

Part C: Simulations

To get to the correct website, Google “Phet Physics Online” it will be the first link.

PART 1: JOHN TRAVOLTAGE!

C.1 What do the little negative signs represent?

C.2 How do you get the little negative signs to fill up in Travolta’s foot? What is the name of this process?

C.3 Do electrons attract or repel each other? When Travolta fills with electrons, what do they want to do?

C.4 What causes an electrostatic discharge (a shock)?

C.5 How can you make Travolta fill up with electrons without incurring any electrostatic discharge?

C.6 How can you make electrostatic discharge happen as soon as the electrons enter Travolta?

PART 2: BALLOONS AND STATIC ELECTRICITY

C.7 What do the positive signs represent?

C.8 What do the negative signs represent?

C.9 Which of the two can move, negative or positive signs? Why?

C.10 Rub the balloon against the sweater. What happens to electrons?

C.11 What do we call this process after the balloon is rubbed against the sweater?

C.12 The balloon plays the role of the

- A) PVC pipe
- B) rabbit fur

C.13 The sweater plays the role of the:

- A) PVC pipe
- B) rabbit fur

C.14 After the balloon rubs against the sweater, the balloon is negative/positive. The sweater is negative/positive. Because the charges are like/opposite, the balloon and sweater attract/repel.

C.15 When the balloon is *charged* and goes near the wall, what happens to the electrons on the wall? Why?

C.16 Is the balloon attracted or repelled from the wall? Why?

C.17 What did we call the process that takes place in the wall?

C.18 Switch to the mode with *two* balloons, and figure out a way to get them to repel *each other*. Explain here: