

Learning Target: I can describe and explain how static electricity occurs through conduction, induction, and friction.

The Shocking Truth About Static Electricity Video Notes



1. Most atoms have no overall \_\_\_\_\_. An atom usually has as many \_\_\_\_\_ as it has protons. This leaves the atom uncharged or \_\_\_\_\_.
2. How can an uncharged object become charged? \_\_\_\_\_  
If an object loses electrons, it is left with more \_\_\_\_\_ - giving it an overall \_\_\_\_\_ charge.  
If an object gains electrons, it will have an overall \_\_\_\_\_ charge.
3. The build up of charges on an object is called \_\_\_\_\_. In static electricity, charges \_\_\_\_\_ up on an object, but they do not flow \_\_\_\_\_.
4. What does the law of conservation of charge state? \_\_\_\_\_

**Charging by Conduction**

Charging by conduction is the transfer of \_\_\_\_\_ from one object to another by \_\_\_\_\_ contact. Conduction occurs on a \_\_\_\_\_ neutral object when a charged object is in \_\_\_\_\_ with it.

5. Look at the picture at 1:56 seconds in the video. How does a neutral object get a negative charge? \_\_\_\_\_

**Quick Check for Understanding!**

In what type of temperature do most people experience static shock? \_\_\_\_\_ Explain why. \_\_\_\_\_

Learning Target: I can describe and explain how static electricity occurs through conduction, induction, and friction.

### Charging by Induction

Electrons can react to the electric field of a \_\_\_\_\_ object without \_\_\_\_\_ the object itself. In some materials like \_\_\_\_\_, electrons can easily \_\_\_\_\_ their atoms.

6. (3:32 seconds) What happens when you put a negatively charged object close to a metal object? \_\_\_\_\_

7. (3:45 seconds) Look at diagram (b). Why did the negative charges come closer to the rod and the positive charges moved away from the rod even though the rod was not touching the balloons? \_\_\_\_\_

### Quick Check for Understanding! (4:15 seconds)

What made balloon A have a negative charge, and what made balloon B have a positive charge? \_\_\_\_\_

### Charging by Friction

\_\_\_\_\_ Is the transfer of electrons from one uncharged object to another by \_\_\_\_\_ the two objects together. Some electrons can \_\_\_\_\_ from one object to the next when you rub them \_\_\_\_\_

8. What does rubbing a balloon on your hair do to the overall charge of a balloon? \_\_\_\_\_

What overall charge does your hair have now? \_\_\_\_\_

### Quick Check for Understanding!

What makes the balloon attracted to your hair now? \_\_\_\_\_

9. What is the difference between static induction and static conduction? \_\_\_\_\_

10. What do you have to do to create static friction? \_\_\_\_\_