



Grade Level: High School
Subject: Science

Prescribed Burns

ESSENTIAL UNDERSTANDINGS

- Since Time Immemorial
- History
- Genocide, Federal Policy, & Laws
- Lifeways
- Tribal Government
- Sovereignty

LEARNING OUTCOMES

- Students will be able to define prescribed burns and describe why they are used at the Grand Ronde Tribe and the greater Willamette Valley.
- Students will be able to take a stance either for or against prescribed burns and defend their answer with fact from various articles

CULTURALLY RESPONSIVE PRACTICES

- Interaction with others through socratic seminar
- Proximity
- Preserving and honoring cultural history
- Student talk, working together and individually

ASSESSMENT

Students will be assessed on their participation in classroom discussions and their written argument.

Overview

In this lesson, students will be learning about prescribed burns and the Grand Ronde Tribes' relationship with these types of burns. Ultimately, students will construct an argument for or against prescribed burns and defend their thinking.

MATERIALS

- [Noble Oaks Part 4: YouTube Video](#)
- [Topographic Map of Oregon](#)
- [Additional Resources for Students to Construct Argument](#) (see Appendix)

LOGISTICS

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

Whole Class Teams: 3-5

Pairs Individually

TIME REQUIRED

2-3, 50 minute periods

STANDARDS

Next Generation Science Standards

HS-ESS3-1 Earth and Human Activity Construct an explanation based on evidence for how the availability of natural resources, occurrence of natural hazards, and changes in climate have influenced human activity.

Oregon Social Sciences Academic Content Standards

Geography HS.39 Use maps, satellite images, photographs, and other representations to explain relationships between the locations of places and regions and their political, cultural, and economic dynamics.

Geography HS.40 Use geographic data to analyze the interconnectedness of physical and human regional systems (such as a river valley and culture, water rights/use in regions, choice/impact of settlement locations) and their interconnectedness to global communities.

Background for Teachers

Prescribed burns have been used by the Grand Ronde people since time immemorial. Tribal people see prescribed burns as a way to rejuvenate the land and keep it healthy. Prior to the European colonization of the Americas, indigenous peoples used controlled burns to modify the landscape and maintain wildlife habitats that helped to support the cultures and economies of the Indigenous peoples of the Americas. There were many [reasons](#) for these prescribed burns including the creation of mineral-rich soil, initiating seed germination, clearing underbrush for easier hunting and travel, decreasing the risk of unplanned catastrophic fires, and the cooling of river temperatures due to smoke density.

For more information:

- <https://www.nature.org/en-us/magazine/magazine-articles/indigenous-controlled-burns-california/>
- <https://www.history.com/news/native-american-wildfires>
- <https://eos.org/features/fire-as-medicine-learning-from-native-american-fire-stewardship>

VOCABULARY

- **Time Immemorial** - time extending beyond the reach of memory, record, or tradition. Since the beginning of time
- **Prescribed Burn** - a planned fire, sometimes called a controlled burn
- **Traditional Land Management** - Methods traditionally used to manage the use and development of land resources

Opening

1. Ask students to think about the first word that comes to mind when you say the word: *Fire*.
2. Ask students to share the words that they have thought of. Make a list somewhere in the room of the words provided by the students. We will circle back to this list at the end.

Activity

Day 1

1. Ask students if they think that fires, specifically wildland fires, have any benefit to the environment. Call on several volunteers to share their thought process.
2. Explain to students that fire has not always been viewed as destructive and negative. Native American tribes have used prescribed burns since time immemorial to keep the land healthy and as a way to harvest various traditional foods. One of the tribes that utilize prescribed burns is the Confederated Tribes of Grand Ronde, a Native American Tribe located in Western Oregon. Show students the topographic map of Oregon and point out where Grand Ronde is on the map. Grand Ronde is roughly 350 feet above sea level. There is a large variety of vegetation including large forested areas.
3. Inform students that there is a Museum in Grand Ronde named Chachalu. This translates to "place of the burnt timbers". This is because a massive forest fire burned through the Grand Ronde Valley shortly before the time of Relocation in 1856. This shows the resiliency of the land and of the people who have lived here since time immemorial. The land, once devastated by fire, is now revitalized with healthy forests and abundant wildlife.
4. Show students the short video about the Grand Ronde Tribe - Noble Oaks Part 4. In the video, they will be learning about Noble Oaks Preserve. It is an area where the tribe plants native species and is striving to return to traditional land management techniques.
5. After viewing the video, ask students:
 - a. *How fire would play a role in the traditional gathering of acorns?*
 - b. *Should there be more prescribed burns allowed?*
6. Let students know that today they will be learning more about prescribed burns. Their job is going to be to read a variety of articles/webpages and construct an argument whether or not prescribed burns should be used more. Some of the articles come directly from the Confederated Tribes of Grand Ronde Newspaper: Smoke Signals.
7. Ask students to take a stance for or against prescribed burns and provide three supporting details from the articles and websites. Students should cite their sources and create a bibliography.
8. Let the students know that they will be taking place in a socratic seminar and will want to have a well thought out opinion.
9. Release students to begin reading the articles and exploring the websites provided. Students can start an outline for their argument and if time permits writing their argument.

Activity

Day 2

1. Ask the students to think in their head about what a prescribed burn is and why the Grand Ronde Tribe historically used them. Ask them to share their thinking with a neighbor.
2. Explain to students that they will be taking place in a socratic seminar about whether or not prescribed burns should be allowed to take place.
3. Explain to students how the socratic seminar will work:
 - a. Students will sit in a large circle all facing each other.
 - b. As the teacher, you will pose an open ended question about prescribed burns and students will have the chance to have a discussion about the question.
 - c. Go over the ground rules of the socratic seminar: Reference the articles/websites, take turns speaking, ask for clarification, discuss ideas not opinions and talk to each other not the leader (teacher). Feel free to add any rules you deem necessary.
 - d. Let students know that they will be adding at least one element from the socratic seminar to their own argument. It can be a point that another classmate made, an example used by a classmate or any other information that would help support their own argument. Students should take notes during the socratic seminar to help with this later.
4. Have students get into the socratic seminar formation.
5. Pose the first question to the students to get the conversation/debate going. Below are some suggestions, but feel free to ask your own questions.
 - a. Should prescribed burns be allowed?
 - b. What are some of the positive outcomes to prescribed burns? Do they outweigh any negatives?
 - c. Should we be concerned about the environment when doing prescribed burns?
 - d. Are prescribed burns good for the environment?
6. Monitor the conversation and allow students to direct the discussion. Intervene if the conversation becomes stalled (pose another question) or if the conversation needs redirecting. Allow the conversation to take place as long as students are engaged and actively participating. There is no set time limit for how long the socratic seminar. Shoot for the activity to last 20-30 minutes.
7. Remind students that they will need to add one point made during the socratic seminar to their argument. Ask them to make sure that they have something written down prior to ending the activity.
8. Have students get back into their original seating arrangement.

Closure

1. Ask students to think in their head about what they have learned about prescribed fires. Show students the list that was made at the start of the lesson (during day 1). Ask students to think in their head about the first word that comes to mind when you say the word fire now.
2. Make a new list and see how it compares to the original list. Ask students what they think about the two lists and what it shows.
3. Collect the students' arguments after they have a chance to add the supporting detail from the socratic seminar.

Differentiation

- If desired, the socratic seminar can be done in various small groups.
- The student arguments can be handwritten, typed, a video or presentation/slide deck.

Extension

Guest Speaker: Invite a guest speaker from a Tribal Wildland Firefighting crew to speak to the students about fire safety, land preservation, and the importance of prescribed burns. Consider using the Extension Interview Questions.

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

- Noble Oaks Part 4 YouTube Video: <https://www.youtube.com/watch?v=FltdvmaNImE>
- Topographic Map of Oregon:
<https://drive.google.com/file/d/1rFDC1jldtV0K7s-aAZyekMdUPz40kGSZ/view?usp=sharing>
- Additional Resources for Students to Construct Argument:
 - https://drive.google.com/drive/folders/1YFTLkqNVmBpkP_OD86GbfHGXunNxnRsW?usp=sharing
 - [Willamette National Forest: Prescribed Fire](#)
 - [Smoke Signals: December 1st, 2002 Flathead Indian Tribe Has Respected Fire Management Program](#)
 - [World Wildlife Article: Forest Fires - the good and the bad](#)
 - [National Public Radio: To Manage Wildfire, California Looks to What Tribes Have Known All Along](#). *This resource has an audio recording of the article on the website.*
 - [The Oregon Encyclopedia: Indian Use of Fire in Early Oregon](#)