

Valentine's Day Paper Circuit



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.



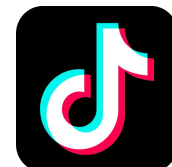
Our philosophy is that STEM transforms classrooms into an exciting world of curiosity, problem-solving, and creativity. STEM education can be an empowering interdisciplinary approach that brings math, science, and engineering concepts to life through challenging opportunities that mimic the complexities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

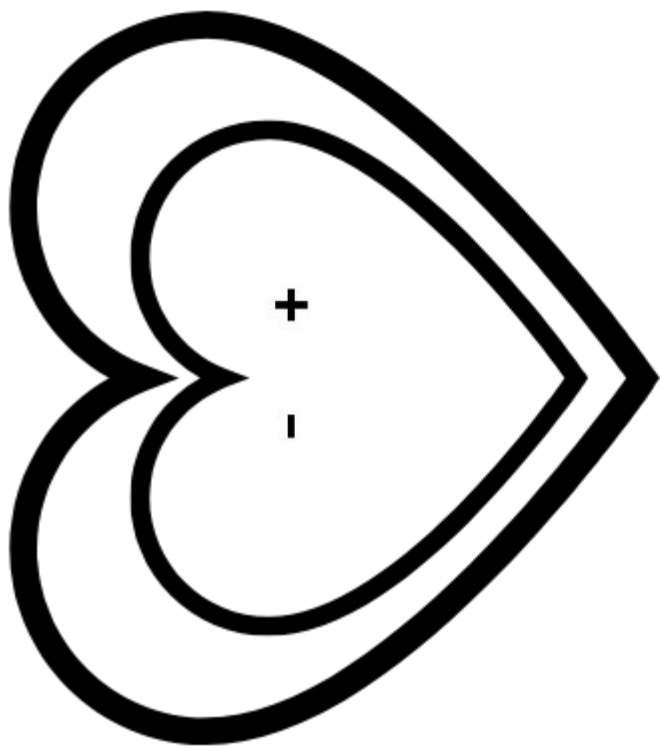


Connect with us for free STEM resources!

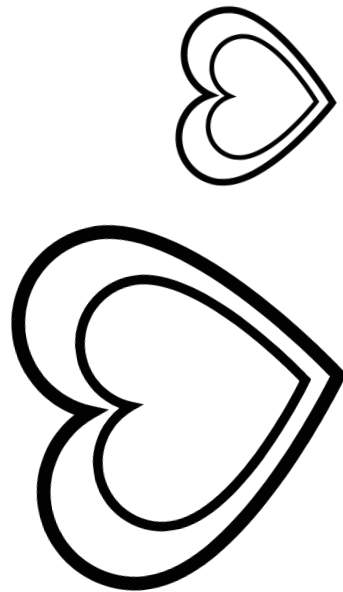
Subscribe to our newsletter and receive access to a library of [free](https://www.vivifsystem.com) STEM resources through www.vivifsystem.com. Follow us on social media or listen to “[The STEM Space](#)” podcast for more resources and ideas.



Follow us for more STEM! [@vivifsystem](https://www.instagram.com/vivifsystem)



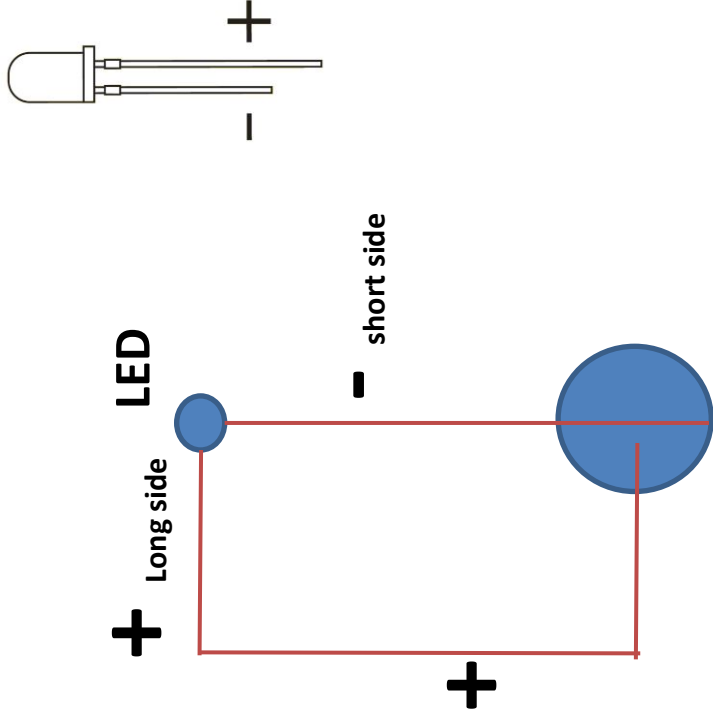
*You make my heart
light up!*



www.vivifystem.com

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!



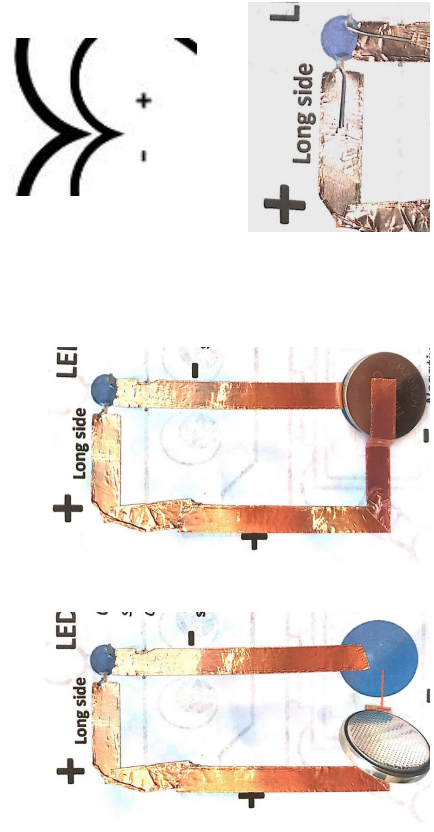
Battery

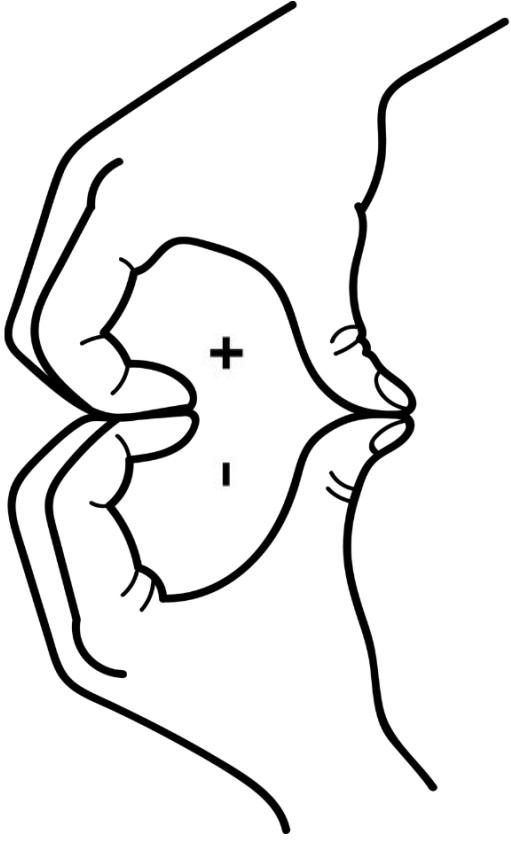
- *Negative side of battery:* Facing down covering the - copper tape

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

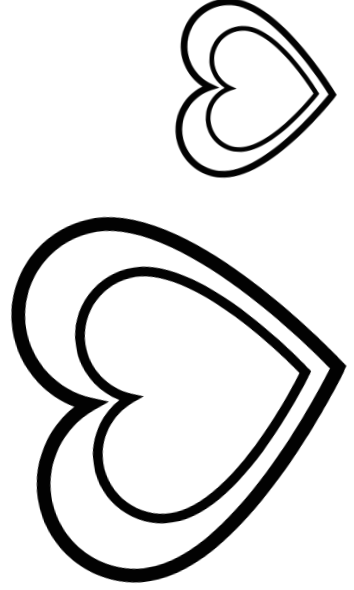
Troubleshooting

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





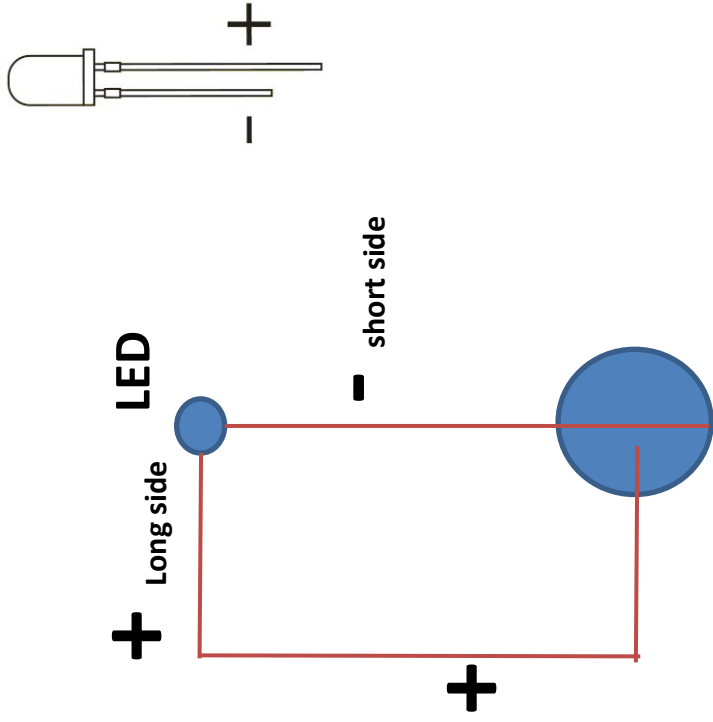
**THANKS A "WATT" FOR
BEING MY FRIEND THIS
VALENTINE'S DAY!**



www.vivifystem.com

Ghost Circuit Instructions:

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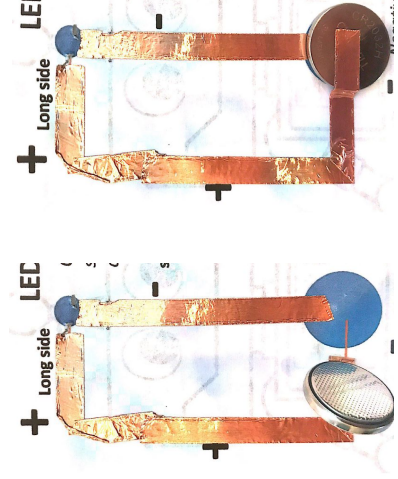
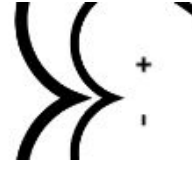
+ *Negative side of battery:*
Facing down covering the -
copper tape

Battery

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

Troubleshooting

1. Check LED and battery are working
2. Reverse battery
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STEM Family Night Station



STEM Family Night

BUNDLE!

Complete Planning Guide

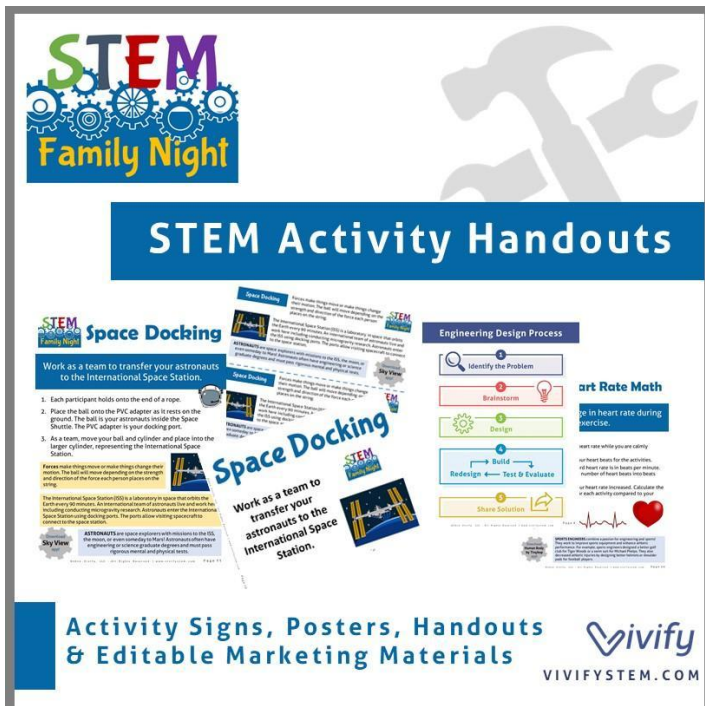
14 STEM Activities & Station Handouts

Vivify
VIVIFYSTEM.COM

This section features a collage of images showing children and adults engaged in various STEM activities at a family night event. The central focus is a 'Complete Planning Guide' for 14 STEM activities and station handouts, provided by Vivify (www.vivifystem.com).

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](#).



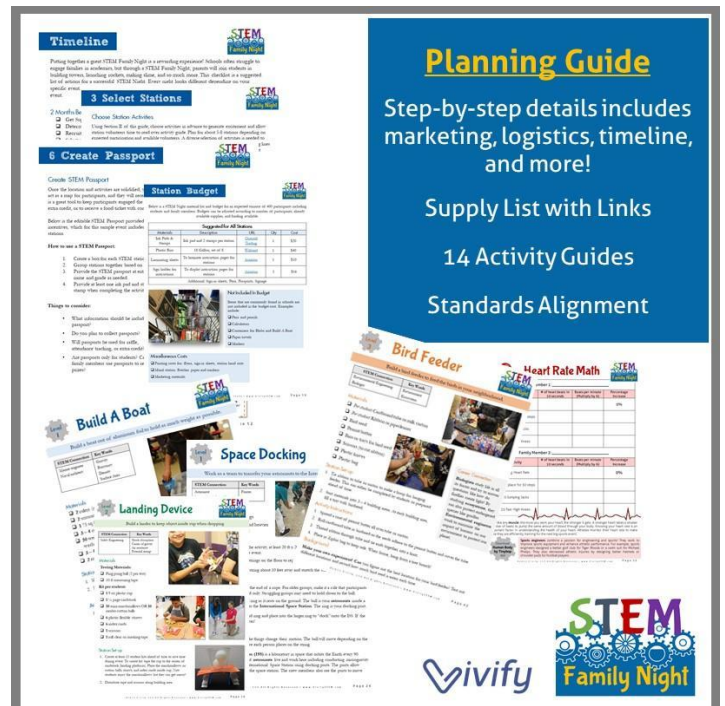
STEM Family Night

STEM Activity Handouts

Activity Signs, Posters, Handouts & Editable Marketing Materials

Vivify
VIVIFYSTEM.COM

This section displays a collection of activity handouts and marketing materials for a STEM Family Night. The featured activities include 'Space Docking' (transferring astronauts to an international space station), 'Heart Rate Math' (calculating heart rate during exercise), 'Build A Boat' (designing a boat to hold a ping pong ball), 'Landing Device' (designing a device to land a hot air balloon), and 'Bird Feeder' (designing a bird feeder). The materials include activity signs, posters, handouts, and editable marketing materials, provided by Vivify (www.vivifystem.com).



STEM Family Night

Planning Guide

Step-by-step details includes marketing, logistics, timeline, and more!

Supply List with Links

14 Activity Guides

Standards Alignment

Vivify
VIVIFYSTEM.COM

This section provides a detailed planning guide for a STEM Family Night. It includes a timeline, a station budget, a supply list with links, 14 activity guides, and standards alignment. The guide is provided by Vivify (www.vivifystem.com).

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!

