

Booklet 10
Electroscope

Flipped Classroom: Video | <https://youtu.be/AXojgNyu9iw>


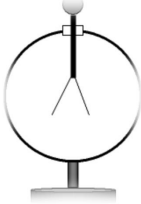
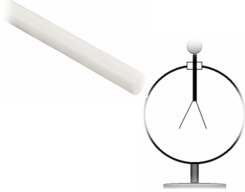

1. Who discovered static electricity? Where did he get inspiration from?
2. Who discovered electric charges? How did he do that?
3. Who discovered electric force? State the equation.
4. Who discovered the electric field? Derive the formula
5. Who discovered electrons? State the mass and charge of electron
6. Who discovered protons? State the mass and charge of proton

Do Now | Video <https://youtu.be/ZbrkBSFB2Fc>

1. Explain the main idea of the video
2. What is Static Electricity
3. What is the charge of friction?
4. What is an insulator
5. What is conductor
6. What is the difference between insulator and conductor?
7. What is induction
8. Draw a diagram to show charges in the electroscope and CVC pipe before the induction.
9. Draw a diagram to show charges in the pipe after Mr. Bari rubbed it with fur
10. Draw a diagram to show charges on pipe and electroscope after Mr. Bari bring it close to electroscope
11. Draw a diagram to show charges on both the electroscope and pipe after Mr. Bari move it away from the electroscope.


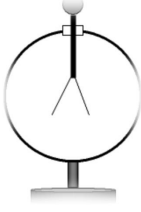
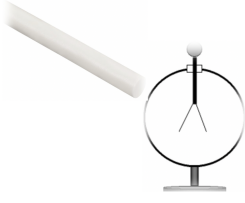

Hint | <https://youtu.be/F3Ejs29GBQc>

1. Explain the main idea of the video
2. Charge by Induction : Draw charges in each scenarios (1) A rubber PVC pipe (Before induction) (2) An Electroscope (Before induction) (3) Rubber pipe bring close to electroscope (after induction) (4) Move away the rubber PVC pipe (after induction)

Scenario 1 Before Rubbing with fur	Scenario 2 Before Rubbing with fur	Scenario 3 After Rubbing with fur	Scenario 4 After Rubbing with fur
			
<p>What is net charge =</p>	<p>What is net charge =</p>	<p>What is net charge in rod = What is net charge in electroscope =</p>	<p>What is net charge in rod = What is net charge in electroscope =</p>

3. Charge by Conduction

Charge by Conduction : Draw charges in each scenarios (1) A rubber PVC pipe (before the conduction) (2) An Electroscope (before the conduction) (3) Rubber pipe bring close to electroscope (after the conduction) (4) Move away the rubber PVC pipe (after the conduction)

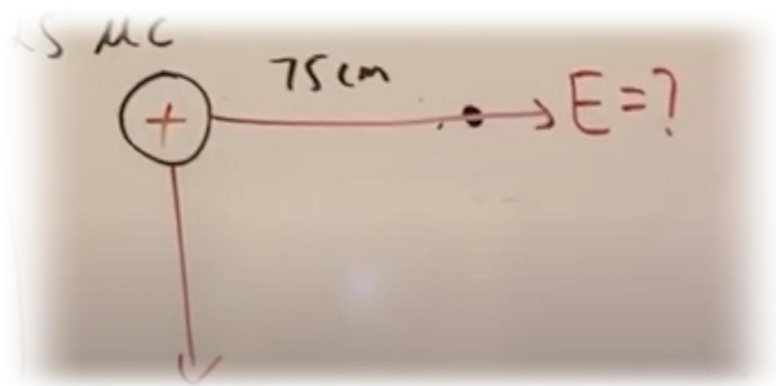
Scenario 1 Before Rubbing with fur	Scenario 2 Before Rubbing with fur	Scenario 3 After Rubbing with fur	Scenario 4 After Rubbing with fur
			
What is net charge =	What is net charge =	What is net charge in rod = What is net charge in electroscope =	What is net charge in rod = What is net charge in electroscope =

Hint | https://youtu.be/ac4NK5-_o-M

Exit Slip | Video

<https://youtu.be/iu58A9XUx-0>

1. Explain the main idea of the video
2. What is an electric field?
3. What is point charge
4. What is source charge?
5. Find the magnitude of the electric field as you watch it on the video.



Hint | <https://youtu.be/KawdYXuzebE>

Homework | Video <https://youtu.be/gVtThGF3zII>

What is a gravitational field? Find the gravitational field strength generated by Earth at (a) on the Earth surface (b) 5000 km above the Earth surface. (Earth radius 6380 km)

Hint | <https://youtu.be/RGmaExgW5eE>