

SUDBURY, ONTARIO, CANADA

Static Electricity: Charging by Friction

Grade 9, Academic, Physics

Pre-Lab Questions and Lab

1. Hypothesis:

If the pop-can moves <u>towards</u> the balloon,

then the balloon and the pop-can have (circle one) <u>opposite / the same</u> charge(s), meaning that the

balloon is (circle one) <u>repelling</u> / <u>attracting</u> the pop-can.

Drawing:

If the pop-can moves <u>away from</u> the balloon,

then the balloon and the pop-can have (circle one) <u>opposite</u> / the same charge(s), meaning that the

balloon is (circle one) repelling / attracting the pop-can.

Drawing:



SUDBURY, ONTARIO, CANADA

- 2. What kind of charging process are we using?
- 3. Why are we rubbing the fur on the balloon for 3 different amounts of time?

4. What amount of charging (5, 10, or 15 seconds) on the balloon will make the pop can have the highest speed?

.

.

- 5. How can we calculate speed?
- 6. Why must we dissipate the charge on the balloon before beginning another trial?

7. How will you dissipate the charge on the balloon before?



SUDBURY, ONTARIO, CANADA

Table 1: Observe and record your observations on the pop can and the balloon

	Balloon (Not rubbed	Balloon rubbed for 5 seconds with fur	Balloon rubbed for	Balloon rubbed for
	with any banoon)	5 seconds with ful	To seconds with ful	15 seconds with ful
Time pop can took to travel 1 meter				
Speed Calculate: 1 meter/# seconds				
Drawing:				