



ELA Common Core Content Standards:

Reading Standards for Literature 1, 2, 3, 6, 7
Reading Standards: Foundational Skills 1, 2, 3
Writing Standards 2, 8
Speaking and Listening Standards 1, 2, 4
Language Standards 1, 2, 4, 5, 6

Estimated duration:
2 sessions, 1 hour each

Goal: Students will learn traditional and contemporary ways of gathering and preparing acorns, and learn about a key traditional resource management technique: cultural burning.

Teacher Background: Many Indigenous Peoples have traditionally regulated the management of their resources by a combination of land management practices, including the use of fire. The vast majority of food and fiber use species native to the mid Klamath River region are what is known as fire dependent, among which are healthy acorns.

Since time immemorial, acorns have been one of the most important of foods for regional Indigenous peoples as well as animals, insects and birds. As a staple food source, acorns have figured prominently in the diets and daily lives of individuals for countless generations. By setting low-intensity fire to the oak groves, local Natives reduced bug populations and the number of brush and trees competing for the resources needed by the oak trees. This traditional land management practice was banned by the U.S. Government in the 1930's.

According to research, the “exclusion of fire from the ecosystem has a host of interrelated ecological and social impacts including impacts to cultural practice, political sovereignty, social relations, subsistence activities, and the mental and physical health of individual tribal members. In addition, Karuk tribal members are negatively impacted by the effects of catastrophic fires and intensive firefighting activities that in turn result from fire exclusion.”¹ Despite catastrophic demographic collapse, removal from ancestral lands, and vast environmental change, California Indian peoples continue to consider acorn use important in sustaining their cultural identities. Although processing techniques have changed and acorn is

¹ Norgaard, K.M. (2014), The Politics of Fire and the Social Impacts of Fire Exclusion on the Klamath. Humboldt Journal of Social Relations, Issue 36. <http://pages.uoregon.edu/norgaard/pdf/Politics-Fire-Social-Impacts-Fire-Exclusion-Norgaard-2014.pdf>

no longer an everyday food item, it persists as a significant connection between the past and present and a celebration of the traditional ways. In addition, some tribes like the Karuk are developing fire/fuel reduction plans to reinstate low intensity cultural burning practices as an ecosystem management tool.

Theme/Big Idea:	Healthy acorns are fire dependent
Big Questions:	Why is low-intensity fire important for the harvest of healthy acorns? How do we get acorns from the forest to the table?
Vocabulary:	winnow*, leach*, cull, rotate, contemporary*, residue, mortar, pestle, hopper*, consistency, inhibit, chlorinate, conveniences, diversify, simmer

*indicates that the word has been defined in lower grade-level lessons.

Materials:

- Xuun – Acorn Soup** booklet (included)
- Fire and Acorns**, video produced by Basil Conrad (included in supplementary materials)
- KWL Chart (included)
- Vocabulary Worksheet: Xuun (included)
- Comprehension Worksheet: Fire and Acorns (included)
- Comprehension Worksheet Master (included)
- Optional: Acorn Soup Match (included)

Preparation: Read the text contained in the **Xuun – Acorn Soup** booklet and make a note of the steps needed to prepare this highly nutritional and flavorful Native food. Preview the **Fire and Acorns** video and comprehension questions. Print out the KWL Chart and the Vocabulary and Comprehension worksheets for each student, as well as print and staple copies of the booklet for each student.

Session 1

Discussion: Tell students that today we are going to talk about acorns and how important they are to the Karuk culture and community. Ask them if anyone knows the Karuk word for the tan oak acorn, the most prized acorn variety for the Karuk People (**xuntápan**²). Ask students if they have ever gathered acorns or eaten acorn soup before. Ask them if any of them know the Karuk word for acorn soup (**xuun**)³. Ask them if they liked it. Ask them if they know of any land management practices that help encourage the growth of healthy tan oak trees and acorns.

² Pronounced *hoon-TAP-pan*, with the first “H” gurgled in the back of the throat. Sound file available at <http://karukstorytellers.org/Language.htm>

³ Sound file located at: http://linguistics.berkeley.edu/~karuk/audio-words/MP3/xuun_LA.mp3

Tell them that preparing good acorn soup is considered a high art, but that this highly nutritional and flavorful Native food also takes an extraordinary amount of time to prepare in the traditional way.

Brainstorming Activity: Have the students brainstorm for all the steps they can think of that must be taken before the acorns are finally prepared and ready to enjoy on the table. Ask a student to write these up on the board as the students call them out. Once they have finished brainstorming, ask them to come to a consensus on which steps they agree belong in the process. You might choose another student to moderate the discussion, reminding them that the moderator does not participate in the discussion other than ask speakers for clarification. Next, have the students write these down on a piece of paper in the order they think they belong, numbering the steps from start to finish.

Once the students have finished their personal sequencing exercise, ask the students to volunteer their suggestions. Write these up on the board. If students disagree with the answers given, ask them to explain why and make a suggestion for a better answer. When you have listed all the numbered steps have been listed, explain to students that lists should be made using what is known as “parallel structure.” Explain that parallel structure means using the same pattern of words to show that two or more words or ideas are of equal importance and to help the reader comprehend what is being written. Tell them that it is grammatically correct to ensure that phrases, clauses and items on a list use the correct parallel structure.

Grammar Exercise: Write *Parallel Structure* at the top of the board, and underneath, write the first part of the sentence, *Steps in preparing Acorn Soup include:*

Working together with the students, decide which part of speech or phrase structure you will use throughout the list. Possible answers could be: Gathering, Drying or Storing, Cracking, Shelling, Sifting (also called winnowing), Pounding or Grinding, Leaching, Heating Rocks, Cooking – or another form, such as: picking up acorns from the forest, drying the acorns behind the stove, storing acorns in a dry place, cracking the acorns with a rock, and so forth.

Preparing to Read: Now pass out the **Xuun – Acorn Soup** booklets. Have the students compare the table of contents to their own list. Ask them if they think they came close with their list. If not, tell them that after reading the text, they can decide if their list is better.

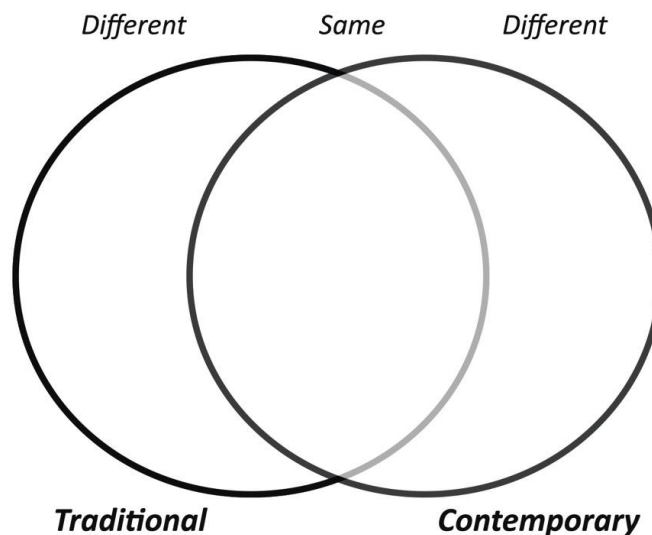
Reading Activity: Students will read each page aloud. When they get to the pages that are on the right-hand side of the booklet, they will see that these sentences are italicized and put into quotation marks. Ask them to try to guess why this is so. The correct answer is explained on the very last page of the booklet.

Vocabulary: Assign the Vocabulary Worksheet: Xuun to the students as homework.

Session 2

Preparation: Preview the Fire and Acorns video and complete the Comprehension Worksheet for yourself. Prepare the DVD for presentation. Review the **Xuun – Acorn Soup** booklet to complete the following exercise on the board.

Compare/Contrast Review: To begin this lesson, students will try to remember what they learned from their **Xuun – Acorn Soup** booklets from the Session 1. In the following exercise, students will list the steps in preparing Acorn Soup and compare and contrast some of the ways people have traditionally and contemporarily completed these. You may choose to project or write the following Venn diagram up on the board:



Building Background: If needed, explain to students that acorns have been one of the most important foods for both the Indigenous peoples of this region as well as for a host of animals, insects and birds since time immemorial. Local Natives used to set low-intensity fire to the oak groves to manage these for their staple food source, but that this traditional land management practice was banned by the U.S. Government in the 1930's.

Discussion: Introduce the topic for discussion with a quote from Dr. Kari Norgaard: *“Karuk tribal members are negatively impacted by the effects of catastrophic fires and intensive firefighting activities that in turn result from fire exclusion.”*⁴ Ask them to interpret in their own words what this statement means. You might want to write *negatively impacted, catastrophic fires* and *fire exclusion* on the board.

⁴ Norgaard, K.M. (2014), The Politics of Fire and the Social Impacts of Fire Exclusion on the Klamath. Humboldt Journal of Social Relations, Issue 36. <http://pages.uoregon.edu/norgaard/pdf/Politics-Fire-Social-Impacts-Fire-Exclusion-Norgaard-2014.pdf>

If needed, explain that fire exclusion is a broad term that means that trying to keep or stop all fires from burning in any given area. Ask them if they think this is a good thing, and encourage them to differentiate wild fires that occur close to homes, and those that burn in remote areas. Ask them if they've ever seen a fire close to their homes.

The topic of *prescribed burning* or *cultural burning* may come up. Unless a student can explain what these terms mean and how they differ from one another, tell students that cultural burning refers to low-intensity burning that indigenous people do for a variety of reasons, among which are ceremonial and/or resource management. Prescribed burning, on the other hand, is the term that non-Natives use for setting low-intensity fires to protect communities and – more and more frequently – to manage for resources as a result of learning by the mistakes made over the past century in suppressing fires at all costs, and from the increasing western scientific validation of the traditional land management practices of the Indigenous peoples of this land.

Preparation for Listening: Pass out the **KWL Chart** and ask students to record what they already know about: 1. Fire and its effect on the environment; 2. Fire's effect on the tan oak trees and their acorns; and 3. Animals that depend on acorns for food. Students will record their answers in the 'know' column. Ask them to write down what they want to know about these topics in the "want" column, and tell them that they will fill in the "learn" column later.

Tell students that they will be watching a video that was produced by a Karuk Tribal Youth named Basil Conrad for this lesson. Explain that producing a video means to edit video clips, develop the audio tracks, and add images such as graphics and photos to complete the final product. Tell them that these are skills that professionals need to learn, and that to produce even a very short video takes a lot of time and patience.

Activity: Show the video to the students once before handing out the Comprehension Worksheet. Then have students review the questions before they watch it a second time. Tell them that they should take notes during the next showing, and that they can write out their answers afterward. Show the video a second time.

Comprehension: Assign students the **Comprehension Questions** worksheet to fill out in complete sentences.

Optional Writing Activity: If student still feel that their list of steps preparing acorns was better than the one in the **Xuun – Acorn Soup** booklet, they might want to write a letter to the Karuk Tribe explaining their ideas and suggestions for editing. They will find the address on the back of the booklet, and they can write: *Attention: Lisa Hillman* under the Addressee line to ensure that the letter gets sent to the proper employee. In their letter, they might want to add a subject line at the top of the page, e.g., *Re: Suggestions for Editing the Xuun – Acorn Soup booklet.*

Optional: Acorn Soup Match. Have students color and match the pictures that go together. Answers are:

Fire – cooking rocks
Sifting tray – acorn flour
Pounding basket – pounding rock
Acorn cooking basket – acorn cooking paddle
Acorn storage basket – acorns
Eating basket – men's spoon

References:

Norgaard, K.M. (2014), The Politics of Fire and the Social Impacts of Fire Exclusion on the Klamath. Humboldt Journal of Social Relations, Issue 36.

<http://pages.uoregon.edu/norgaard/pdf/Politics-Fire-Social-Impacts-Fire-Exclusion-Norgaard-2014.pdf>

Anderson, M. K. (2007). Indigenous Uses, Management, and Restoration of Oaks of the Far Western United States. USDA-NRCS. Technical Note No. 2

http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb1042292.pdf

Master Comprehension Questions: Fire and Acorns

1. Why do Karuk people burn oak stands for the acorn? *reduce infestations that make the acorns inedible*
2. What kind of animals like the worms that sometimes get into acorns? *birds*
3. What are the two kinds of animals the first speaker names that like meaty acorns? *deer and elk.*
4. Karuk People used to burn underneath the trees to do what? Circle all correct answers.
 - a. to burn up their garbage
 - b. to scorch buggy acorns
 - c. to get worms to hatch more quickly
 - d. to prevent too much brush from growing underneath
 - e. to improve the acorn harvest
5. The life-cycle of worms is important to understand in order to manage for healthy acorn stands. Write the number in which the phases of their life-cycle occur, from when they first appear in an acorn to when they infest the next year's acorns.
 2. burrow into the ground,
 3. hatch out
 4. fly into the trees to infest growing acorns
 1. feed on ripe acorns
6. What prevents fire from continuing to burn under oak stands? *moist soil*
7. During the process of culling buggy acorns from healthy one, what is a good strategy to prevent further infestations? *piling buggy acorns and burning them with rotting wood*
8. What is one of the factors that help molds grow in acorns? *too much moisture*
9. What is one of the factors that prevent molds from growing in acorns? *smoke*
10. How can you learn traditional ecological knowledge? *learning from experiential learning, such as gathering and doing things for yourself; and from stories*
11. One of the speakers says that "Fire is a tool." What does he say that it isn't? *a weapon*

Name _____

KWL Chart

Topic: _____		
What I Know	What I W ant to Know	What I L earned

Name: _____

Vocabulary Worksheet: Xuun – Acorn Soup

Choose the vocabulary from the word bank to fill in the sentence definition blanks. Careful: some of the words must be changed to another part of speech!

winnow	leach	cull	rotate	contemporary	residue	mortar	pestle
hopper	consistency	inhibit	chlorinate	convenience	diversify	simmer	

1. The _____ of something is the quality of being thick, firm, smooth, etc.
2. An upside-down bowl or basket that has a hole in it is called a _____, which is used to keep pieces of acorns from flying too far.
3. A _____ is a heavy, deep bowl in which seeds, nuts, spices, etc., are pounded or crushed with a heavy tool.
4. The _____ is usually a small amount of something that remains after a process has been completed or a thing has been removed.
5. To move or turn in a circle is to _____.
6. _____ acorns is a way to remove the bad ones from the group, or to select or choose the better ones for further processing.
7. Something that makes you more comfortable or allows you to do things more easily is called a _____, like a microwave.
8. Changing something to include different kinds of things is called _____.
9. When you _____ acorns, you are removing the tannic acid from them by passing through them.
10. To cook something so that it is almost boiling for a certain period of time is to _____ it.
11. To _____ means to remove the unwanted coverings of seeds from grain by throwing the grain up in the air and letting the wind blow the unwanted parts away.
12. When you want to describe something that is happening or beginning now or in recent times, you can use the adjective _____.
13. A _____ is the tool used for pounding or crushing things in a deep bowl.

Name _____

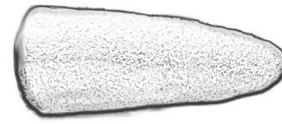
Comprehension Questions: Fire and Acorns

1. Why do Karuk people burn tan oak stands for the acorn?
2. What kind of animals like the worms that sometimes get into acorns?
3. What are the two kinds of animals the first speaker names that like meaty acorns?
4. Karuk People used to burn underneath the trees to do what? Circle all correct answers.
 - a. to burn up their garbage
 - b. to scorch buggy acorns
 - c. to get worms to hatch more quickly
 - d. to prevent too much brush from growing underneath
 - e. to improve the acorn harvest
5. The life-cycle of worms is important to understand in order to manage for healthy acorn stands. Write the number in which the phases of their life-cycle occur, from when they first appear in an acorn to then they infest the next year's acorns.
_____ burrow into the ground,
_____ hatch out the next year and
_____ fly up into the trees to infest
_____ feed on ripe acorns
6. What prevents fire from continuing to burn under tan oak stands?
7. During the process of culling buggy acorns from healthy one, what is a good strategy to prevent further infestations?
8. What is one of the factors that help molds grow in acorns?
9. What is one of the factors that prevent molds from growing in acorns?
10. How can you learn traditional ecological knowledge?
11. One of the speakers says that "Fire is a tool." What does he say that it isn't?

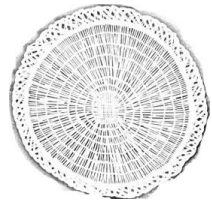
Match the pictures that go together.



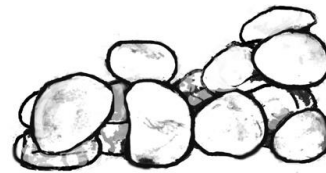
fire



pounding stone



sifting tray



cooking rocks



pounding basket



acorn flour



cooking basket



men's spoon



storage basket



acorns



eating basket



cooking paddle