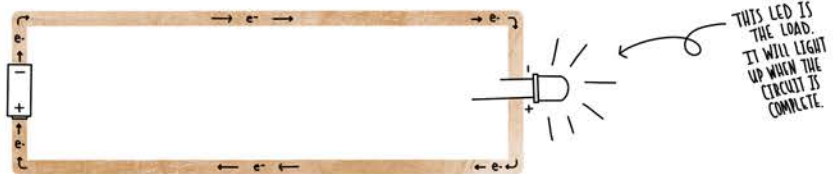


ANGLER FISH LIGHT-UP CARD

In this activity, you will create a basic circuit to make a card that lights up when you close it! A circuit is a path that lets electricity flow from one end of a power source around to the other. A circuit must be made with a material that allows electrons to flow freely, this is called a conductive material.



We can connect an electrical load to the circuit to use that power. A load can be a light, motor, computer, heater... anything that uses electricity!



We can also add a switch to the circuit, which will open (turn off) and close (turn on) the flow of power.



You will be using a light emitting diode (LED) as the electrical load. It will light-up when you close the card, because you will position the conductive material so that opening and closing the card acts as a switch.



ANGLER FISH LIGHT-UP CARD

Materials

- Printed Angler Fish Card
- Printed Card Circuitry Cover
- 5mm white or yellow LED
- 1/4 inch Copper Foil Tape
- CR2032 3V Coin Battery
- Clear Tape
- Scissors

****Coin and button cell batteries are very harmful if swallowed.
Do not use around children who mouth items.****

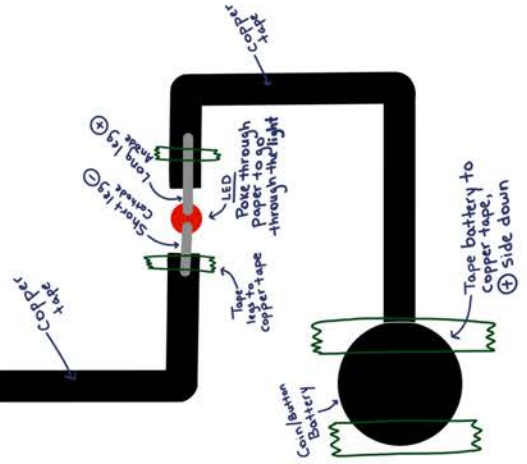
Instructions

1. Fold the printed Angler Fish Card so the circuit diagram is on the back of the card.
2. Roughly measure and cut two lengths of copper tape using the template diagram.
3. Remove the backing of the copper tape and place over the diagram lines.
4. Affix the battery, positive side down, on top of the copper tape on the template. Tape the battery with two pieces of tape on either side so a middle strip of the battery is left exposed, as shown on the template.
5. Carefully poke a small hole through both the marked LED site on the template page through to the Angler Fish's light on the front of the card.
6. Push the LED through the hole. Splay the legs of the LED and tape them to the copper tape, paying attention to the polarity/length of the legs as shown on the template.
7. Test the card. When you close it, the copper tape at the top of the card beyond the crease should fold down and lay over the exposed strip of the battery, turning on the light. Adjust placement if necessary.
8. Cut out the circuitry cover paper, including the small rectangular holes, and tape/glue over the circuitry on the inside of the card, making sure the copper tape still makes contact with the battery through the rectangular holes.
9. Write a note and send to a friend! Place a piece of paper inside the card to block the circuit if sending through the mail so the battery doesn't run out.



FOLD

When you fold the card and press down, this end will touch the ⊖ side of the battery, completing the circuit to light up the angle fish's light!



FOLD

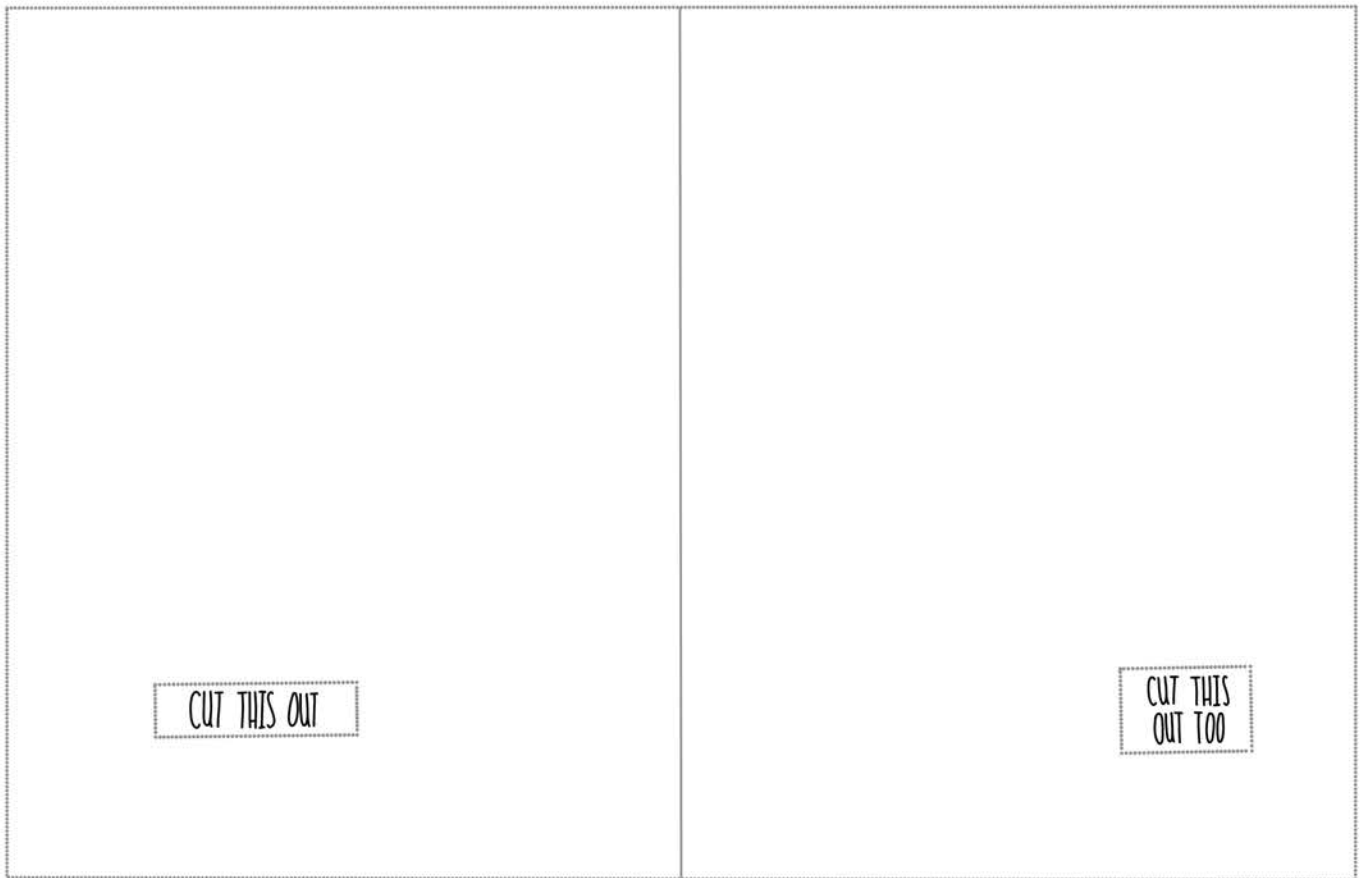
Save the Elements

let
your
Light
shine

Press Here!



Card Circuitry Cover



CUT THIS OUT AND AFFIX TO YOUR CARD TO COVER YOUR CIRCUIT AND HAVE ROOM TO WRITE A NOTE!

MAKE SURE TO CUT OUT THOSE TINY RECTANGLES TOO SO THE CIRCUIT CAN STILL BE COMPLETED.

