

## Lab01A Observations and discussion worksheet

Type the correct answers **based upon your observations.**

### Experiment 1

1A: Yes or No: Touching the charged rubber rod to the copper loop makes the leaves separate.

1B: Yes or No: Touching the charged glass rod to the copper loop makes the leaves charged in 1A separate more or separate less.

1C: Interpret your results from 1B in terms of total amount of charge on the electroscope.

1D: Can you conclude from your results that there are two types of charges? (why)

1E: Describe your experiment which will test for the sign of rubber on acetate and glass on wool.

1F: What did you determine for the following:

Sign of glass rod charge when rubbed with cats fur is : \_\_\_\_\_

Sign of rubber rod when rubber rod when rubbed with acetate is: \_\_\_\_\_

### Experiment 2:

2A: Below, describe the experiment that will test the sign of the charge deposited on a balloon when rubbed with cats fur.

2B: When charged as described in the lab, do the balloons attract or repel each other?

2C: Is the sign of the charge on the balloons the same or different.

2D: What can you conclude about the interaction between two bodies when the charge on both bodies is the same as in this case?

2E: What happens when the negatively charged rubber rod is brought close to the charged balloons?

2F: What is the sign of the charge on the balloons (positive or negative)?

**Experiment 3**

3A: Explain how, after charging the electroscope as described by induction, you can test for the sign of the charge on the electroscope.

3B: According to your test above, what is the sign of the charge on the electroscope and why.

3C: Describe the steps required to place a negative charge on the electroscope by induction.

3D: Describe how you determined the sign of the charge on the metal plate of the electrophorus.

3E: Explain (in your words) how the electrostatic chime works.