# Anticipation Guide: Electric Charge

**Before Reading:** In the space to the left of each statement, place a check mark (✓) if you agree or think the statement is true or an (X) if you disagree or think the statement is false.

**During or After Reading:** Add new check marks or cross-through the X’s for which you have changed your mind. Keep in mind that this is not like the traditional “worksheet”. You may have to put on your thinking caps and “read between the lines.” Use the space under each statement to note the **page, column, and paragraph(s)** where you have found information to support your thinking (evidence).

1. \_\_\_\_\_ Electrically charged objects work best on dry days.
2. \_\_\_\_\_ Like charges repel.
3. \_\_\_\_\_ Unlike charges repel.
4. \_\_\_\_\_ Objects with equal an equal amount of positive and negative charge has no net charge.
5. \_\_\_\_\_ Protons and neutrons are not fixed and may move from atom to atom.
6. \_\_\_\_\_ If an electron is transferred from one neutral object to another the first object loses negative charge thereby becoming positive.
7. \_\_\_\_\_ During transfer of electrons electric charge is created.
8. \_\_\_\_\_ The principle of conservation of charge is one of the fundamental laws of nature.
9. \_\_\_\_\_ When an object is charged, its charge is always a multiple of a fundamental unit of charge, symbolized by the letter ***e***.
10. \_\_\_\_\_ An object may have a charge of ±e, or ±2e, or ±3e, and so on.
11. \_\_\_\_\_ The value of e is 1.6 x 10-19 C.
12. \_\_\_\_\_ 1 Coulomb, the SI unit of electric charge, contains 6.2 x 1018 electrons.
13. \_\_\_\_\_ Materials in which electric charge moves freely are called electrical insulators.
14. \_\_\_\_\_ Most metals are conductors.
15. \_\_\_\_\_ Materials in which electric charges do not move freely, such as glass, rubber, silk, and plastic are called electric insulators.
16. \_\_\_\_\_ Superconductors have zero electrical resistance and can conduct electricity without heating.
17. \_\_\_\_\_ Induction is the process of charging a conductor by bringing it near another charged object.
18. \_\_\_\_\_ Charging by induction requires that both objects contact one another.

Reading Assignment: Holt McDougal **Physics** (black book) pages 549 - 561