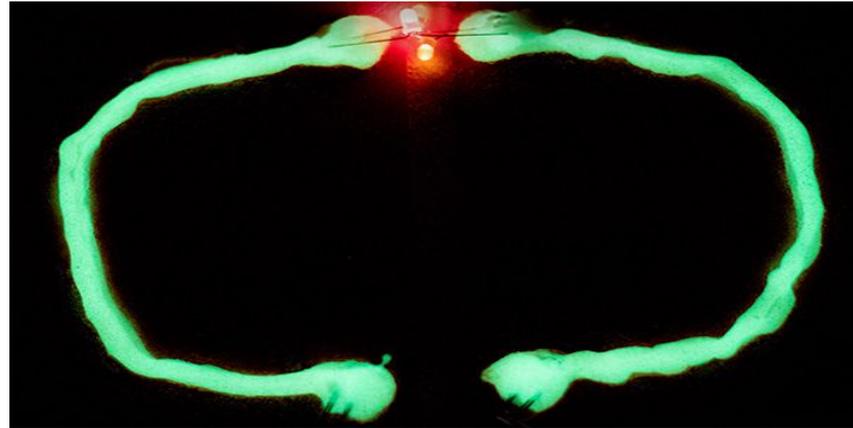


GLOW IN THE DARK STEAM



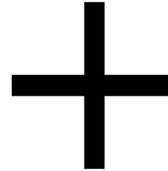
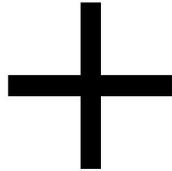
Why do things glow in the dark?

All materials that glow in the dark contain substances called **phosphors**. In the simplest terms, a phosphor is something that **exhibits luminescence**. There are hundreds upon hundreds of compounds that can act as a phosphor, including those that are used in glow-in-the-dark toys and radar screens (e.g., zinc sulfide, strontium aluminate etc.), as well as the ones they use in computer screens, white LEDs and sensors.

Glow in the Dark Flower

A **black light** is a type of lamp that emits primarily ultraviolet light and very little visible light. Because the light is outside the range of human vision, it is invisible, so a room illuminated with a black light appears dark.

Tonic water is a carbonated beverage that has a chemical called quinine dissolved in it. Quinine is made from the bark of a tree and has been used for centuries as a treatment for malaria



How does it work?

Under an ultraviolet "black light," the quinine in tonic water makes the water fluoresce a brilliant, bright blue. In general, something fluoresces because it has absorbed light energy, which makes it excited, and then it releases (or emits) light as it returns to its normal, unexcited state. We cannot see the (ultraviolet) light they absorb but can see the visible light they emit (which is blue in the case of quinine).



Glow Jars



1. Pull the end off the highlighter and take out the gauze that holds the ink. Use gloves if you would like.

2. Fill a jar with warm water. Squeeze marker gauze to get ink into the jar. Add glitter.

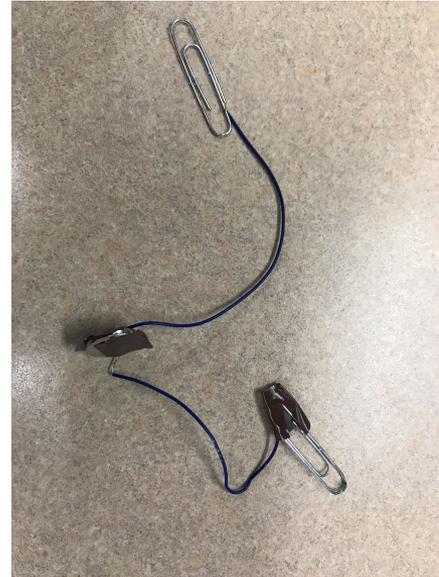


Glow Salt Circuits

- 1 sheet colored construction paper
- table salt
- 2 paper clips
- 2 stripped wires
- battery
- LED bulbs
- glow in the dark Glue
- Markers etc.

Glow Salt Circuits-Step 1

Wrap the metal part of the stripped wire to the paperclip. Tape the other end to one side of your battery Repeat with the other wire. Use tape if needed.



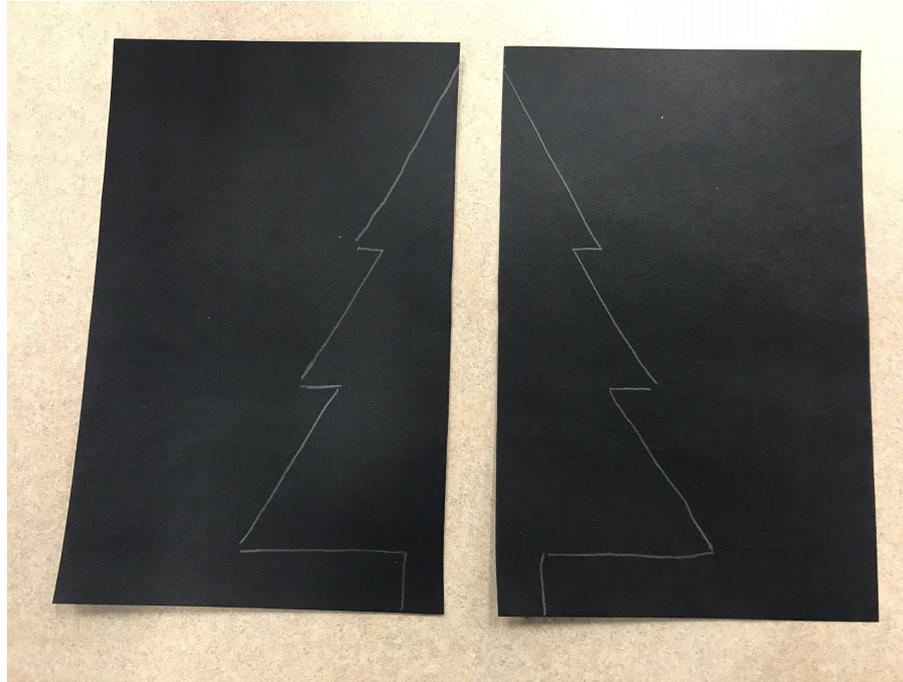
Glow Salt Circuits-Step 2

Test that the circuit is working by touching the prongs of the LED light to each of the paperclips.

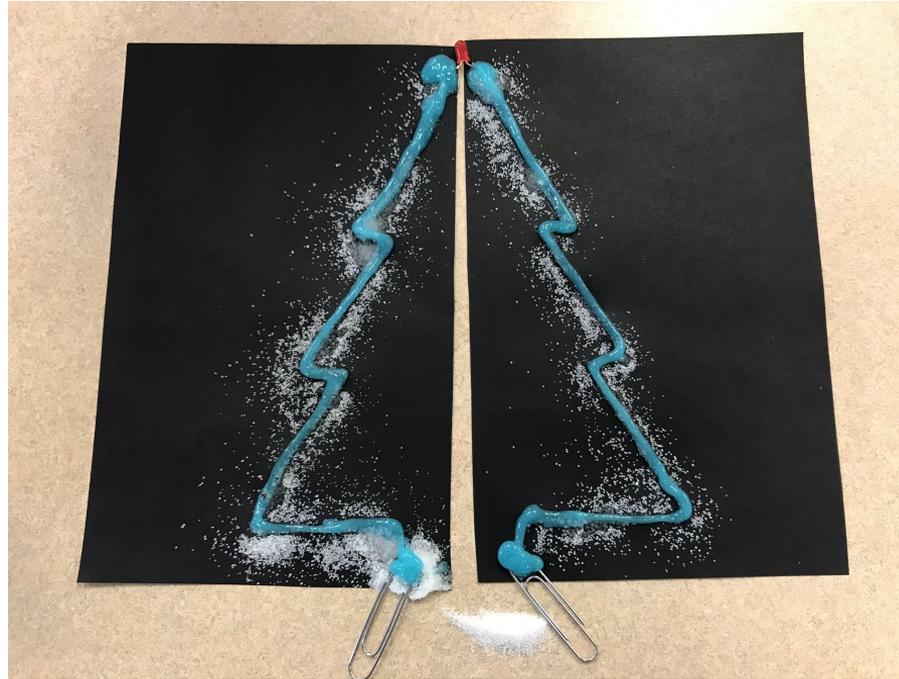


Glow Salt Circuits-Step 3

Draw your picture and cut it in half.



Glow Salt Circuits-Step 4



Glow Salt Circuits-How does it work?

Salt and water is very conductive. So you need to add salt to your glue (which has water in it) so the electrical current can travel from your battery pack, along your circuit, eventually turning on your LED light. The current travels from salt molecule to salt molecule, and works best if the salt is quite wet. This is why you should place a line of glue, then add salt, then cover the salty line with another layer of glue with a bit more salt. It all helps move that current along to it's destination – the LED!

Glow in the Dark Slime

You will need...

- a partner (or 2)
- 1 cup clear glue
- 1 cup room temp water
- 1 cup of hot water
- 1/2 tsp of Borax powder
- 1 tsp GITD powder

1. Dissolve the Borax powder in the cup of hot water and stir until dissolved and set aside.
2. In a large bowl add the clear glue and the GITD powder and mix WELL. Make sure there are no lumps.
3. Add in the 1 cup of room temp water and mix well.
4. Add the Borax solution in small amounts mixing well after each addition until your desired consistency is met (we used 3/4 cup).
5. Expose to light. Then go into a darkened room.

