Name: _____ Date: _____ Block: _____

Electrostatic Series Questions (Science 9)

Answer these questions in full sentences on a separate sheet of paper. You will be asked to hand this assignment in for marks.

1. When the two pairs of objects are rubbed together, predict which will end up with a positive or negative charge. Explain.

2. Object A (vinyl) and Object B (amber) are both rubbed with wool for 10 seconds.
    a) What charge will the objects have before rubbing? After rubbing?
    b) Which object will have a greater (stronger) static charge after rubbing? Explain briefly.

3. How could you get glass to have a positive static charge? How could you get glass to have a negative static charge? (Challenge: is there a way to accomplish this without rubbing the glass itself?)

4. Plastic wrap clings to practically *everything*. Use the electrostatic series to explain why this is the case.

5.
    a) What would you use to rub ebonite with to get the strongest static charge: silk, wool, human hair, or rabbit fur? Explain the science principles behind your answer.
    b) Perform the experiment you planned in part “a” of this question.
    You will measure the strength of the static charge by counting the number of hole punches stuck to the ebonite.
    c) Was your prediction correct? If NO, suggest 3 ways your experiment might have been improved to make the results more accurate.

6. Is it possible to get two rubber balloons to stick together? Draw and explain how this might be possible. Show this plan to your teacher, who may allow you to try this experiment.