

STEAM STORY TIME

AT HOME:

SPOOKY SCIENCE

Suggested Reading

- *Have You Seen My Monster?* by Steve Light
- *Inside a House That is Haunted* by Alyssa Satin Capucilli
- *Monster Trouble!* by Lane Frederickson
- *Quit Calling Me a Monster!* by Jory John
- *Walter's Wonderful Web* by Tim Hopgood

Activity 1: Witch's Brew

Supplies:

- Mini cauldron (or small bowl)

Supplies from home:

- Vinegar
- Baking soda
- Food coloring (optional)

Prompt:

"Double, double, toil and trouble. Fire burn and cauldron bubble," the witches chant in Shakespeare's *Macbeth*. What happens when you add baking soda to vinegar? That's what you are going to find out in this experiment!

1. Place your mini cauldron on a tray or plate.
2. Fill your mini cauldron half-full with vinegar.
3. Add a couple drops of food coloring, if you wish.
4. Add 1 tsp of baking soda to the cauldron.

Questions

1. What happened when you added the baking soda to the vinegar?
2. After the reaction, can you separate the baking soda and vinegar from each other?

Explanation

Baking soda and vinegar are two different kinds of chemicals with different pH levels. When baking soda, a "base" chemical, and vinegar, an "acid" chemical mixed with water combine, a chemical reaction happens. In the reaction, the baking soda takes a piece of the vinegar and new chemicals are made: water and carbon dioxide. The carbon dioxide is a gas that makes the mixture go bubbly.

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Activity 2: Spider Web

Supplies:

- Page with spider and web images
- Wooden dowel
- Scissors
- Glue

Prompt:

A thaumatrope was a toy popular a couple hundred years ago that took advantage of an optical illusion.

1. Cut out each circle of the spider and the web.
2. Set one circle face down in front of you. Apply glue to the back.
3. Place the wooden dowel down the center of the circle, at least halfway up.
4. Place the other circle on top of the circle with glue and the dowel, so that its picture faces you. Press the two sides together.
5. Once the glue has dried, hold the dowel between the palms of your hands. Rub your palms across each other (like you are trying to warm your hands), so that the dowel quickly turns.
6. Look at the pictures as they spin. What do you see?

Explanation

How can the spider be on the web when they are two separate pictures? When your eye sees something, your eyes holds onto the image 1/30 of a second longer even when the image is gone. With a thaumatrope, one image is quickly replaced with another, and then repeated, so it looks to our eyes and brain that the two images are together.

Activity 3: Monster Sort

Supplies:

- Sheets of monsters
- Scissors

Prompt:

Oh, no! There are monsters in the kit! But don't worry these are kind monsters.

Directions

1. Cut out the monsters (does not need to be fussy cut unless you really want to, they can be cut into squares).
2. How many different ways can you sort them? If you are stuck, think about how you would describe the monsters. How are they the same and how are they different?

Activity 4: Haunted House

Supplies:

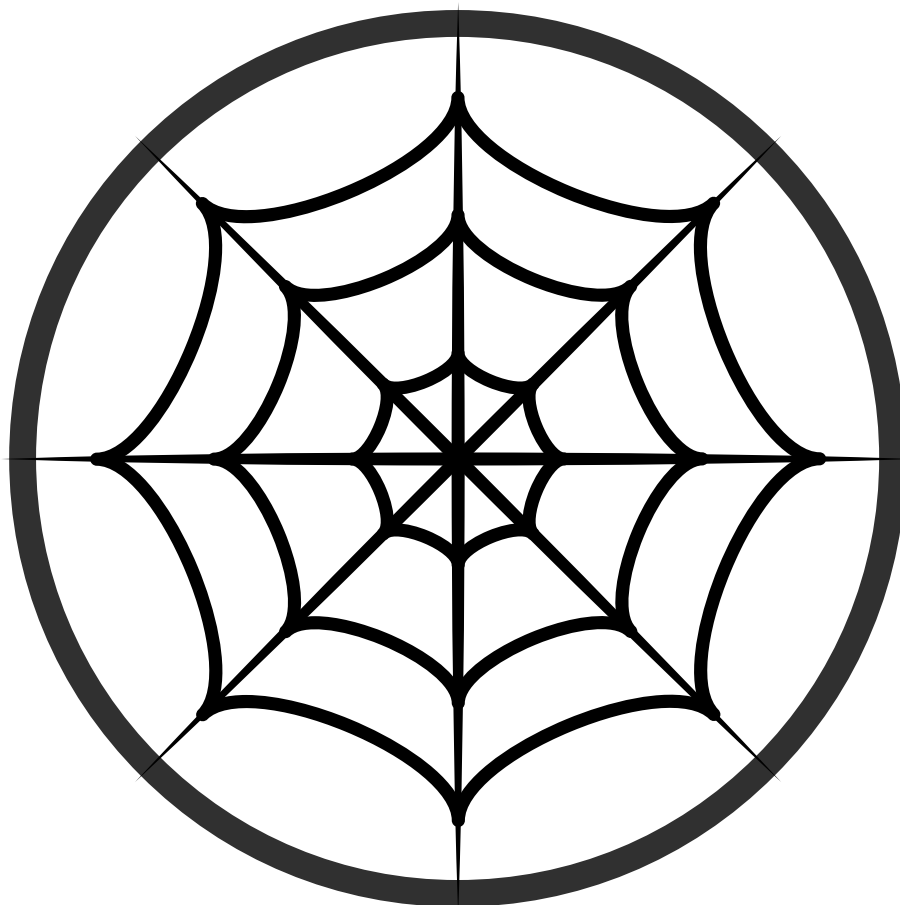
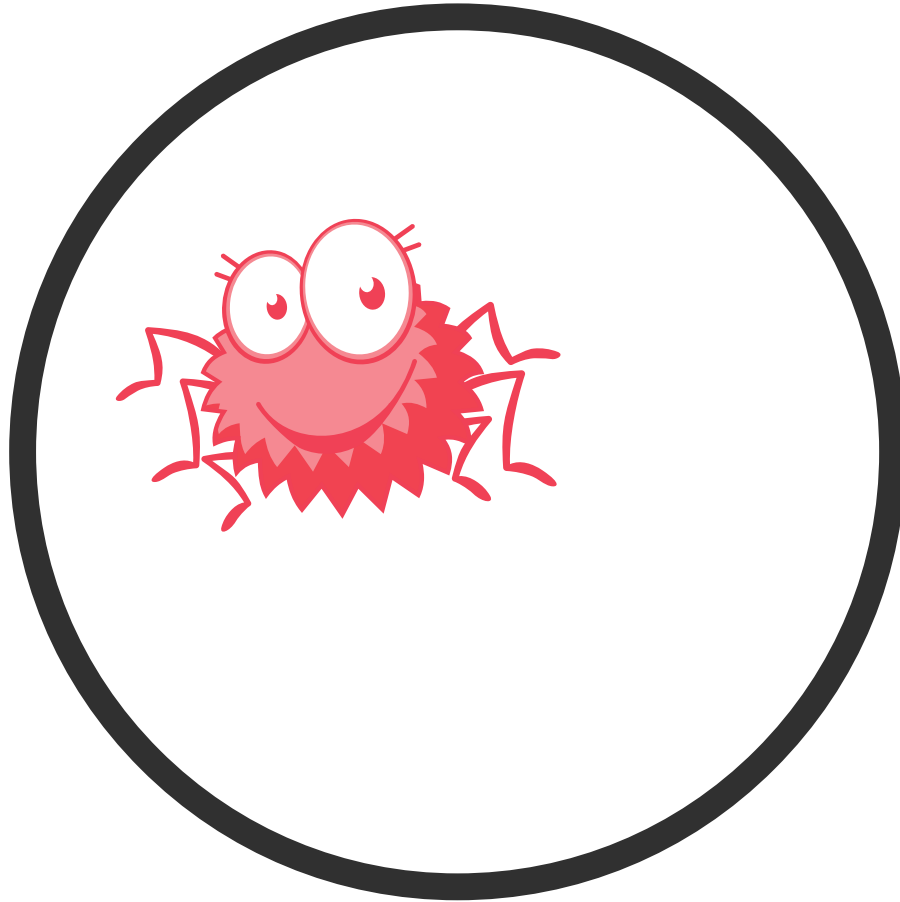
- Toothpicks
- Mini marshmallows

Prompt:

Build a spooky house with only toothpicks and marshmallows. As you build, think about the shapes you make- squares, triangles- and what would make your building more stable.

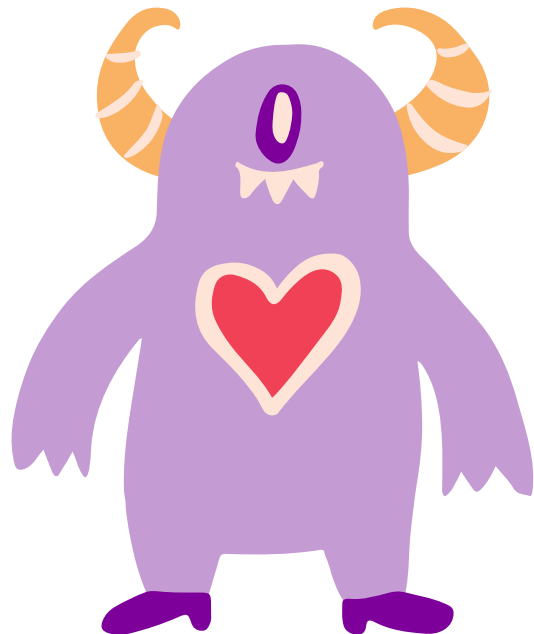
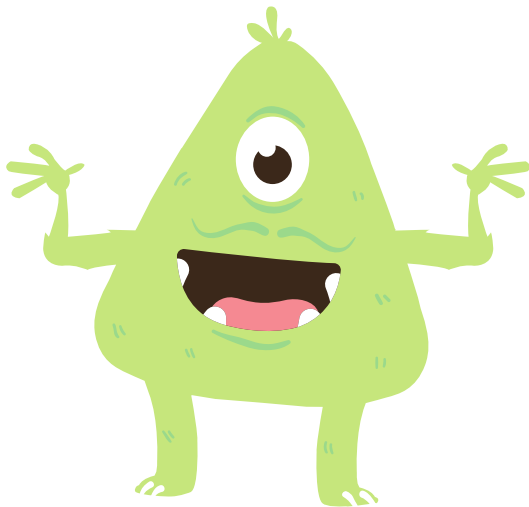
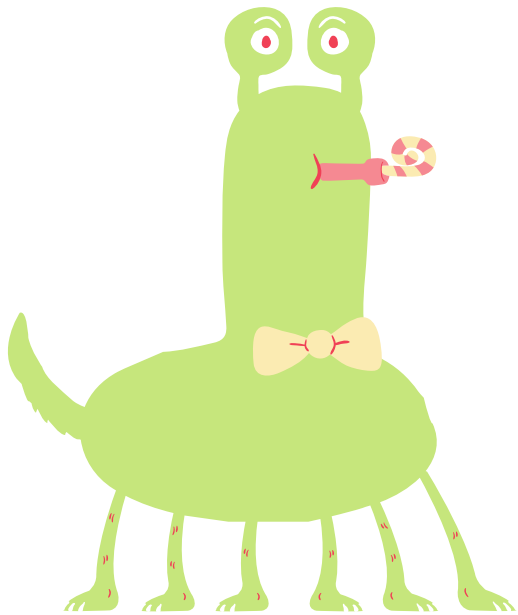
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Activity 2: Spider Web



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Activity 3: Monster Sort



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