



Grade Level: 3
Subject: Math

Kalapuya Tart Recipe

ESSENTIAL UNDERSTANDINGS

- History
- Identity
- Language
- Lifeways

LEARNING OUTCOMES

- Students will be able to describe a food made and eaten by the Native peoples of the Confederated Tribes of Grand Ronde.
- Students will be able to solve problems involving measurement and estimation.
- Students will be able to represent and solve problems using addition and subtraction.

CULTURALLY RESPONSIVE PRACTICES

- Connecting to the lives of students
- Preserving and honoring cultural history
- Student talk, working together and individually

ASSESSMENT

Students will be assessed on their proficient completion of their Kalapuya Tart Worksheet.

Overview

Many Native American tribes gather and utilize berries in their everyday life. In this lesson, students will learn about a Kalapuya recipe using berries and other natural food ingredients while practicing their skills of addition, subtraction, and understanding of fractions.

MATERIALS

- [Jammin' with the Tribal Elders](#)
- [Kalapuya Tart Presentation](#)
- [Kalapuya Tart Worksheet](#)
- Measurement Tool Examples (optional)
- Manipulatives (optional)

LOGISTICS

- Where does this activity take place?
Classroom
- How are the students organized?

Whole Class Teams: 3-5

Pairs **Individually**

TIME REQUIRED

45 minutes

STANDARDS

Oregon Common Core Standards: MATH

3.OA.A Represent and solve problems involving addition and subtraction

3.NF.A Develop understanding of fractions as numbers.

3.GM.B Solve problems involving measurement and estimation

Oregon Social Science Standards

Geography 3.9 Describe and compare physical and human characteristics of regions in Oregon (tribal, cultural, agricultural, industrial, etc.).

Historical Knowledge 3.12 Describe how the identity of the local community shaped its history and compare to other communities in the region.

Background for Teachers

Provided by David Harrelson (Kalapuya):

A modern adaptation of Willamette Valley ancestral flavors. The Kalapuya Tart can be made with any kind of berries but for this recipe and general accessibility, blueberries will be used. You can use red huckleberries, blue huckleberries, salal, thimbleberries, service berries, strawberries, raspberries, blackberries and many more. What makes this tart unique from other berry tarts is that a half cup of crushed tarweed seeds (substitution-sunflower seeds) is used in place of a half cup of flour in what is a 3:1 ratio of flour : tarweed (sunflower) seeds. You will not be able to find tarweed seeds a.k.a Sappolil or Atuk at a supermarket or specialty store. This is a native plant that is a relative of the sunflower managed in plots by the Kalapuya for its nutritious and oil rich seeds. The only way to get the seeds is to harvest them yourself or barter and trade with someone who has committed to making this traditional food a part of their lives. Hulled sunflower seeds impart nearly the same flavor without the fibrous husk of Tarweed seeds. It is best to use frozen berries when making this recipe because the freezing process changes the skins of the berries and makes it easier to drain the juices, preventing a soggy tart. During berry season, we often think about how to use all the fresh berries but for those of us that gather and stock our freezers each year, berry season generally means it is time to clear out the freezer for new berries.

VOCABULARY

- **Willamette Valley** - the land between the Oregon Coast Range and the Cascade Mountain Range. It is home to two-thirds of Oregon's population, including the state capital, Salem, and the state's largest city, Portland, which surrounds the Willamette's mouth at the Columbia.
- **Kalapuya** - The Kalapuyans are a Native American ethnic group. Many of their contemporary descendants are members of the Confederated Tribes of the Grand Ronde Community of Oregon. The Kalapuyan traditional homelands were in the Willamette, Elk Creek, and Calapooya Creek watersheds of Western Oregon.
- **Recipe** - a list of ingredients and instructions for making a food

Opening

Begin the lesson by showing students the video “Jammin’ with the Tribal Elders” (<https://youtu.be/2T5hMBY3QQI>)

Discuss with students:

- What are the people in the video doing?
- Why is something that is so important to their people?
- What else could berries be used for besides jam?

Activity

1. Explain to students that they will be learning about a recipe that is important to many Native American people in Oregon - the Kalapuya Tart.
2. Show students the Kalapuya Tart Presentation - see Speaker’s Notes for additional information and discussion prompts.
3. *OPTIONAL:* After the presentation is complete, teachers may show the measurement tools used in the recipe (cup, $\frac{1}{2}$ cup, teaspoon, Tablespoon, etc.) Teachers can show students the difference in amounts using a substance such as water or rice.
 - a. Fill up the $\frac{1}{2}$ cup with rice, fill the 1 cup with rice, dump them side-by-side where students can see. Which is more? Have students guess how many $\frac{1}{2}$ cup scoops will fit into a 1 cup scoop.
 - b. Fill up the teaspoon and tablespoon measurements. Which is more?
 - c. Discuss with students why it is important to pay attention to the measurements in a recipe.
4. Work through the three example problems with students from the Kalapuya Tart Presentation. These will be similar to the questions on their worksheet.
 - a. Question One: If the Kalapuya Tart Recipe makes 12 tarts, how many times will we need to repeat the recipe to feed 24 people? **(2)**
 - b. Question Two: If we repeat the Kalapuya Tart Recipe 2 times, how much flour will we need? **(3 cups or 6 $\frac{1}{2}$ -cups)**
 - c. Question Three: If the Kalapuya Tart Recipe is made 2 times, will 1 cup of sugar be enough? **(Yes)**

Closure

Pass out the Kalapuya Tart Worksheet. Students will work to complete the worksheet as their assessment for this lesson.

Differentiation

- Teachers can bring in the ingredients for the Kalapuya Tart recipe to use during the measurement size demonstration.
- Teachers can following the “I do, We do, You do” format to teach the three practice questions within the presentation.
- Students can work with partners or in small groups on the Kalapuya Tart Worksheet.

Extension

- Using the CTGR Lesson: 3.ELA.Cooking Techniques, teachers can make Kalapuya Tarts with their class. This could be integrated into the lesson or taught as an additional activity.

Notes/Other

Jan Michael Looking Wolf’s or Grand Ronde Canoe Family audio tracks can be played as background music while students are working. These audio tracks can be found on Spotify or Apple Music.

Jan Michael Looking Wolf: [Spotify](#) and [Apple Music](#)
Grand Ronde Canoe Family: [Spotify](#) and [Apple Music](#)

Appendix

- Jammin’ with the Tribal Elders: <https://youtu.be/2T5hMBY3QQI>
- Kalapuya Tart Presentation:
https://drive.google.com/file/d/16v0ph9eS-Pwmb_9xhlqrYZ1mwvOT3xVZ/view?usp=sharing
- Kalapuya Tart Worksheet:
https://drive.google.com/file/d/16v0ph9eS-Pwmb_9xhlqrYZ1mwvOT3xVZ/view?usp=sharing