Source: KBhPHYS201IntroToElectrostaticsLN

1 | The Rods and Paper Experiment

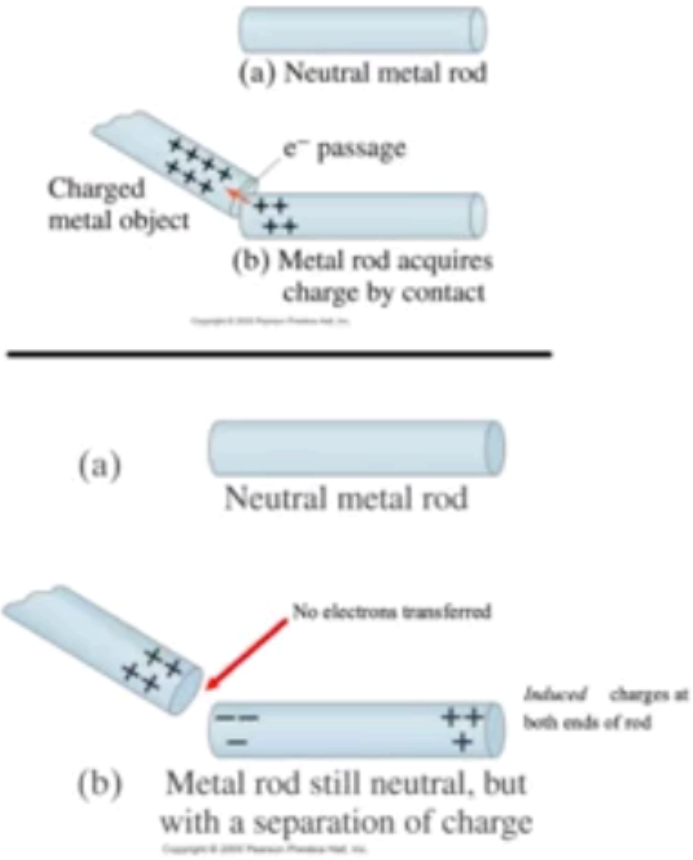

Figure 1: Screen Shot 2020-08-24 at 4.46.46 PM.png

Scenario 1

- Taking neutral rod + close, positively charged, rod
  - Electrons will move from the neutral rod to the charged rod
  - Balances the charge out

Scenario 2

- Taking neutral rod + slightly farther, positively charged, rod
  - The neutral rod “polarizes”, repelling the positively charged protons off to one side while attracting all the electrons towards it
  - There is a net force of attraction to the “left” on the example image — towards the charged rod

Recall that per the physics KBhPHYS201D1AtHomeActivity D1 At home Activity, pieces of paper sometime flow towards the charged rod, then back again. Why?

About how that works…

1. The charged rod polarizes the paper
2. The paper's newfound positive end attract with the plastic rod's negative end
3. The paper has a net positive force towards the rod, so it accelerates towards it
4. Electrons, once connected, tries to flow back onto the paper
5. The paper neutralizes, then falls to the ground
6. Repeat from (1)