

## MATERIALS

- 2 tables
- Food dehydrator
- Large window screens for sun drying
- Assorted kitchen supplies: kid-safe knives, cutting boards, plates, bowls, hand sanitizer
- Salt
- Flip chart and markers
- Pint-sized harvest boxes

## PREPARATION

- Set up two separate work stations in the outdoor classroom, one for sun drying and one for using the food dehydrator
- Arrange the lesson materials around each table to allow for a nice work “flow”
- Sanitize knives, cutting boards, plates, etc. prior to starting the lesson

## PROCEDURE

### Part 1: Getting to Know the Work Stations

- Direct students’ attention to the two work stations and introduce the lesson materials.
- At one work station, students will prepare tomatoes for sun drying. This is a process that uses the heat from the sun to gradually remove moisture for the tomatoes.
- At the other work station, students will place cut and prepared tomatoes into a machine called a food dehydrator. This machine removes moisture from the tomatoes in a matter of hours instead of days.

### Part 2: Harvesting Red Tomatoes

- Divide students up into two groups and assign an adult leader to each.
- Have adult leaders take their groups to separate tomato beds and review proper harvesting methods.
- We want to select the healthiest and best-looking tomatoes. Look for tomatoes that are completely red. Gently pull the tomatoes off the vine, being careful not to squish them.
- Divide students into teams of four and supply each with a pint-sized box. Have each team pick one box of full of red, ripe cherry tomatoes.
- When students are finished, instruct them to return to the gathering space with their tomatoes.

### Part 4: Preparing our Harvest

- Assign one group to the sun drying station and arrange students around the table, repeat for other station
- Explain the importance of maintaining a sanitary work space when handling food
- Slowly guide students through the food preparation process, briefly demonstrating each part.
- Divide up food preparation tasks amongst the students and pass out hand sanitizer
- Carefully cut tomatoes from top to bottom. Use smooth, even pressure to gently cut through the skin.
- Salt tomatoes and place them, skin side down, on drying screens or in the food dehydrator.
- Airflow is important so make sure the tomatoes do not touch one another. Cover the screen with cheese-cloth and let dry for one week in a safe, sunny spot. Turn the tomatoes daily to ensure they dry completely.
- Bring the food dehydrator inside and plug it in. The tomatoes should be dry in 6-12 hours, depending on your dehydrator and the current weather. Store dried tomatoes in airtight jars.
- Save any leftover tomatoes for a fresh afternoon snack!

# Preparing for the Next Season

## Patterns & Preparation

### ENGAGE

We study for a test to get ready, to know the information. What are some other examples of things we do to prepare for activities and jobs? Setting the table, filling up the gas tank, cleaning your room... Our work today is preparatory for next season. It's similar to doing the dishes at the end of a meal or filling up the gas tank. We won't need the dishes again right away, but they'll be ready for us when we do.

### OBJECTIVES

- Students will understand why food preservation is an important part of human survival
- Students will understand how the drying process removes moisture from food, making it suitable for long-term storage
- Students will understand how to select, harvest, and prepare red tomatoes for sun drying or machine dehydrating

### EXPLAIN

#### What is Food Preservation?

Bountiful summer harvests often yield more fresh produce than we can keep up with! Unfortunately, fresh tomatoes from the garden wouldn't last more than a week before spoiling. So if we want to make our harvest last, we have to alter the fresh food in some way to prevent it from going bad. Thankfully, humans have invented a variety of ways to process food in order to prevent spoilage, making it ideal for long-term storage. This is called *food preservation*. The five commonly used methods for preserving foods are drying, freezing, sugar preservation, pickling, and canning. The primary goal behind food preservation is to prevent the growth of harmful bacteria, fungi, or other harmful microorganisms.

#### Sun drying vs. Food Dehydrator

This lesson will focus on one method of food preservation: drying. During this process, our tomatoes undergo a physical change. Drying removes the water, or moisture, from our tomatoes, making it easier to store them for long periods of time without spoiling. During this lesson, we will be experimenting with two different ways of drying our tomatoes. Sun drying is a process that uses the heat from the sun to gradually remove moisture from the tomatoes. A food dehydrator is a machine that removes moisture from the tomatoes in a matter of hours instead of

### ADDITIONAL CONTENT INTEGRATION (see previous page)

Compare and contrast the raw, fresh tomato and the sundried tomato using a Venn diagram or list. How are the two the same, how are they different?

### MATERIALS

- Venn diagram
- Example of a fresh and a dried tomato.

### EVALUATE

**Journal Prompt:** Back in the classroom, once again divide students into their separate work groups. Have each group compose a set of "how-to" instructions based on their respective work stations. Have the sun-drying team present to the food dehydrator team, and vice versa. Discuss some of the similarities and differences between the two methods.

Store dry tomatoes in airtight jars until you are able to arrange for an in-class taste test. Have students try a sample from either batch and record their responses in their journals. Encourage them to consider factors such as taste, texture, and appearance in their overall assessments.