

## Prepare Your Own Summary

In this chapter, you investigated how static charge is produced by electron transfer. Create your own summary of the key ideas from this chapter. You may include graphic organizers or illustrations with your notes. (See Science Skill 12 for help with using graphic organizers.) Use the following headings to organize your notes:

1. Electric Charge and the Atom
2. Charge Distribution in Neutral, Positive, and Negative Objects
3. Transferring Charge
4. Laws of Static Charge
5. Insulators and Conductors

## Checking Concepts

1. Draw and label a diagram showing the three parts of the atom. State the electric charge on each part.
2. Using  $(-)$  to represent electrons, and  $(+)$  to represent protons, draw:
  - (a) a neutral object
  - (b) a negative object
  - (c) a positive object
3. Which type of particles are transferred during static charging?
4. What type of charge do plastics, such as acetate, gain when charged by friction?
5. A neutral piece of amber becomes negatively charged when rubbed with fur. What charge would the fur possess after charging the amber?
6. What is the purpose of
  - (a) an electroscope?
  - (b) a Van de Graaff generator?
7. What effect does grounding have on a charged object?
8. What is the difference between a conductor and an insulator?

9. Use the word “attracts” or “repels” to state what happens when each of the following objects interact.

- (a) positive—positive
- (b) positive—negative
- (c) negative—positive
- (d) negative—negative

10. Use the word “increases” or “decreases” to complete each of the following sentences in your notebook.

- (a) When two charged objects are moved farther apart, the electric force \_\_\_\_.
- (b) When two charged objects are moved closer together, the electric force \_\_\_\_.
- (c) Increasing the amount of charge \_\_\_\_ the electric force between two charges.
- (d) Decreasing the amount of charge \_\_\_\_ the electric force between two charges.

11. Describe the movement of electrons when an object is charged by:

- (a) conduction
- (b) induction

12. State whether each of the objects below is negative, positive, or neutral.

