

Static Electricity



Purpose: Demonstrate the basics of electric charge.

With this basic setup, you can create both kinds of charges by friction and demonstrate their interactions.

Here are the combinations:

Rub-ee	Rub-er	Charge (Rub-ee)
Glass Rod	Silk	+
Acrylic Tube	Fur	-
PVC Tube	Green Wool	-

Ben Franklin established the convention that the charge induced on the glass rod is to be positive.

Note: The tubes are much lighter than the glass rod, so it works best to use them in the swivel bases, and keep the glass in your hand.

Also included are some pith balls, foil (to make small conducting shells), some string, and a hanger. With these you can show the attraction of a neutral body due to polarization, charge transfer, *etc.*

If you want to be more quantitative, we have one decent electroscope. With this you can accumulate charge from *e.g.* the glass rod with a few repeats of charging and brushing against the scope's accumulator. Then see how many passes with one of the tubes it takes to discharge it.

Extra Equipment: Electroscopes (Shelf F1)

Location: Shelf E2