

## Lesson Plan

### Ring of Fire

**Book:** Detecting Wildfires

**Series:** Detecting Disasters

**Level:** Navigator

### Objective

To help students practice quickly and accurately recalling specific details from a text, and to help them explore how wildfires affect the environment, how scientists detect wildfires, and how people can stay safe during wildfires.

### Supplies

- *Detecting Wildfires*
- Ring of Fire Questions (attached)
- A chair for each student

### Before the Activity

Read through the *Detecting Wildfires* book, or assign it to students to read on their own. Arrange the chairs in a circle. Print the Ring of Fire Questions.

### Activity

Choose two students to begin the activity, and ask them to stand up. Explain that you will ask the two standing students a true-or-false question. The first student to shout out the correct answer gets to remain standing. The other student should sit down in the first student's chair.

This will open up the second student's chair. The standing student should move over toward this chair. There will now be an empty chair between the standing student and a third student. Ask the third student to stand up. Explain that these two students will now face off the same way: after asking them a true-or-false question, the first student to shout out the correct answer will remain standing, and the other student will sit down in the chair. This will cause the empty chair to move again.

Each student's goal is to go all the way around the circle and end up back in his or her original chair. Students can keep advancing from chair to chair, following the empty chair around the circle until they get an answer wrong or do not answer quickly enough. When this happens, they have to sit down, and a new student will begin advancing around the circle.

## Evaluation

Continue until one student makes it back to his or her original chair. If you use all the questions provided, go back to the beginning of the list and rephrase the questions, using the notes in parentheses to change “False” answers to “True” answers (or vice versa) as needed.

## Standards

This lesson may be used to address the Common Core State Standards’ reading informational texts standards, grade 3 (RI 3.1; RI 3.4) and the National Science Education Standards’ Content Standards E and F, grades K–4.

## Ring of Fire Questions

1. Every year in the United States, there are more than 100,000 wildfires. (True, p. 11)
2. If there is wind and dry weather, wildfires can double in size every minute. (False: They can double every 5 minutes, p. 11)
3. Most wildfires are caused by people. (True, p. 12)
4. Lightning can also cause wildfires. (True, p. 12)
5. A wildfire needs oxygen, heat, and sunlight. (False: It needs oxygen, heat, and fuel, p. 12)
6. Wildfires occur on every continent except Antarctica. (True, p. 11)
7. To help detect fires, the US government built lookout towers in national forests throughout the United States. (True, p. 18)
8. There are more than 5,000 of these stations still used today. (False: There are only a few hundred stations still used in the United States, p. 21)
9. Today people use cameras with sensors that can estimate a fire’s location, size, speed, and direction. (True, p. 26)
10. These cameras can detect fires and smoke within the 116 square miles (300 sq km) around them. (True, p. 25).
11. Wildfires are always harmful. (False: Occasional wildfires actually help the land, p. 15)
12. Burned plants take away nutrients from the soil. (False: They provide nutrients for the soil, p. 15)
13. Wildfires help plants grow because they burn away trees, which lets more sunlight reach the forest floor. (True, p. 15)
14. Smoke and haze from wildfires add valuable nutrients to the atmosphere. (False: Smoke and haze pollute the atmosphere, p. 13)
15. There are 9 categories of wildfires. (False: There are only 3 categories, p. 15)
16. Ground fires burn fuel in the soil beneath the forest floor. (True, p. 15)
17. Surface fires burn slowly along the forest floor. (True, p. 15)
18. Crown fires burn the tops of trees. (True, p. 15)
19. Crown fires cannot spread very quickly. (False: They can spread very quickly, p. 15)
20. Ground fires are the most common. (False: Surface fires are most common, p. 15)
21. Crown fires are hardest to contain. (True, p. 15)

22. The US government started the United States Forest Service in 1776. (False: The US Forest Service was started in 1905, p. 17)
23. Hallie M. Daggett became the first female lookout in 2007. (False: Daggett became the first female lookout in 1913, p. 18)
24. William Bushnell Osborne Jr. created the Osborne Firefinder in 1911. (True, p. 19)
25. The Forest Service's first telephone line was built in 1943. (False: It was built in 1906, p. 20)
26. Forestry officials began using drones to detect wildfires in 2015. (True, p. 26)
27. The word "brush" means "short trees or shrubs." (True, p. 31)
28. The forest floor is the upper layer of soil and decaying matter in a forest. (True, p. 31)
29. The word "timber" means "trees that are more than 50 feet tall." (False: It means trees grown for their wood, p. 31)
30. An alidade is a device used to spot and measure faraway objects. (True, p. 22)
31. Fuel can only be made from wood. (False: Fuel is any material that can burn, pp. 12–13)
32. Plants, branches, leaves, and water vapor are all examples of fuel for a wildfire. (False: Water vapor is not a fuel for a wildfire, pp. 12–13)
33. Megafires are huge, intense fires on public land. (True, p. 7)
34. Megafires spread most quickly in areas with wet, rainy climates. (False: A dry climate helps them spread quickly, p. 7)
35. An emergency kit for a wildfire should contain a flashlight, batteries, money, and first aid supplies. (True, p. 29)
36. To prepare your home for a wildfire, you should cover your roof and gutters in leaves. (False: You should clean your roof and gutters regularly, p. 29)
37. If you get burns from a wildfire, you should cool them with clean running water. (True, p. 29)
38. Burns from a wildfire need good airflow, so they should not be covered with bandages. (False: You should cover burns to prevent infections, p. 29)
39. If you see a wildfire, you do not need to call 911 to report it. (False: You should not assume that someone else has reported it, p. 29)
40. If there is a wildfire in your area, you should listen to the radio or watch the TV to get news and emergency instructions. (True, p. 29)