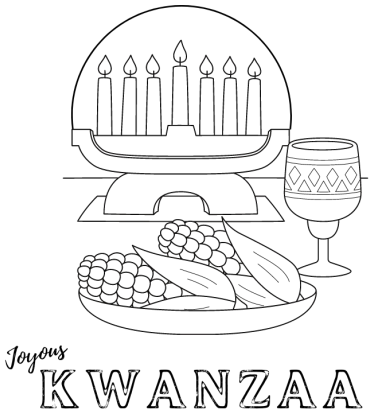
Winter Holiday Paper Circuit Templates



Thank You!

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About Vivify

Vivify is a K-12 STEM education resource company founded by two aerospace engineers, Natasha and Claire, with a passion for providing access to quality STEM education.

Our philosophy is that STEM transforms classrooms into an exciting world of curiosity, problem-solving, and creativity. STEM education can be an empowering interdisciplinary approach that brings math, science, and engineering concepts to life through challenging opportunities that mimic the complexities and excitement of the real world.

Every teacher or parent can incorporate STEM into their classroom or home given the right resources, and that is where Vivify comes in! We love creating STEM materials and are excited to bring STEM to more classrooms and homes! Click here to learn more about Vivify.

Connect with us for free STEM resources!

Subscribe to our newsletter and receive access to a library of free STEM resources through www.vivifystem.com. Follow us on social media or listen to "The STEM Space" podcast for more resources and ideas.

Follow us for more STEM! @vivifystem

Click here for editable link of circuit templates.

Christmas is a holiday celebrated on December 25th by people around the world with both religious and secular traditions and practices for thousands of years. Popular customs include gift giving, decorating evergreen trees, special religious occasions, meals with family and friends and many around the world can be found patiently waiting for Santa Claus!

Learn more about Christmas at https://kids.nationalgeographic.com/celebrations/article/christmas

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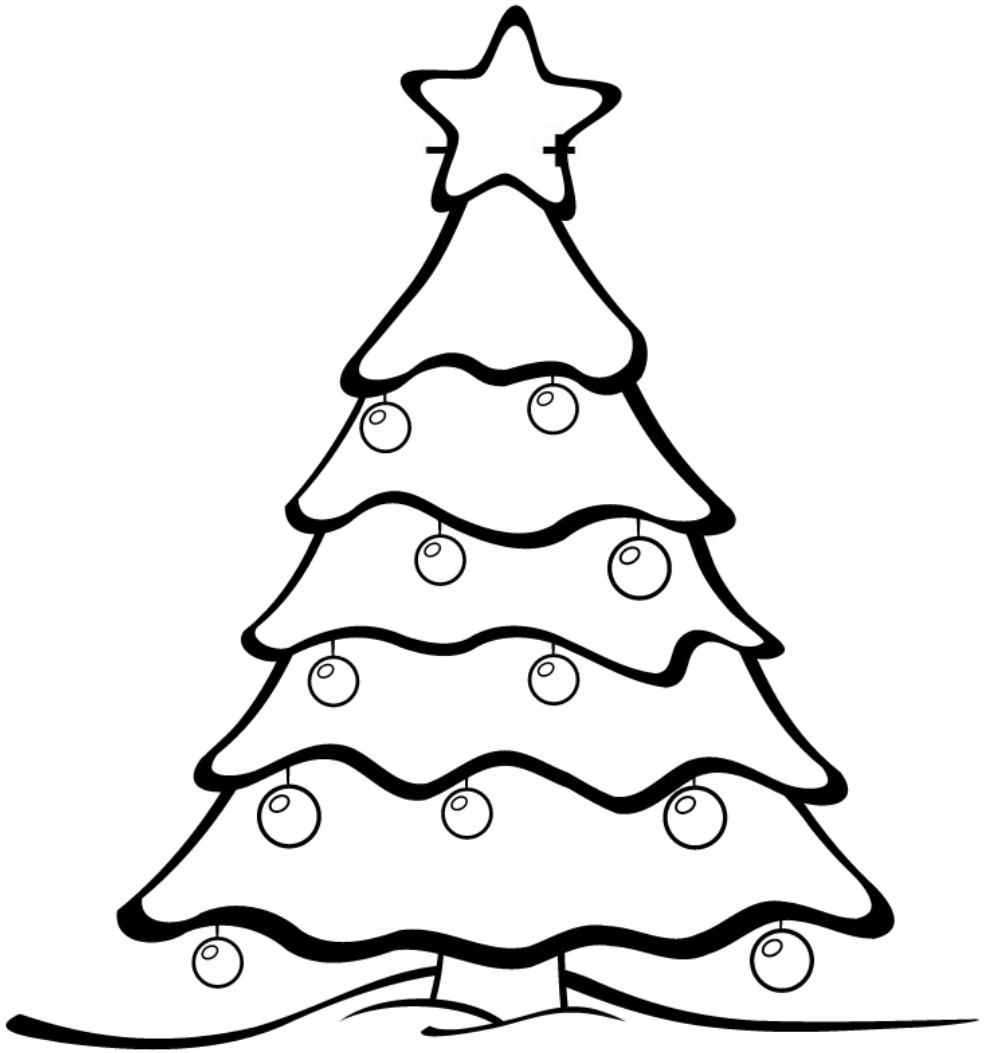
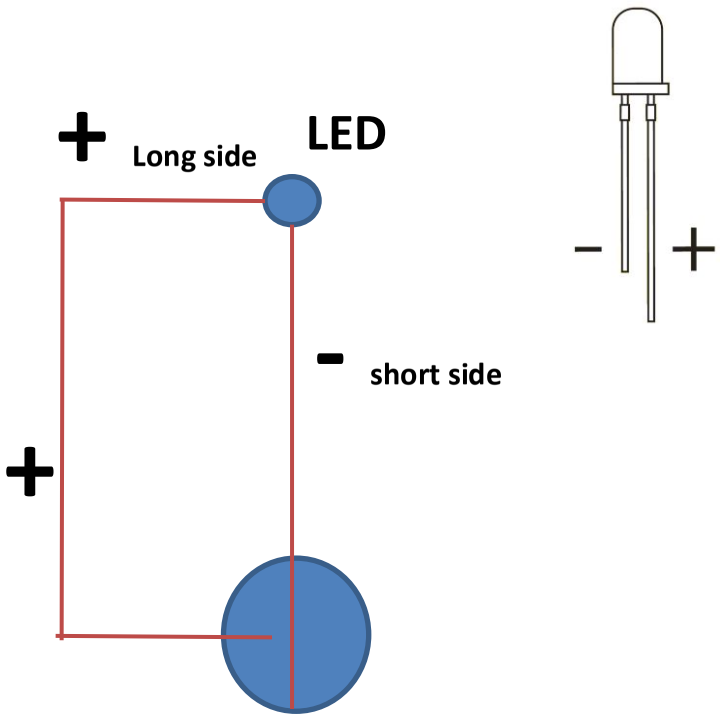


Merry Christmas!



Battery

Negative side of battery: Facing down covering the - copper tape

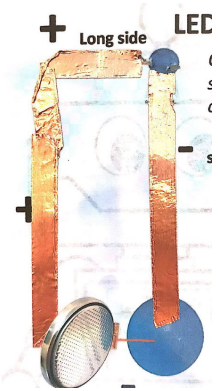
Positive side of battery: Facing up with the + copper tape on top

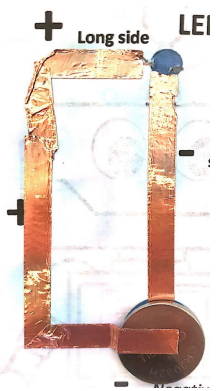
Troubleshooting

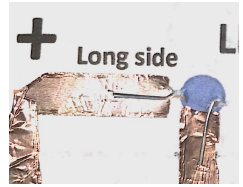
1. Check LED and battery are working
2. Reverse battery
3. Make sure + and – cooper tape strips are not touching
4. Make sure copper tape is continuous and smooth

Ghost Circuit Instructions:

1. You need: 1 LED light, copper tape, 1 battery
2. On the diagram to the left, place copper tape along all the lines on the (-) negative side. Make sure there are not breaks in the tape.
3. Place the battery negative side down where shown. Make sure it overlaps the copper tape.
4. Add copper tape to the positive (+) side of the circuit diagram all the way to the positive side of battery. Make sure to continue tape to cover battery.
5. Insert LED through the **FRONT** of the card with the longer wire (+) to the left. On inside of card, bend wires so the bulb is flat to the paper and the wires lay on top of the copper tape.
6. Add copper tape on top of the wires to secure.
7. Close card and press on “Happy Halloween.” If your LED lights up, you are creating a closed circuit that allows electricity to pass from the battery to the LED!







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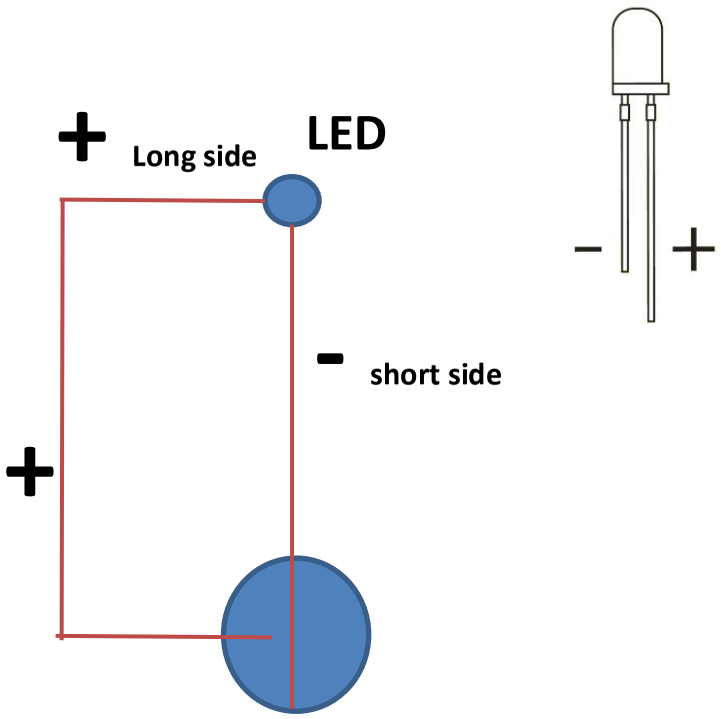
Happy Holidays!



Battery

- *Negative side of battery*: Facing down covering the - copper tape

Positive side of battery: Facing up with the + copper tape on top

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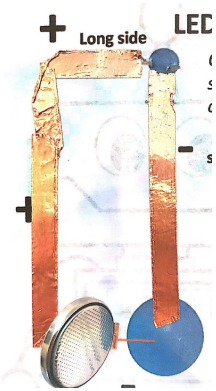

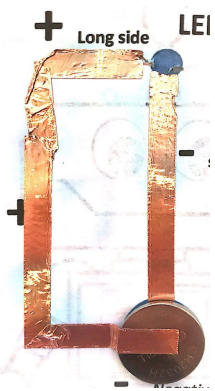

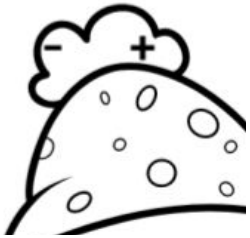

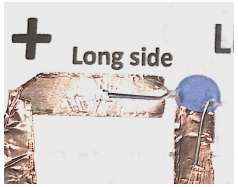

Hanukkah (also spelled Chanukah) is a Jewish holiday that is also known as the “Festival of Lights” and celebrates an miraculous event from over 2,000 years ago. Hanukkah usually starts in late November to mid-December and is celebrated with special foods, family, and the lighting of a candle on the menorah on each of the eight nights.

Learn more about Hanukkah at https://kids.nationalgeographic.com/celebrations/article/hanukkah

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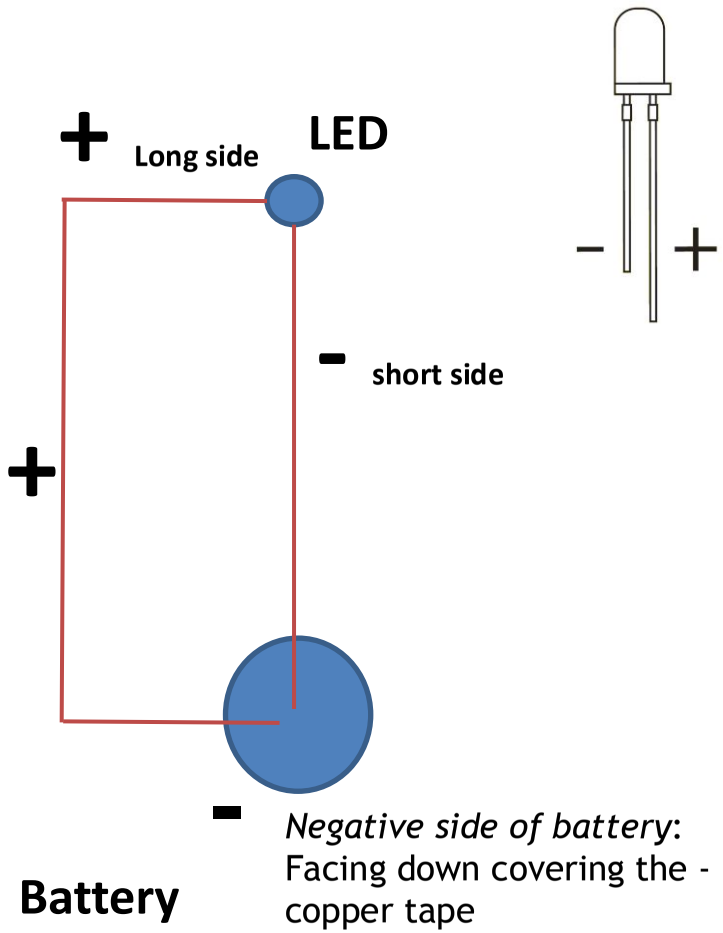
Happy HANUKKAH



Negative side of battery: Facing down covering the - copper tape

Positive side of battery: Facing up with the + copper tape on top

Troubleshooting

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Spider Circuit Instructions:

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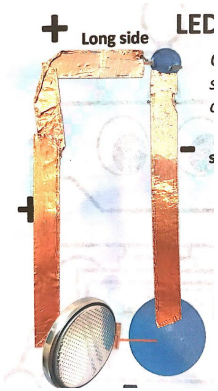

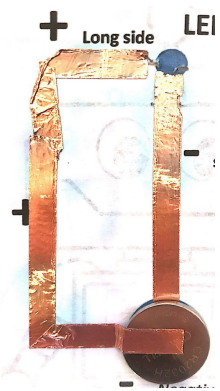

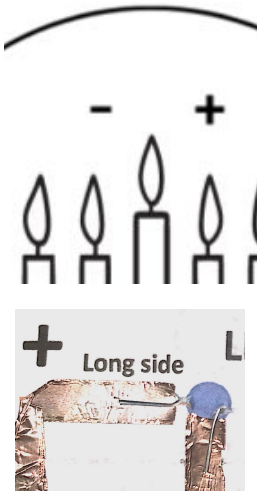

Kwanzaa (Dec. 26 - Jan. 1) is an annual holiday that celebrates both African culture and Black heritage in the USA. While Kwanzaa is not an African holiday, it is inspired by many African cultural practices, using traditional woven mats called a *mkeka* (muh-KAY-kuh) having baskets filled with fruits and vegetables to represent the harvest and a unity cup called *kikombe cha umoja* (kee-KOHM-bee cha oo-MOH-jah) placed on it. The *kinara* (kee-NAH-ruh) holds seven candles: one black, three red, and three green. The black candle in the middle represents unity among people of African descent; the red candles on the left represent the past, and the green candles on the right stand for the future.

Learn more about Kwanzaa at https://kids.nationalgeographic.com/celebrations/article/kwanzaa

Watch video

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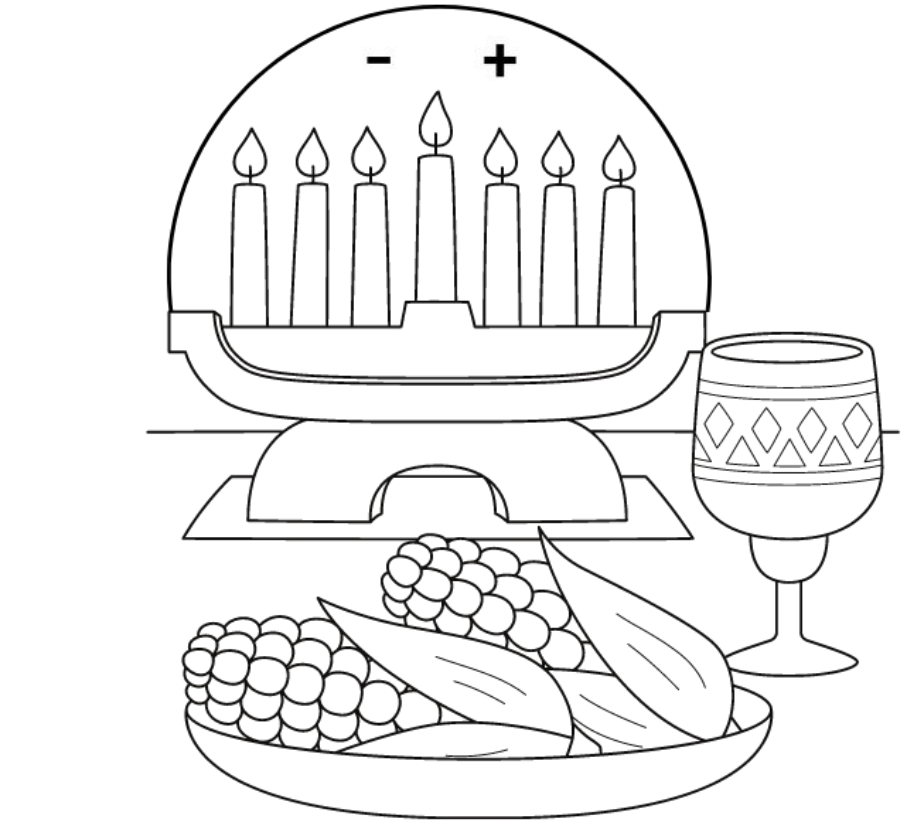
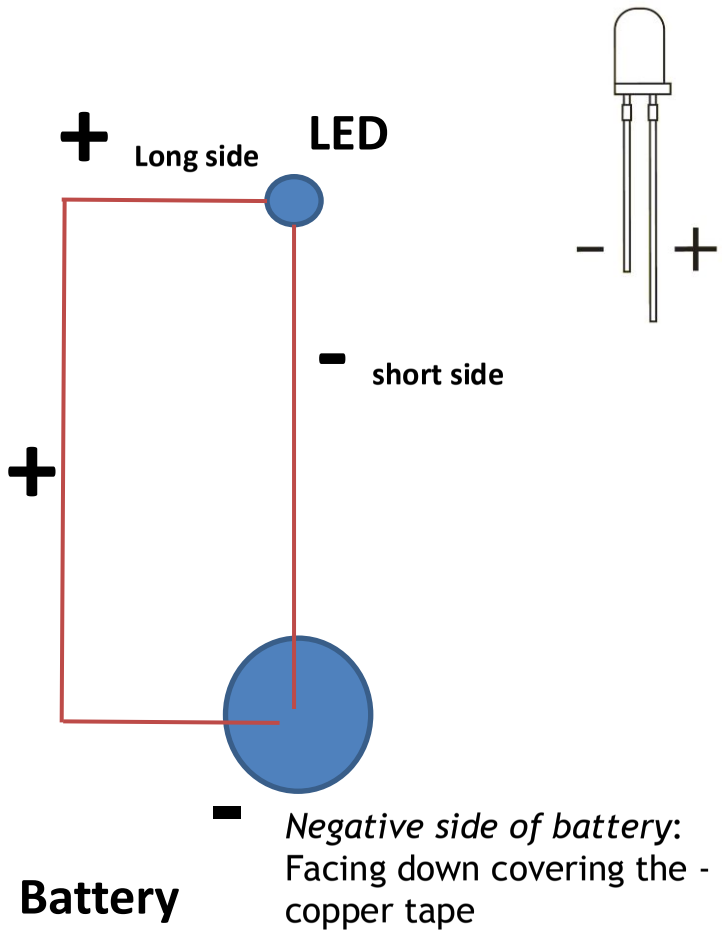


Joyous

KWANZAA



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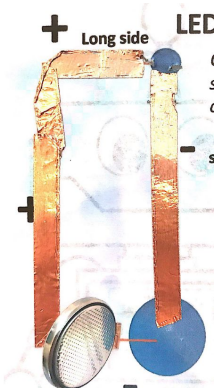
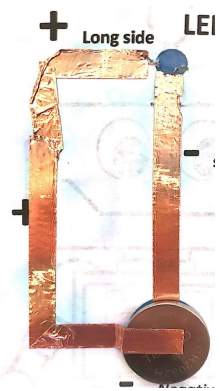
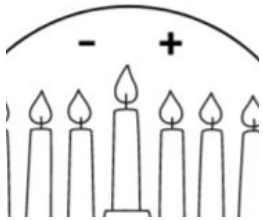
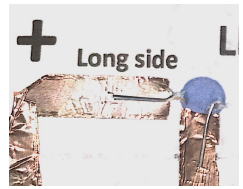




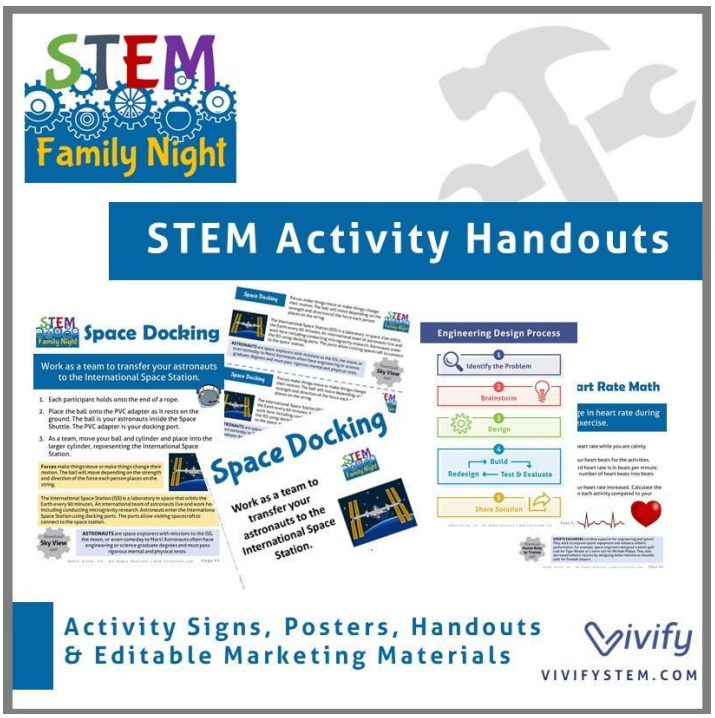




STEM Family Night Station

This activity is a great station for a STEM Family Night! For a complete planning guide along with 14 stations, check out our STEM Family Night Guide and Activities here.

Learn more about STEM Family Nights here.



Want more STEM?

For a complete list of all of Vivify STEM resources by topic and grade, go to:
https://www.vivifystem.com/curriculum-map

Help! I need to plan a year-long STEM class! What should I cover? What is appropriate for each grade level?

We can help! Click here for guidance on a scope and sequence of a STEM class plus resources and examples for planning a STEM curriculum map.

3 Stages of STEM

STEM generally revolves around the Engineering Design Process that embraces failure, relies on teamwork, and requires critical thinking and creativity. While exciting, educators often become intimidated as a search for curriculum leads to an overwhelming range of activities from index towers to robotics competitions. At Vivify, we believe that not all STEM is created equal. Educators should adopt a 3 Stages of STEM approach by progressively building towards more complex projects.

Click images for lessons for each stage!