



## SUMMER | Air Temperature: Cool Your Jets...or Plants!

### Summary:

Garden Guides will have the opportunity to measure the temperature in the garden throughout the week. Graph their findings and then create a plan to keep the garden happy and healthy during hotter temperatures.

### Before Visiting the Garden:

**Gather:** A thermometer, graphing paper notebook, pencil or pen, rain gauge, magnifying glass, and sun hat and sunscreen (it's important to protect you and your plants!)

**Explore:** “The Hunter (Catalan Landscape)” by Joan Miró—what temperature do you think it is in this painting?

**Read:** *The Magic School Bus and the Climate Challenge* by Joanna Cole & Illustrated by Bruce Degen

### In the Garden:

Good gardeners need to have a plan to make sure their plants survive in the late summer when hotter temperatures come. Too much heat can fry our plants or give some of our veggies a bitter taste. Some of the simplest and best ways to protect plants during these harsher conditions is to make sure that they are being frequently watered and are given the proper amount of shade.

### Questions to Explore:

- Describe a comfortable temperature for plants to live in.
- How can you tell if a plant is overheating? What do you notice? (Dry or curling leaves? Are plants flowering? What's happening at the root?)
- What are some ideas for controlling temperature? (Shade, watering, mulching)
- What patterns do you notice in the temperature throughout the week? Are there any extreme changes?

### Activity:

1. Every day for one week, bring your gardener to the garden with their thermometer, graphing paper, and magnifying glass.
2. Set a rain gauge up at the beginning of the week and check it each day too so you are creating two data points: temperature & rainfall.
3. Graph the temperature and the rainfall over the course of a week. Be sure to record when you water as well.
4. On a separate sheet, record what you notice about different plants. How do flowers react to heat? What do your vegetables look like?
5. At the end of the week, gather your data and ask your gardener what they discovered about changes in temperature and garden growth. As you may have seen, hot temperatures can be hard on plants so take some time to brainstorm with your gardener and write up a plan for managing heat in the garden. Consider watering routines, mulching around the roots of plants, and designs for a simple shade structure to keep plants shaded without trapping heat too close to the plant. Be creative! Then, innovate and implement!

### Beyond the Garden | Get to Know Your Neighbors + Learn About the History of Heat in Your Area

Remember, people get hot too! Grab some cold lemonade or popsicles and visit your neighbors.

- Have any of them lived for many years in your neighborhood?
- Ask them to tell you about the hottest summer they can remember and what they did to stay cool.
- Have your gardener share what they're learning about heat and try implementing a heat management plan in your home garden or ask if the neighbor needs help with their garden!

### Continue Exploring | Supporting Materials

Explore global climate science with NASA: <http://climatekids.nasa.gov/>