**Electron Merry-go-Round**

4th Grade Physical Science Standard

1b. Show that electricity in circuits requires a complete loop through which current can pass (DOK 1)

1.2 Energy can be used or stored. For example, it can be stored in a battery and then used when running a portable media player such as an iPod

**Objective**

Demonstrate how electrons flow through a circuit and how energy is transported from a battery to a electric device, through a role-playing activity.

**Materials**

- Wool or string to lay out a circuit on the floor
- Cotton balls or marbles that serve as energy tokens
- Large Space

**Activity**

Lay out a large simple circuit on the floor using wool with a battery, a motor and a switch. One kid each will play the motor, the battery and the switch. The remaining kids are all electrons. Each "electron" will be given a certain amount of cotton balls representing energy packets. As soon as the "switch" is turned on the "electrons" move along the circuit. When they pass the "motor" they will hand over the "energy" and the "motor" will spin once for each package received. When the "electrons" pass the "battery" they will pick up more energy packets. More complicated circuits that include resistors or parallel circuits can also be simulated this way.