



## **Apple Pressing and Volume Predictions**

**Grade: 3-5**

**Season: Fall**

### **Objectives**

To predict how many pressed apples are in a cup of cider

To learn the anatomy of an apple

To use the apple press and make apple cider

### **Materials and Tools**

- Apple press
- Apples
- Upper Elementary apple pressing worksheet
- Clipboards
- Pencils
- Three large pitchers or bowls to catch juice
- 1 clear measuring cup
- Whiteboard markers
- Gluesticks
- Dixie cups

### **Before You Begin (1 week prior)**

Reserve the apple press on the shared calendar. Pick apples - you will need approximately 1-2 apples to fill a small dixie cup, multiply by the number of students and teachers.

### **Before You Begin (day of class)**

#### **Opening Circle**

On the whiteboard, write out the following statements:

*Prediction: \_\_\_ pressed apples = 1 cup of cider*

*Finding: \_\_\_ pressed apples = 1 cup of cider*

*Conclusion:*

Pass out worksheets, clipboards and pencils. Go over the day's procedures. Show them the apple press, and explain that today we will be making cider. As scientists, we often make predictions before performing an experiment.

Questions: What's a prediction? (an educated guess) What's a finding? (an answer that comes from performing an experiment)

Today, we are going to predict how many apples it will take to make one cup of cider. Explain that they need to make "PREDICTION" as to how many apples it will take to make a cup. They will leave the box under "FINDING" blank until the closing circle. At the end, they can see how close they were to their prediction.

### **Procedure**

Have students stand or sit in a circle (outside if nice weather) or sit in a half-circle (inside with a tarp underneath if bad weather) around the press. Show the students the parts of the press and demonstrate how to crush an apple into the basket. Call up students individually to put an apple into the press and crank the wheel. This process can be as fast or as slow as you want. You select students in a creative way (I'm looking for someone who \_\_\_\_\_.) until everyone has had a turn. If you have a surplus of apples, you can have students do 2.

It is important to know how many apples go into the press, so that you can find the answer to your question during the opening circle.

\*\*\*If you are working outside and you have a large class, you can break the class into two groups. Use the extension activity during this time. If you have garden chores that take priority, while half of the class presses, the other half can be with a co-teacher doing chores. Be sure to ring the cowbell and have groups switch so that everyone gets a turn with the press. Save the cider in the pitchers to measure with the whole class during the closing circle.

### **Closing Circle**

Pour the pitchers of cider into the clear measuring cup, one cup at a time. It is helpful to have an extra pitcher that is empty, so that you can transfer the cider over as you're measuring it out.

While the lead teacher is measuring out the cider in front of the class, the co-teacher is drawing a large measuring cup on the whiteboard for each cup that is measured out.

Ask the students how many apples went into the press. Then ask them to help you with some division. We are going to DIVIDE the number of apples by the number of cups to determine: How many pressed apples are in one cup of cider.

As students count by ones, the co-teacher will put a tally or apple in each of the measuring cups on the whiteboard.

As students are writing their finding, pour cider for each of them. If there is extra time, label the apple parts and glue worksheet into journals.

Have students share their predictions.

Questions: What is a benefit of pressing apples? (preservation)

Can other fruits be pressed?

Cheers! They can then tell a partner some describing words of how the cider tastes.

Teachers can go around and listen to the describing words. We can highlight some words quickly out loud and send the kids on their way.

### **Extension**

If time allows, pass out the image of the apple cross-section. Have students label and and glue into their journals. Cut an apple in half for students to see and touch the cross section.

### **Reflect and Refine**