Chapter 7: **Static electricity is produced by electron transfer.**
Static Electricity

• Refers to electric charges that can be collected and held in one place.
• It is the temporary transfer of electrons.
Charges on objects...

*Remember:*

1. Protons have a *positive* charge
2. Electrons have a *negative* charge
When the number of protons equals the number of electrons, the atom is neutral.
• If electrons are **removed** from a neutral object, the object will become **positively** charged.
• If electrons are **added** to a neutral object, the object will become **negatively** charged.
Activity 7-1B
Visualizing Charge Transfer
Pg. 231
Static Electricity

Video.google.com
(23 min)
Electric Discharge

• The removal of electric charge from an object.
• Ex. Lightening “shocks”
Electric Discharge
The Coulomb (C)

- The unit of electric charge.
- It takes the addition or removal of $6.25 \times 10^{18}$ electrons to produce 1C of charge.
Laws of Electric Charges:

1. Like charges repel
2. Unlike charges attract
3. Charged objects attract some neutral ones.
Laws of Electric Charges
Technologies and Static Electricity

Lightening rods
Photocopier

1. Original Document
2. Charged plate
3. Charged letters
4. Blank paper
5. Toner
6. Final copy
Electrostatic air cleaner