



LESSON:

6/10

SIXTH GRADE GARDEN ROTATION

STANDARDS ALIGNED:

YES

---

## Apple Cider

PLACE OF LEARNING:

Garden Classroom

DURATION:

90 minutes

GRADE LEVEL:

Grade 6

CONTRIBUTOR

ESY Berkeley Teaching Staff

Edible Schoolyard Project

Berkeley, CA

TAGS:

Seasonality

Harvesting

Teamwork

## Summary:

In this sixth-grade seasonal lesson, students use teamwork to collectively press cider and learn about apples.

## Student Learning Goals & Objectives:

After this lesson, students will be able to:

- Recognize seasonality in apples.
- Formulate an observation of the cider.
- Understand how to measure volume using displacement.

## Assessments:

During this lesson, students will:

- Name the season apples are ripe in.
- Describe the finished apple cider using one of their five senses.
- Collectively make a hypothesis on the volume of apples and then find the volume by reading the measurement after the displacement activity,

## Materials & Prep:

### FOR OPENING CIRCLE

- Apples Visual aid
- Job board

### FOR THE CIDER STATION

- Apple press
- Bucket with liter measurements
- 21 pounds of apples
- 35 small cups
- Two pitchers

- ☞ Trays for serving cups of cider

#### BEFORE YOU BEGIN

- ☞ Create the visual aid with apple facts
- ☞ Create job board, listing cider pressing and garden jobs
- ☞ Collect all the materials
- ☞ Create the apple cider station by setting up the press with the bucket placed to catch cider
- ☞ Create the apple gallery by purchasing apples that are unique and that showcase varying characteristics (5-6 varieties are needed)
- ☞ Create descriptions of the apples you have for the gallery

## Procedure Steps:

FULL GROUP, 7-12 MINUTES

1

### AT THE OPENING CIRCLE

Welcome students and introduce the day's activity.

1. Explain that, in celebration of fall, students will learn about apples in Opening Circle, press cider, and enjoy cider in Closing Circle.

Use the word "collaborate" in a sentence: *"We will collaborate to press cider so that we can all enjoy a sip at the end."*

2. Review visual aid highlighting apple facts.

2

### DISPLACEMENT ACTIVITY

Ask if anyone has heard of displacement and invite students to share what they know about it.

1. Describe how displacement can be used to measure volume.
2. Ask a student to use the measuring guidelines on the side of the bucket to figure out how much water is in the bucket.
3. Have students guess how high the water will rise once the apples are placed in the bucket.
4. Ask a student to put the apples in the bucket of water, instructing students to watch the level of water as the apples are submerged.  
Explain that the apples float because they are less dense than the water.  
Have a student push the apples down so they are completely submerged.
5. After all the apples are in the water, have a student read the measurement on the side of the bucket to figure out how much water was displaced.  
Remind students that this number indicates the volume of the apples.
6. Review garden jobs and explain that students will rotate through the cider station in their working groups.
7. Divide the class into groups for garden jobs. Rotate each group through the apple cider station during garden work time.

SMALL GROUPS, 40-60 MINUTES

3

### **AT THE APPLE CIDER STATION**

Bring students over to the apple cider press station and show them the apple gallery.

1. Remind students that apples come in many varieties and that we usually see a few common varieties for sale in our grocery stores.
2. Give students a chance to read descriptions of the different apples and encourage them to notice the different characteristics among them.
3. Describe how the apple press operates, emphasizing safety, and move students through each job (holding the press, putting apples in, cranking the gears, and catching the cider).
4. After everyone in the first group has a chance to do each job, return students to their garden job and bring in the next group.
5. Once all the groups have taken a turn grinding apples, invite students from the final group to press the apples to collect the remaining juice. Pour cider into small cups to be served during Closing Circle.

FULL GROUP, 10-15 MINUTES

4

### AT THE CLOSING CIRCLE

Welcome students back to the Closing Circle.

1. Remind students of the components of the tasting ritual.

Wait until everyone is served.

Once everyone is served, taste your portion.

Make an observation of the tasting based on the five senses.

2. Differentiate an opinion from an observation.

3. Have student volunteers serve cider from trays to classmates.

4. Once everyone has been served and has tasted the cider, ask each student to share their name and an observation.

Use the word "characteristic" in a sentence: *"Now that you've tasted the cider, what are some characteristics of the cider using your five senses?"*

## Download Lesson Materials

APPLES VISUAL AID

## Vocabulary:

Variety

## Academic Standards

### Common Core State Standards

READING STANDARDS FOR LITERACY IN HISTORY AND SOCIAL STUDIES 6-12

RH.6.7

Integrate visual information (e.g. in charts, graphs, photographs, videos, or maps) with other information in print and digital texts

RI.6.7

Integrate information presented in different media or formats (e.g., visually, quantitatively) as well as in words to develop a coherent understanding of a topic or issue.

## Edible Schoolyard Standards

### In the Garden Classroom, Grade 6

#### TECHNIQUES

2.4

Harvest and prepare crops with guidance, recognize the relationship between the kitchen and garden, and learn the seed to table concept.

### The Edible Schoolyard Program

#### CONCEPTS

3.12

Understand seasonality by recognizing and enjoying foods at their peak of flavor and ripeness.

## Contributors:

All lessons at the Edible Schoolyard Berkeley are a collaboration between the teachers and staff of the Edible Schoolyard and Martin Luther King, Jr. Middle School,

This lesson follows the BEETLES Project's Learning Cycle (Invitation > Exploration > Concept Invention > Application > Reflection) and uses their Discussion Routines (e.g. Think-Pair-Share and Whip-Around). For more information, review the BEETLES Learning Cycle ([PDF](#)) and Discussion Routines ([PDF](#)) documents or visit [beetlesproject.org](http://beetlesproject.org).

#### PREVIOUS LESSON

LESSON:

6/10

IN "[SIXTH GRADE GARDEN ROTATION](#) "

#### NEXT LESSON

---