

## Product Experiments

### **VAN DE GRAAFF GENERATOR**

**These experiments align with many Common Core State Standards such as: ELA-Literacy.RST.6-8.3 and ELA-Literacy.RST.11-12.3. Students will follow a multi-step procedure when implementing experiments and taking measurements.**

Educators afford their students the opportunity to witness the process of static discharge by using the Van de Graaff generator. This generator produces an electric field with the use of a pulley and copper mesh. The Van de Graaff is best used during lessons about physics and electrostatics.

Other items such as Volta Storm and pie tins may be used in further experiments. Once the Van de Graaff is switched on pie tins and other objects will charge with electricity and will repel one another. Generators such as the Van de Graaff can also cause an individual's hair to stand on end when the generator is touched with a bare hand.



#615-3100

#### **Demonstrate Lightning:**

Lightning, an awesome natural phenomenon, is an electrical discharge between clouds and the ground. Create it in miniature with a Van de Graaff Generator due to the buildup of positive electrical charges on the dome. Bring a rounded object (metallic, for best results, such as a mixing bowl or juice can or 10-074 Discharge Wand) near the dome. You may wish to wear a glove or use a dry towel to hold the objects as you approach the dome to minimize the likelihood of receiving a shock. The discharge that occurs between rounded object and collector dome is accompanied by a crackling sound and can be made brighter and more frequent by bringing the rounded object closer (from 2" to 1/2" away.) If you withdraw the rounded object, the discharges become feeble and less frequent and may be seen only in a darkened room. You should hear intermittent crackling sounds and see feeble sparks in darkness.

Many additional experiments detailed in the product instructions.