

Unit 2: Electricity

Notes, part 2: Textbook Chapter 18.1-18.3 Conductors & Insulators, Electric Field, Etc.

Conductors and Insulators

1. _____ allow electrons to easily move through them. List some examples.

2. _____ do not allow electrons to move through them. List some examples.

3. Protons _____ (can/cannot) flow through solid conductors.

4. **Ground:** a large, neutral source of charge (like the Earth). The ground can serve two purposes...

"The ground" can...

"The ground" can...

5. What happens to an object when the object is "grounded?"

6. What other objects, other than the Earth, could be used to ground something?

7. What is an electric field?

8. What creates an electric field?

9. **Electric Field Hockey (pHet Simulation)**

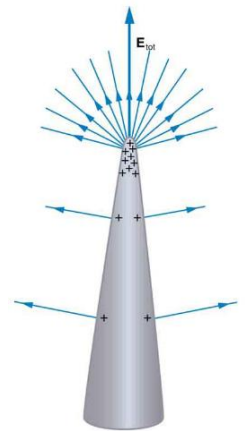
1. Find and run the simulation.
2. Click the "Field" and "Trace" buttons.
3. Try to win levels 1 and 2.
4. What happens when you turn off "puck is positive," so that the puck becomes negative?

10. Interesting (and important) facts:

Fact #1: Charges "leak away" from surfaces of charged conductors that are

_____.

This explains why lightning rods are added to buildings:



This also explains why the surface of a Van de Graaf generator is _____

Fact #2: The electric field inside a conductor is _____. This is why

one of the safest places to be during a lightning storm is
