

LIGHT UP ANGLER FISH

AGES

Children 8+ years

Teens/tweens

PROGRAM DESCRIPTION

Create a circuit to emulate the angler fish's lure! To ensure that you have enough supplies for an in-library program, be sure to have a sign-up sheet with a limited number of participants. These also make great take-and-make kits. See Printables for an angler fish template by Christina Dorman of Maine State Library, Augusta, ME. Suggested runtime: 60 min.

MATERIALS AND PREPARATION

Materials: Cardstock, colored paper, glue, markers, pencils, transparent tape, copper tape (¼ inch width), LED lights (5mm or LED stickers), coin batteries, small binder clips

In advance, precut strips of copper tape approx. 6-8" long (two per participant). Create packets for each participant containing:

- 2 strips of copper tape
- 1 coin cell battery
- 1 LED
- 1 small binder clip
- Transparent tape
- Angler fish circuit template

During the program:

- Explain how circuits work, the etymology of the word, and how they are used.
- Introduce the idea of conductive vs. non-conductive materials
- Distribute materials to the participants and give them a primer on construction instructions.
- Invite each participant to use the angler fish template to guide placement of the copper tape and apply it.
- Tape the LED light in place with transparent tape.
- Place the coin cell battery in the designated spot on the template, fold the corner of the paper over it, and clip it in place with the binder clip.
- The LED will light up!

TIP:

To reduce costs, purchase AA batteries with battery holders instead of coin batteries. For take-home kits, use wrapped wire or alligator clips instead of copper tape.

ADAPTATION:

Create a 3-D angler fish using wrapped wire or alligator clips. Cut the fish out of cardboard or heavy paper, then tape or staple the circuit with the LED light dangling off the front. Caution: Wrapped wire is sharp!

UNIQUE SPACE AND/OR PERSONNEL NEEDS

Solo-librarian friendly for small groups. For large groups, add 1–2 volunteers or staff members to ensure that everyone gets their angler fish to light up.

RESOURCES

Web

About angler fish from SciShow Kids: <https://bit.ly/2SvQqKc>

60 second paper circuit tutorial video from Fawn Qiu:
<https://bit.ly/2TpeTRW>

Books

Non-fiction

Creatures of the Deep (2015) by Matthew Rake and Simon Mendez (children's)

The Anglerfish (2017) by Tanya Turner (children's)

Wire It! 6 Creative STEM Projects for Budding Engineers (2019) by Caroline Alliston and Tom Connell (children's)

Fiction

Anglerfish for Rent (2016) by Sarah Fox Anderson and Leo Silva (children's)

Nick and Tesla series (2013–2016) by Bob Pflugfelder (children's)

Printables

Angler Fish Template

TIP:

Be sure to watch “Folding Copper Tape for Paper Circuitry” from NexMap to understand how to correctly fold/turn the copper tape: <https://bit.ly/3vsobup>

