Electricity is the Flow of Electrons

# Educational Goal

* Learn how electricity works
* Represent electricity as the flow of electrons

An Electron’s Day Out is a complex game representing the passage of electrons along a copper circuit from copper atom to copper atom. There are resistors along the way, which cause a drop in potential/voltage. This game teaches the fundamentals of electricity and circuits, along with Ohm’s Law and how resistance works.

I created this game using Javascript and royalty-free images from Wikipedia. The music is taken from Schoolhouse Rock.

# Lesson Plan

* Start game
* Listen to background music(Schoolhouse Rock song about electricity)
* Play level one
  + Player character is electron moving along copper wire
  + Colliding with a resistor(light bulb) causes a drop in potential
  + Electron must be transferred to another atom(pick up atom) to create electricity
  + Circuit completed at end of stage
* Play level two
  + Longer circuit
    - More resistors = more potential drop
* Play level three
* Reflect on game
  + What did we learn?