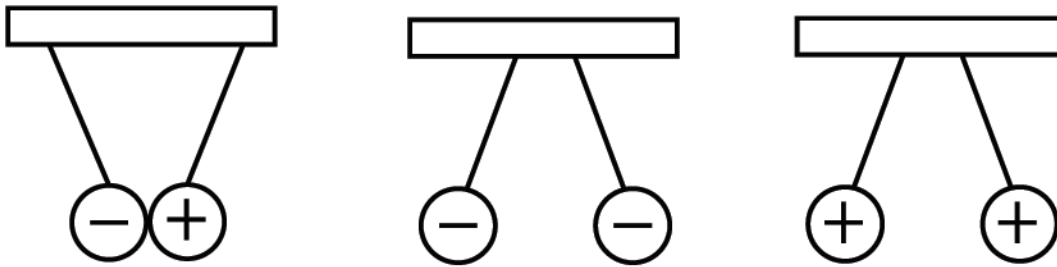


ESCAPING ELECTRONS!

An atom usually has the same number of protons and electrons, but the electrons can separate from atoms. You may have heard the expression "opposites attract". In the case of atoms, unlike charges attract each other and like charges repel each other. The attraction between like charges (positive + positive, negative + negative) causes the movement of electrons between two objects.

Answer Key



An object is neutral and has no charge when it has the same amount of protons and electrons. But when the object loses or gains electrons it becomes unbalanced, and electrically charged. If there are more protons than electrons, the object carries a positive charge. If there are more electrons than protons, the object carries a negative charge.

Some materials allow electrons to pass through more easily than others. **Conductors** hold onto electrons loosely. Electrons move easily through these materials. Metal is a good conductor.



Insulators hold onto electrons tightly. Electrons do not move easily through these materials. Plastic, cloth, and glass are good insulators.



Circle the word that makes each statement true.

An object with a positive (+) charge will attract ~~repel~~ an object with a negative (-) charge.

An object with a negative (-) charge will ~~attract~~ repel an object with a negative (-) charge.

An object that gains electrons will have a ~~positive~~ negative charge.

An object that loses electrons will have a positive ~~negative~~ charge.

Student answers will vary, but may include:

An insulator conductor holds electrons tightly, so electricity does not flow through easily.