Electric Cell Game

Introduction:

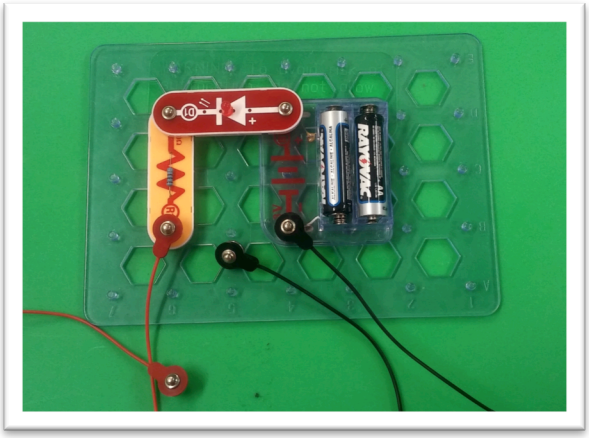
This is a quick review game to help students learn the organelles of plant and animal cells. There are six paperboards, three animal cells and three plant cells. The paperboards have holes punched on the cell next to organelles and in a row on the side with words that match the organelles. There is a strip of folded aluminum foil that connects each matching word and organelle that is insulted with electric tape. Students will use a circuit set with an LED to complete the circuit. If the student matches the organelle to its name properly, the LED will light up.

This activity is not time-consuming enough to be a full lesson. It works best as an activity in stations or as a review.

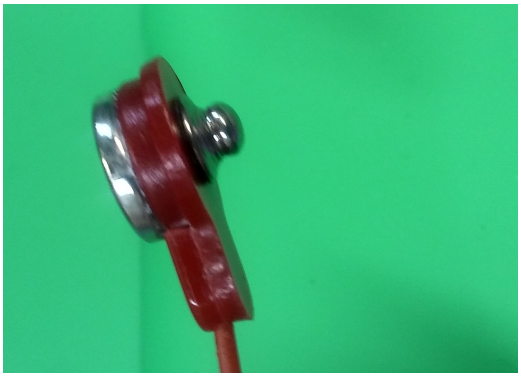
Please be very careful with these, as they were time consuming to make and are fragile. Do not let students draw on them.

Instructions:

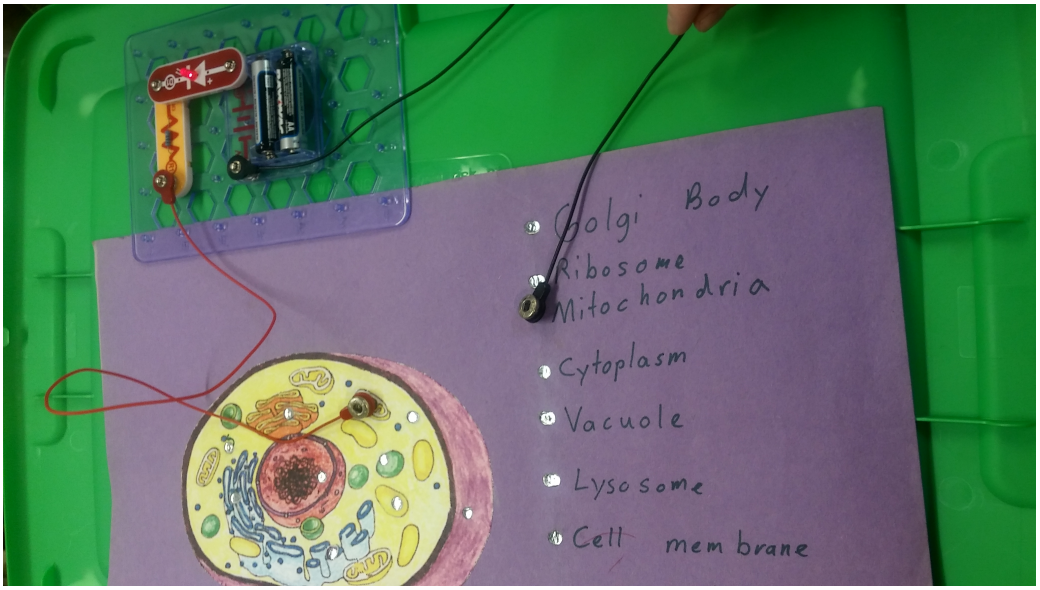
This game uses snap circuits. They are fairly simple to set up and use. Just snap the components together leaving wires loose at the end so the loop is only completed by the game. The circuit composes of two wires, batteries, a LED, and a resistor. Make sure the LED is facing the right way (+ sign on battery goes with the + side of the LED) or it will not light up. Some of the parts may be a little finicky, so make sure to wiggle them around a bit. Put any parts that are for sure broken in the broken parts bag provided in the kit and let the kit director know when the kit is returned. See the circuit set up below.



Each paper cell board needs one circuit set. Students will use the protruding end of the wire (pictured on the right side below) to touch the aluminum foil showing through one of the holes on the cell. They will then use the other wire to touch the aluminum foil in the hole next to the corresponding organelle.



If the LED lights up when both wires are touching the foil, then the student has correctly identified the organelle. If the light does not light up then the student got the answer wrong. Please, see a properly selected organelle below.



It should be noted that the circuits can be temperamental at times. In order to test the units just place both ends of the wires together completing the circuit. If the light turns on, Great! If it does not turn on, then there might be something wrong with the setup, such as the LED is backward, the batteries are dead, or the wires are frayed. Check all of the components and build a new board if the error of the old one cannot be found. Enjoy the game and take care of the boards.