



# Activity #2: Brain Circuits

A Brain Basics Activity: **How do Neurons Signal Each Other?**

## Description

Using pre-assembled pieces of a circuit, teams must work to build a circuit composed of 3 bulbs. This activity will expose students to the physics behind neuroscience in a fun and interactive manner. This interdisciplinary, puzzling activity will help each student discover how the basic unit of the brain truly functions.

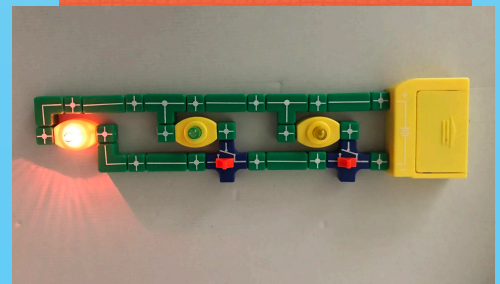
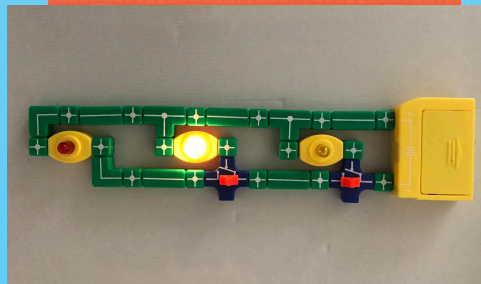
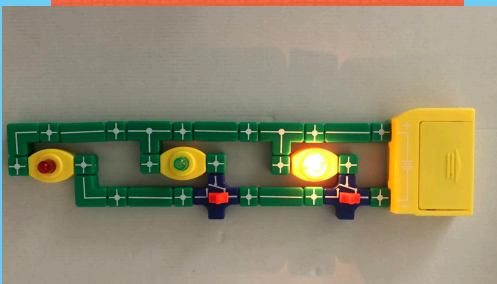
## Instructions

With their teams, students must use the various pieces provided to create a circuit. This challenging activity is very much like a puzzle. Teams must work together to connect the correct pieces together in the proper orientation. The pieces will resemble axons and dendrites while the bulbs will represent the cell bodies within the neuron to showcase electrical transmission in the brain. The first team to build the circuit correctly wins.

1st Bulb Lit

2nd Bulb Lit

3rd Bulb Lit



## 3 Bulb Model

Teams should construct a model like this with 3 bulbs and 2 switches instead. Initially, the first bulb must be lit. Then, the flip of the 1st switch should shut off the first bulb and switch on the next. This process should continue until the 3th bulb is lit and the rest are off. This will showcase how the electrical signal "jumps" from one bulb to another in order to mimic the signaling process in the brain.