



# Make Your Own Crystals!

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Science  
Grades 6–8



## Introduction

In this activity, students will make their own crystals using a few simple ingredients. Students will make observations on a daily basis just as a scientist would. To end it, students will make predictions based on research. Students will make observations over the course of a week, answer extension questions, and formulate a prediction based on research.

## Learning Objectives

[\(MS-PS1 Matter and its Interactions\)](#)

- WALT engineer crystals using basic ingredients and make observations.
- WALT review their research and data to make predictions.

## Materials Needed

- [Crystal Data Collection Sheet](#)
- Vinegar
- Water
- Salt
- Cup
- Sponge
- Food Coloring
- Shallow Dish
- Bins

## Procedure

1. Before you begin the lab, have bins prepared with the necessary materials. This will save you a lot of time during the lesson.
2. Review all safety procedures before beginning the lab. Reference any anchor charts you have in the room.
3. Review what crystals are! These are websites/videos on crystals. These are some other ways to make crystals using different ingredients also.

Continued on page 2



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Continued from page 1

- [This link](#) explores a crystal growth lab at a university.
  - [Crystal Growing Science Video](#)
  - [Borax Crystals](#)
4. Pass out the Crystal Data Sheet and preview it with the students. Then have students move to their lab stations with their groups.
  5. Students should first complete questions 1 & 2 on the Data Collection Sheet before beginning the lab.
  6. Each student should then begin to create their crystals. (Each student can make his/her own dish of crystals, or they can make as a group depending on supplies.) Stir together 1 cup of hot water,  $\frac{1}{4}$  cup of salt, and 2 teaspoons of vinegar in a cup until salt is completely dissolved.
  7. In a shallow dish, students should take a small piece of a sponge and place it inside. Then, the students should take the water, vinegar, and salt solution and pour it over the top of the sponge. The sponge should cover the majority of the bottom of the dish and soak up the solution. You may not use the entire cup of the solution. Make sure students cover the top of the cup with the unused solution.
  8. To add color, you can dot the sponge with food coloring. The colors can potentially run together as the crystals begin to grow.
  9. The dish should sit in a sunny place, so designate an area of the classroom where the students may place their dishes. Make sure the students have them labeled with their names.
  10. Students will monitor crystal growth for one week. Each day students may pour more of the solution over the top of the sponge to replace the solution that has evaporated. Students will draw a simple sketch of the crystal dish each (school) day over the one week period, and write a sentence or two about the changes they are observing each day.
  11. Make sure to have students clean the lab area when the lab is completed.
  12. Students will then answer extension questions after one week and turn in their Crystal Observation Sheet.

## Evaluation

The point values of each activity are located next to the question on the lab sheet. This will count as a lab grade.