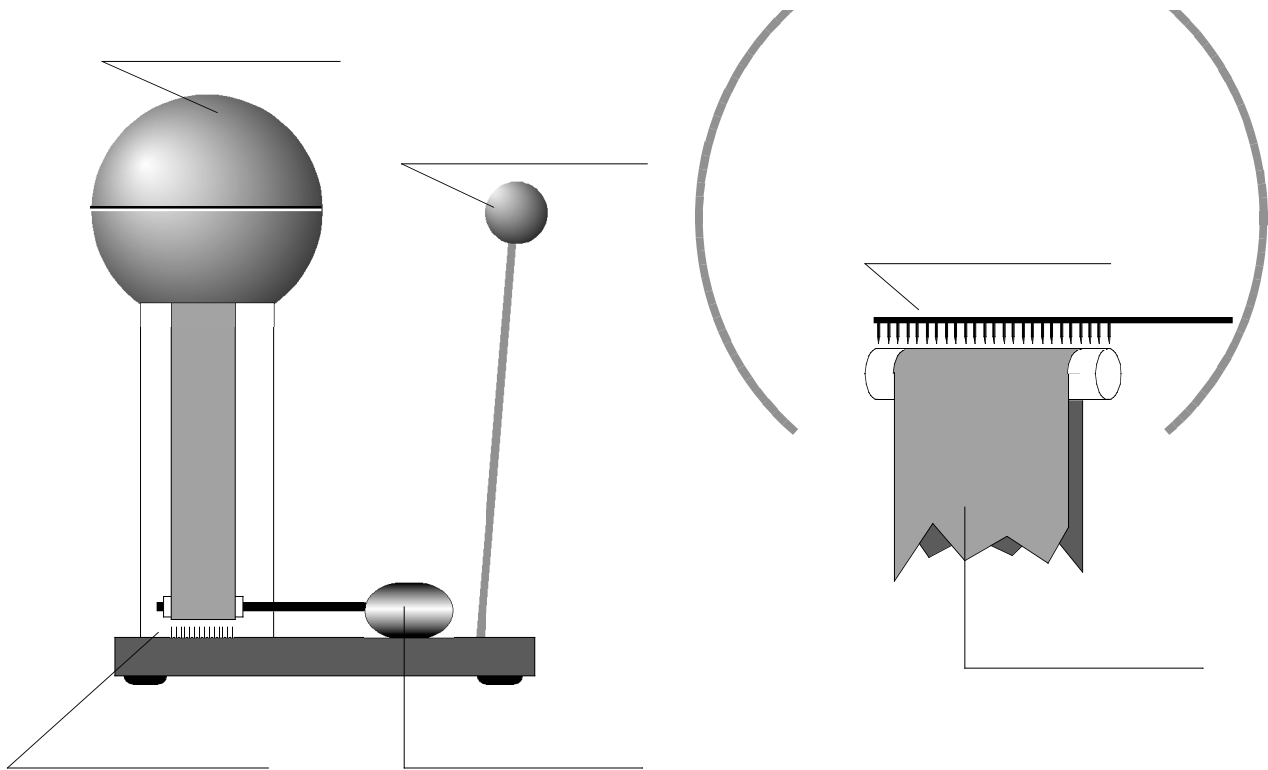


CHARGING AHEAD

DEMONSTRATIONS OF CHARGE, FIELD, AND POTENTIAL

Name: _____ Period: _____ Date: _____

The Van de Graaff generator is a device that can produce a relatively large isolated charge. Label the diagram below and record your observations of the demonstrations involving this device. Parts to be labeled are the dome, the belt, the charging comb, the collecting comb, the motor, the grounding (or discharge) sphere.



1. ZAP!

Under today's conditions, can you see and/or hear the sparks when the aluminum dome discharges to the grounding sphere?

2. HOW DOES IT DO THAT?

How does the generator put charge on the aluminum dome?

3. MOP HEAD

A replacement mop head (bound strings only) is placed on top of the aluminum dome. What does the mop-head do and why does it do it?

4. PIE TINS AND STYROFOAM BOWLS

A stack of aluminum pie tins is placed atop the dome. Then a stack of styrofoam bowls is placed atop the dome.

a. What do the pie tins do and why do they do it?

b. What do the styrofoam bowls do and why do they do it?

5. BUBBLE BRIGADE

Soap bubbles are blown toward the dome. What do the soap bubbles do and why do they do it?

6. ANY VOLUNTEERS?

Draw a sketch of someone touching the dome while it's charging. Be artistic!

7. WHY THE TITLES?

Why does this demonstration have the title it has?