

Investigating Static Electricity

/15

Name:

Date:

Block:

Question:

What happens when you charge certain materials?

Background:

Static electricity is electric charge that remains in one place. A material can be charged if there is a transfer of electrons from one to another. Certain materials are more likely to lose electrons, and other materials are more likely to gain electrons.

Hypothesis:

IF we charge certain materials, **THEN** they will attract or repel other charged materials.

Procedure:

- 1) Use the materials provided to complete station 1, 2, 3, and 4
- 2) Follow all of the instructions for the experiment as outlined at the stations
- 3) Do not experiment with the materials in a random way!

Observations:

For each station, describe what you have observed (*1 mark each*) and draw a diagram including the positive and negative charges on the object (*1 mark each*)

Station 1: Crazy Confetti

I observed:

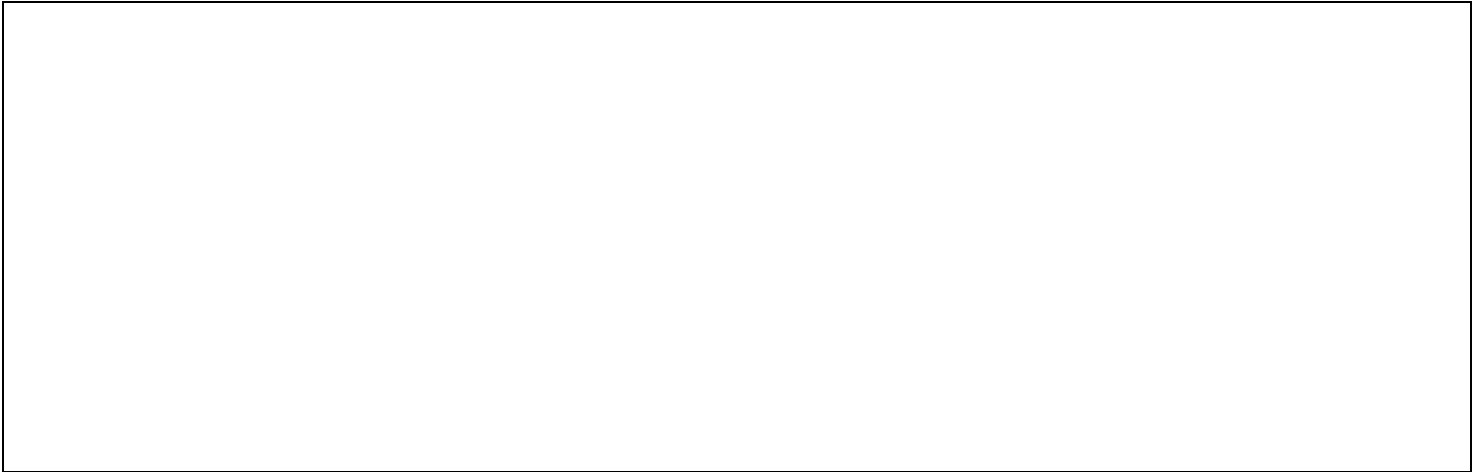
Sketch what happened, including negative and positive charges on the object



Station 2: Balloon on a Wall

I observed:

Sketch what happened, including negative and positive charges on the object



Station 3: Magic Can

I observed:

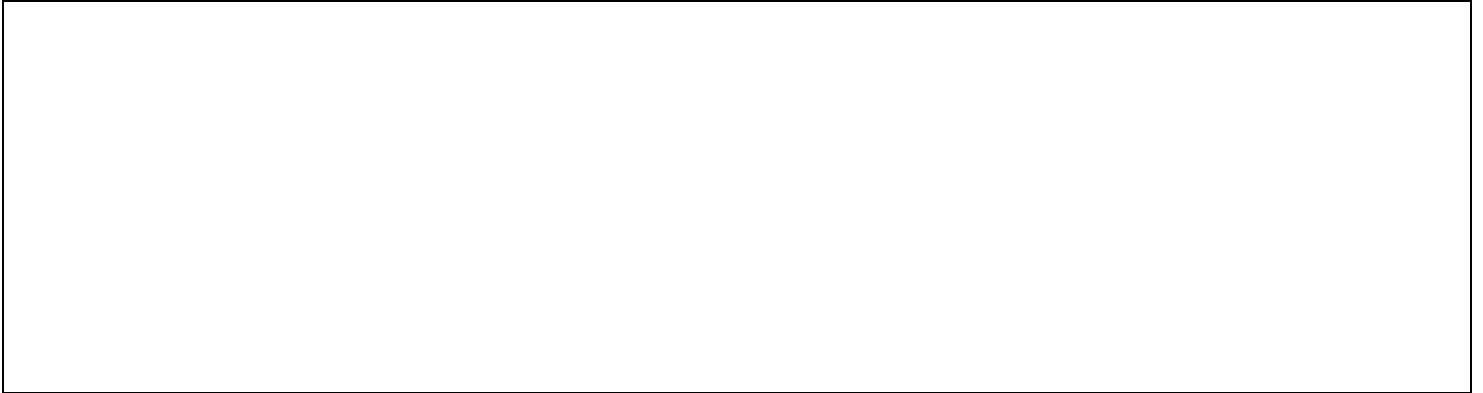
Sketch what happened, including negative and positive charges on the object



Station 4: Weird Water

I observed:

Sketch what happened, including negative and positive charges on the object



Error Analysis:

What about this experiment might others say is not accurate enough? What might make them think your results were not reliable? (2 marks)

Analysis/Conclusion:

1. When two materials are rubbed against each other, a charge is created. What subatomic particle is being transferred in order to create that charge? (1 mark)
2. Once a material is charged, why does it attract or repel another charged material? (1 mark)
3. Explain the Law of Electric Charge. (2 marks)
4. Provide an example of static electricity in your day to day life (1 mark)