**1.1 Native Californian’s Connection with Fire**

**Overview:** Students read a Northern California Tribal story of how tribal members obtained fire as a resource and watch a video about modern cultural burning. Students discuss why fire is an important tool for tribes and how they use it to manage the landscape. Students discuss their own relationships with fire, how they feel about fire, and why fire may be an important part of our landscape. This provides a baseline to discuss how northern California oak woodlands are adapted to fire, and it provides context to talk about fire in a safe and supportive environment.

**Subjects:** Science, Reading, Writing, Speaking and Listening

**Duration:** one class period

**Group Size:** Whole class

**Setting**: Indoors

**Vocabulary:***ecosystem, ecological community, fire behavior, wildland fire, species, pyro-agriculture*

**Goal:** To give students a chance to understand their feelings about wildfire. To introduce the idea that people have been interacting with fire in California for a long time. To provide understanding that many tribes used fire as a tool to manage the landscape.

**Objectives:** Students can…

* Describe their feelings about fire in general (e.g. campfires, wood stoves, fires in fireplaces, birthday candles, and more) and wildland fire
* Describe the ways fire is important for local tribes in the past and present

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| **Standards:**  |  |  |
| **NGSS** | Cross Cutting Concepts  | Stability and Change Systems and System Models |
|  | Science and Engineering Practices | Obtaining, Evaluating, and Communicating Information |
|  | Disciplinary Core Ideas | LS2.C: Ecosystem Dynamics, Functioning, and Resilience |
| **Environmental Principals and Concepts**  |  | Principle 1 – People Depend on Natural Systems Concept, Principle 3- Natural Systems Change in Ways that People Benefit From and Can Influence |

**Teacher background:**

For thousands of years indigenous people of California used and continue to use fire as a tool for many purposes including for cooking, heating their homes, and for ceremonies. They also use fire to manage the landscape. They lit frequent, low intensity fires to cultivate desired plant communities, manage pests, and increase abundance of some wildlife species. This is called pyro-agriculture. Their deep understanding of how and when to burn maintained a land of abundance. Many reports of first settlers’ visions of California describe it as looking at a well-tended park, filled with wildlife.

Unfortunately, many tribes were forced to stop their traditional burning practices after Europeans settled in California. Today, oak woodlands look very different than a few hundred years ago. Some are very dense and have high fuel loads due to lack of fires. Others have far fewer trees and shrubs because they were cut to improve rangeland or for development. There is now a desire to manage the land with fire once-gain, and many people are turning to local tribes for their expertise. When developing these lessons and meeting with several tribes, many tribal members echoed the need to build respect for fire instead of just fear. For more information on cultural burn practices past and present, see these articles:

<https://www.theguardian.com/us-news/2019/nov/21/wildfire-prescribed-burns-california-native-americans>

<https://arcade.stanford.edu/occasion/historical-and-cultural-fires-tribal-management-and-research-issue-northern-california>

To learn what tribal land your town currently resides on, you can look at this map:

<http://www.ncidc.org/California_Indian_Pre-Contact_Tribal_Territories>

The goal of this lesson is to lay the groundwork for learning about wildfire and for students to understand its relationships with people and its potential benefits. Fire plays an important role in California oak woodlands, and many plants and animal species need it to grow and thrive. Today, many communities are considering how to safely return fire the land and how they can become more fire adapted themselves. Perhaps someday your students will help with this process.

**Materials and Preparation:**

* Have copies of a tribal story of fire printed or available digitally for students to read
* Consider inviting a tribal member to class to share their connection with fire.
* Have videos of current tribal use of fire ready to be projected
* Butcher paper for “Wildfire Lesson Ground Rules”

**Procedure:**

1. Explain to students: Each of us have different experiences and feelings about wildland fire, and many of us may feel scared because of recent wildfires in our area. Before we begin this unit, we are going to create class boundaries together to help us feel comfortable when learning about fire.
	1. Have student’s brainstorm ground rules for discussing fire sensitively.
	2. Record boundaries on a piece of butcher block paper that you hang for each fire lesson.
2. Explain to students: We are going to read the story of \_\_\_\_\_\_\_\_\_ Tribe’s connection with fire. During this reading students should begin to think about their personal relationships with fire, and why they think fire was such an important resource for tribes.
3. Read or watch tribal story of fire. Discuss the following questions:
	1. Why would fire be an important tool for tribes?
	2. What are some of the ways that tribes used fire?
	3. Based on the story, what types of feelings do you think the tribe had about fire?
	4. What are some of the ways that you use fire currently?
	5. Do you think that fire plays an important role on the landscape?
4. Watch videos of current tribal uses of fire.
	1. KCET. Tending the wild: cultural burning. <https://www.kcet.org/shows/tending-the-wild/episodes/cultural-burning> (18:28)
	2. UC Davis. 2018. Fighting fire with fire: Using Cultural Burning Practices. <https://www.youtube.com/watch?v=Vr5LP0UZvKg> (3:15)
	3. Klamath Media. 2019. Fire belongs here. <https://www.youtube.com/watch?v=jbNy52Ed-3k> (2:06)

Discuss the following:

* 1. What were some of the reasons given for why fire is important?
	2. What were some of the ways people used fire in the video?
	3. What are your thoughts on bringing fire back to the land (i.e., intentionally using fire)?
1. For future lessons: Explain to students that they will learn about the natural and cultural fire ecology of the oak woodlands. As they move forward in the lessons, they should keep in mind the interaction between the ecology of the land and the culture of the people who live in it.

**Assessment:**

Explain to students: Write on a clean sheet of paper:

* + 1. A paragraph describing the many uses of fire, and why fire is important to people past and present.
		2. Three questions that they have about fire’s role in the ecosystem.
		3. A list of three words or phrases that describe their feelings about wildland fire. Explain that people’s feelings often differ without being “right” or “wrong,” so all of the feelings are valid. Also, because their feelings could change over time, they will have a chance to record their feelings again after they’ve learned more about fire.

**Evaluation:**

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|  | Good | Fair | Poor |
| a. Uses of fire Paragraph | Complete paragraph. Contained at least two examples uses of fire  | Incomplete paragraph. Contained one example uses of fire  | Incomplete paragraph. Did not contain examples uses of fire  |
| b. Questions they have about fire’s role in the ecosystem | Three questions they have about fire’s role in the ecosystem  | Two questions they have about fire’s role in the ecosystem | One or no questions they have about fire’s role in the ecosystem |
| c. Fire Feelings List | Three words or phrases about personal feelings about wildland fire | Two words or phrases about personal feelings about wildland fire | One word or no words or phrase about personal feelings about wildland fire |