

## LESSON 1

# Teacher Guide

## Healthy Forests, Healthy Planet (90 Minute Lesson Plan)



*This lesson can be completed in the classroom, or at home using teleconferencing (such as Zoom, Skype, Google Meet, Facetime, etc.) and/or shared documents (such as Google Docs) during group activities such as discussions and group projects. Sections requiring use of one of these remote-access tools have been marked (\*). Before beginning this lesson, explain to your students how you would like them to participate in these group activities if your class will be completing the lesson at home.*

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## Today's Topic: Healthy Forests, Healthy Planet

NGSS 5-ESS3-1: Obtain and combine information about ways individual communities use science ideas to protect Earth's resources and environment.

### Introduction to Our Forests (10 minutes)\*

Have students watch the video, [Healthy Forests, Healthy Planet](#). Ask students to make note of the different types of habitats and organisms they see. Then, ask students if they have been to a forest or have seen one in a movie or on television. Ask them to describe what characteristics make an area of land a forest.

## Read and Respond

### Our Forests (5 minutes)

Students should complete the short reading to learn about forests and California's forests.

### How Forests Are Managed (5 minutes)

Students should complete the short reading to learn about some of the things that can happen to California's forests. They should read about how the forests are being managed to protect them from overuse.

## Types of California Forests (10 minutes)

Students should complete the short reading to learn about the different types of California forests.

## Student Response (5 minutes)\*

As students complete the sections, have them join a group discussion about what they learned. These can be small groups or a whole class, depending on your class size and needs. If completing this lesson in the classroom, you could also have the students break into short discussions after each reading rather than waiting until all readings are complete.

Possible discussion questions:

### Our Forests

- How do you use forests?
- Why do you think it is important to keep forests healthy?
- How are forests important to living things and the environment?

### How Forests Are Managed

- Do you think it is possible to prevent forests from being converted to other uses and better protect them from wildfires?
- If you could tell the governor one thing about why forests are important and need to be protected, what would you say?

### Types of California Forests

- Which of these forests have you visited before? What did you notice about the types of trees and other plants there?

## Research

### Who Owns and Manages California's Forest? (10 minutes)

Direct students to appropriate websites or texts to determine current percentages of California forest ownership, or provide this data for students to use to complete this section.

One such resource is [Forest Research and Outreach](#) from the University of California. This page is static, but is a good starting point to find additional information about the percentages of ownership. Another appropriate website could be the [USDA](#).

Students should then complete the short reading on California’s forest ownerships to learn more about how California’s forests are owned by different groups of people with different needs.

### **The Forests and You (15 minutes)**

Have students watch the videos [Crystal Lake Tree Planting—It’s All Yours](#) from the U.S. Forest Service to learn about what foresters do and the ways that citizens can volunteer in our forests.

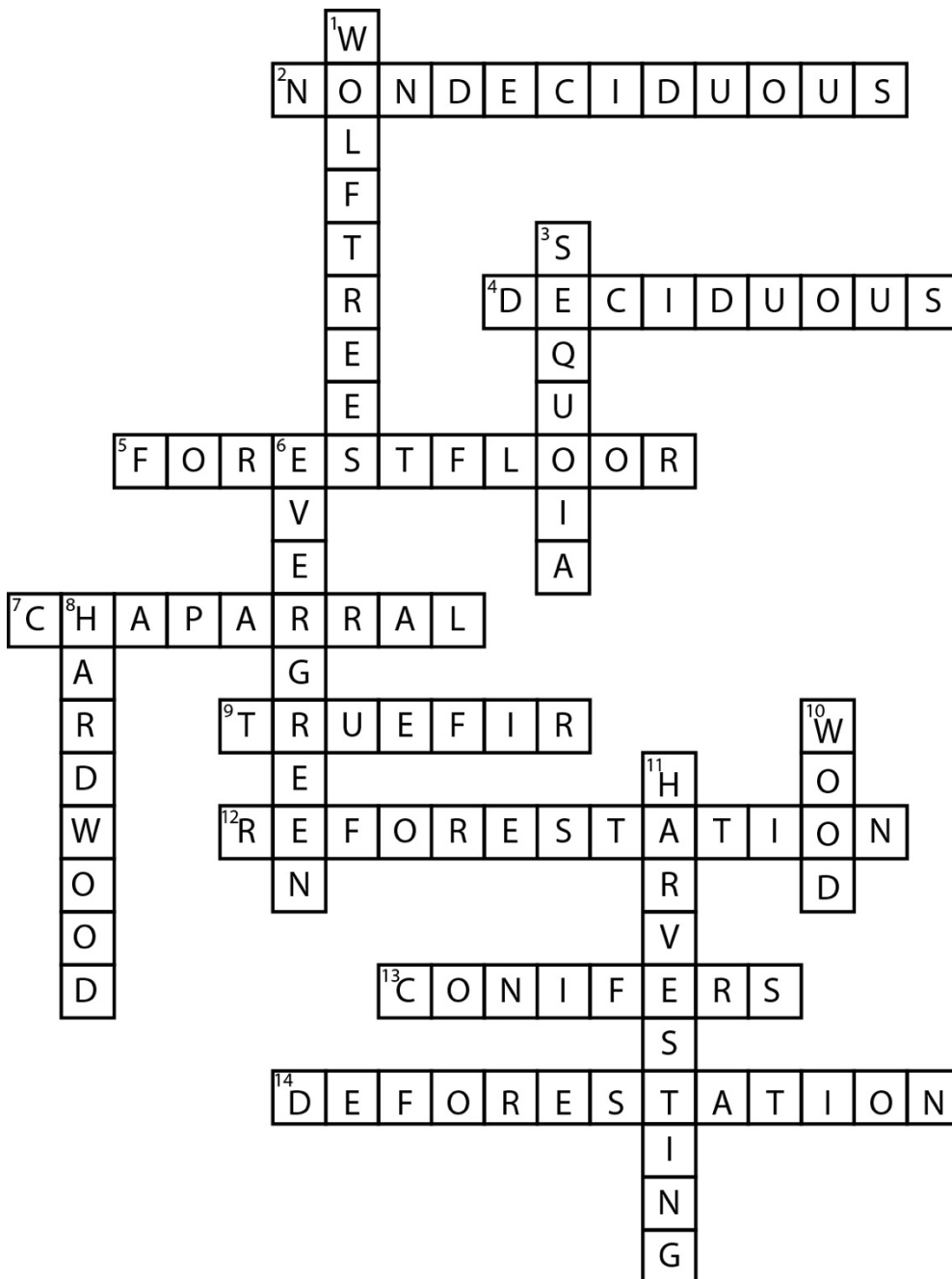
Next, direct students to perform online research at the following websites to learn other ways people and volunteers help maintain California’s forests. Have them write a short paragraph outlining what they learned.

- [U.S. Forest Service Volunteers](#)
- [Tree People](#)
- [U.S.D.A Forest Service Volunteers](#)
- [National Association of State Foresters](#)
- [Cal Fire](#)
- [Hoopa Tribal Forestry](#)
- [California Forest Foundation](#)
- [University of California Cooperative Extension](#)
- [Cap-and-Trade Program](#)
- [California Cap-and-Trade](#)

## Healthy Forests, Healthy Planet Crossword Puzzle

### Practice Vocabulary and Facts (5 minutes)

Have students complete the crossword puzzle to help them practice identifying terminology and definitions associated with California's forests.



## What Did You Learn?

### Assessment Questions (5 minutes)

Have students complete the following multiple choice assessment questions to allow students to apply what they have learned. Note: correct answers are in bold.

1. Why can it be good to remove trees from overgrown forests by cutting them down?
  - a. to make space for new buildings
  - ✓ **b. to maintain desired forest density**
  - c. to provide wood products for societal use
  - d. to start growing new forests
2. Which term or phrase is used to describe how well forests are able to recover from damaging events?
  - a. forest density
  - ✓ **b. resiliency**
  - c. even-aged forest
  - d. reforestation
3. Who owns the National Forests found in California?
  - a. the federal government
  - b. the State of California
  - ✓ **c. all people in the United States**
  - d. private companies and individuals
4. How are controlled burns helpful in managing California forests?
  - ✓ **a. by removing brush to prevent large wildfires**
  - b. by removing all the trees before they can catch on fire
  - c. by clearing the land so new trees can replace old ones
  - d. by making more space for people to build homes
5. Which type of forest has rules on how owners can manage and remove trees?
  - a. national forests
  - b. California state forests
  - c. forests owned by companies
  - ✓ **d. all of the above**

## Apply to the Real World

### Group Activity: Discussions (20 minutes)\*

Have students complete the group activity to promote the sharing of opinions and working together.

Explain to students that part of being a good citizen means making informed decisions. Making an informed decision means that you must consider all of the facts, not just opinions or feelings, when making a choice.

Break students into an even number of small groups, and assign each group to either Discussion 1 or Discussion 2. Instruct students to discuss the prompt and write a one-page response. Once groups have completed their discussions and writing, bring the class back together so that student groups can present their ideas. Encourage students to think about what each group presented and make any changes to their own recommendations.

#### Discussion 1

Inform the students in this group that the school's nature club has asked the principal to replace some of the blacktop playing area at the school with a "forest." Ask the students to discuss this idea and produce a list of benefits that this project would provide for student welfare, as well as any disadvantages, in order to help the principal make an informed decision.

#### Discussion 2

Ask the students in this group to imagine that the school's nature club is making pamphlets saying that trees should never be harvested from public lands. Remind the students that in order for the pamphlet readers to make informed decisions the pamphlets should also include information about the benefits of forest management. Have the students write a letter to the club providing reasons why forests that allow harvesting are healthier and provide more value to society than forests that grow wild and ask the club to include this information in their pamphlets.