



Project Exploration creates transformative learning opportunities for youth underrepresented in the sciences –particularly students of color and girls – by equipping them with the skills, practices, and mindset needed for a lifelong pursuit of learning. STEM@Home makes activities around science, technology, engineering, and math accessible and fun to do at home. This STEMbook activity, resources, and more are available at www.projectexploration.org/stemathome.

In this activity, you will:

make observations about marshmallows, and draw conclusions. Conduct a basic experiment and test your hypothesis.

Supplies Required:

- 4 large marshmallows, the kind used for s'mores
- 1c juice
- 1c water
- 1c vinegar
- 1c pop
- Graphic organizer (page in your STEMkit!)

Video

Learn more about the scientific method with BrainPop: <https://tinyurl.com/yx24gz4y>

Overview

Marshmallows are one of the first **confections** - a sweet mixture or compound - created by humans!

These soft, puffy treats are from an old recipe which combined the roots of the marshmallow plant (the part of the plant which grows underground!) with water and sugar. Marshmallows today can be made from lots of types of simple ingredients, but most include corn syrup, water and gelatin.

Dissolving or melting a marshmallow can be done by heating up the **confection**. Once melted, it can be used in many ways - from making frosting to Rice Krispies treats! We know that heat made by the stove or microwave can dissolve a marshmallow. Can a liquid melt the marshmallow? Use the scientific method to figure which liquid can melt the marshmallows the fastest!

Instructions

1. Walk through the graphic organizer as you complete the activity.
2. **STEP 1: Problem:** What do we want to solve? Which liquid will dissolve the liquid the fastest?
3. **STEP 2: Hypothesis:** Make a prediction! Which substance do you think will be the fastest? Draw your prediction!
4. **STEP 3: Experiment:** Test it out and make observations!
Place one marshmallow in a small cup of each liquid (juice, pop, water, and vinegar).
Set a timer and draw the marshmallow at every 10 second or 30 second mark.
5. **STEP 4: Analysis:** Based on your observations what do we now know?
What marshmallow dissolved the fastest? The slowest? Why do you think this happened?
6. **STEP 5: Conclusion:** Was your hypothesis correct or incorrect?
Use the sentence starter: My hypothesis was (in)correct because...

Additional Resources

1. Learn more about solutions, solvents, and solutes: <https://tinyurl.com/oxlr4z7>

Share It Out

Share on social media: Share the results of your experiment with your friends and family on social media! Explain the steps of the scientific method in a video! Use the hashtags:

#ScientificMethod
#ProjectExploration
#StemAtHome

Share via PE's website: Students who complete STEM@home activities and share what they learned with the PE team via our website will earn points which can be traded in for cash prizes at the Explore Store. Your project number is 102. Learn more at www.projectexploration.org/explore-store



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