Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Lighting a Light Bulb**

**Objective**: We will explore electricity and determine what makes a light bulb light by testing different electric pathways.



1. **Explore:** Take 5 minutes to explore the sim.

2. **Turn and Talk:** Talk about your findings with a partner.

3. Try to create different pathways that will light the light bulb.

|  |  |  |
| --- | --- | --- |
| Components (parts) I used to make a pathway: | Did the bulb light?(circle Y or N) | Observations |
| 3 wires, 1 lightbulb, and a battery | Yes | No |  |
|  | Yes | No |  |
|  | Yes | No |  |
|  | Yes | No |  |

4. Draw one of the working pathways here:



**5. Turn and Talk:** Share some of your findings with your partner.

* Is there more than one way to create a working pathway?
* What did you notice about successful pathways?

6. Complete the table below.

|  |  |  |
| --- | --- | --- |
| How can you… | What did you do?(write or draw)  | What other changes do you notice? |
| ..make the bulb brighter?  |  |  |
| How can you… | What did you do?  | What other changes do you notice? |
| …change the direction of the electrical current? |  |  |
| …turn off the bulb without pushing pause?  |  |  |



7. **Turn and Talk:** Share your findings with your partner.

* In order for the bulb to light, what needs to happen?
* What components did every working pathway have?

8. In the box below, use your understanding to explain how a light bulb turns on. You can use words or pictures to help show what you know.