Lesson Plan
Charging an Electroscope - Computer Simulation

Date: [Insert Date]  Unit: Characteristics of Electricity
Grade: Nine Science  Topic: Static Electricity and Electroscopes

Purpose

- To investigate the behavior of charges in an electroscope when a charged rod is used with the electroscope using a computer simulation.

Student Outcomes

- **BOC 9.1** operate a wide variety of school media, computer, and other educationally appropriate equipment for learning, communication, and the representation of their learning, independently and safely with teacher supervision
- **BOC 9.3** demonstrate comfort with keyboarding and manipulation of computer input and peripheral devices as they work
- **BOC 9.4** manage their electronic files and correspondence efficiently
- **PTS 9.2** explore curriculum concepts under study using specialized software; measuring, sampling and recording equipment; and computer-based simulations, with teacher assistance
- **PTS 9.3** explore the curriculum through a wide range of print and electronic forms; accessing and processing information by means of the specialized techniques associated with the technology they select
- **SCO 211-2** communicate questions, ideas, intentions, plans, results, using lists, notes in point form, sentences, data tables, graphs, drawings, oral language and other means.
- **SCO 308-14** identify properties of static electrical charges
- **SCO 308-13** explain the production of static electrical charges in some common materials

Prior Knowledge

- Students will bring a prior understanding of static electricity including types of charges, and conductors and insulators.
- Students will bring a prior experience of working with electroscopes and observing their behavior during charge separation, charging by conduction and charging by induction processes.

Materials:

- Computer with shockwave plug-in
- Worksheet template for computer simulation
- Computer screen picture of website
- Student worksheet from electroscope lab to do revised descriptions
Lesson
• Pass out “Charging an Electroscope Computer Simulation Direction Sheet”.
• Read through what is expected of the students in this activity.
• Take students to computer lab to work on activity.

Closure
• Get students to save their work, log off computer and head back to class.

Assessment:
• Get students to pass in completed worksheet template from the computer simulation to assess activity.
• Get students to pass in electroscope lab student worksheet to assess the revised descriptions of the diagrams that were observed in the previous class.
• As a final cumulative assessment get students to complete and pass in “Electrostatics Assignment.”