

**Bill Nye the Science Guy: *Static Electricity*** Name \_\_\_\_\_ pd \_\_\_\_\_

Date \_\_\_\_\_

**BEFORE** viewing the tape, read through the questions below.

\_\_\_\_\_ 1. The word "static" means \_\_\_\_\_.

\_\_\_\_\_ 2. Electricity is made of \_\_\_\_\_.

\_\_\_\_\_ 3. Opposite charges \_\_\_\_\_ one another.

\_\_\_\_\_ 4. A Van Der Graff generator is used to make \_\_\_\_\_.

5. In the space below make a sketch of a Van Der Graf generator. Show the path of electrons in the machine.

6. Why did the hairs on "wig of science" all stand on end when Bill placed his hand on the Van der Graff generator?

Why did the hairs go down when he touched the small metal ball to the Van der Graff?

\_\_\_\_\_ 7. Like charges \_\_\_\_\_ one another.

\_\_\_\_\_ 8. When electrical charges jump to ground, you see a \_\_\_\_\_.

\_\_\_\_\_ 9. "Embarrassing electron build up" in clothes is commonly known as \_\_\_\_.

\_\_\_\_\_ 10. What is an easy way to remove static cling?

11. Three fun things you can do with static electricity:

1. \_\_\_\_\_

2. \_\_\_\_\_

3. \_\_\_\_\_

12. Make a sketch of an atom. Where are the electrons?

\_\_\_\_\_ 13. When electrons are discharged to "ground" they actually pass through water pipes and into the \_\_\_\_\_.

\_\_\_\_\_ 14. The 3rd prong on a power plug is the \_\_\_\_\_ wire.

\_\_\_\_\_ 15. Can lightning strike backward, that is, from the ground up?

\_\_\_\_\_ 16. The Greek word for amber is \_\_\_\_\_.

\_\_\_\_\_ 17. Lightning can raise the air temperature to \_\_\_\_\_ °C.

\_\_\_\_\_ 18. Lightning can have as much voltage as \_\_\_\_\_ volts?

19. Why is a car the safest place to be during a thunderstorm? What happens to electric charges?

20. Describe 2 fun things to do with a comb?

21. What happens when you bring a glass bottle rubbed with silk near a plastic bottle rubbed with wool that is laying on its side? Why?

22. How can you make an electroscope with a plastic peanut butter jar, a coat hanger, some aluminum foil, and a foil gum wrapper. Draw a picture?