

Dr. Ward

Physical Science Packet

Day 1-5

These Physical Science assignments are geared toward discovery and the scientific method. Please do the best that you can and feel free to use any resources at your disposal. These activities may reference a textbook, but the book is not needed.

These activities are meant to keep your mind engaged while you are away, but do try to have fun with them.

Activity**1****IRA/NCTE****Standard 1**

Directions: Read the magazine article below, then answer the questions.

Cerro Grande Forest Fire Not What Was Prescribed

June 20, 2000—On May 5, a fire intentionally set by the National Park Service at Bandelier National Monument in New Mexico began burning out of control. What began as a prescribed burn became Cerro Grande fire—one of the worst fires in New Mexico’s history. The fire was prescribed to remove brush and undergrowth in parts of the forest. By burning away this wildfire “fuel,” the Park Service hoped to prevent a natural, uncontrollable wildfire from occurring. It also hoped to restore the natural cycle of fire necessary for forests to survive.

Forest fires can serve a purpose. The variety of plants in an area is often ten times greater after a wildfire because of the nutrient-rich soil that fires can produce. Fires burn mineral-storing parts of plants into ash. Rain or snow dissolves the ash into the soil, providing essential minerals to the soil. Some plants even depend on fire for survival. Many pine trees cannot reproduce without the help of fire. Their cones will not open and release seeds unless heated.

Many natural forest fires are started by lightning. However, it is common practice for the National Park Service to prescribe burns such as the one in New Mexico. Unfortunately in this case, good intentions had devastating results. Strong winds and hot weather caused the fire to spread rapidly, making it difficult to contain. By May 10, the fire had consumed more than 7,200 hectares of land. It also had destroyed many homes along the edge of the forest near Los Alamos, New Mexico. Thousands of people had to be evacuated. Embers from the fire were being carried up to a mile away by the wind, causing spot fires to erupt. When the fire was finally contained on June 6, it had burned almost 20,000 hectares of land, more than 200 homes, and caused more than \$1 billion in damage.

Time will tell whether the forest will ultimately benefit from the fire or be forever damaged. The enormous amount of damage might outweigh any benefits. Most certainly, the lives of the people who watched the fire swallow up so much of the land have been forever changed.

Multiple Choice

1. What does the word *prescribed* mean in “prescribed burn”?
 - a. to order
 - b. to outlaw
 - c. to give medical advice
 - d. to claim a right to
2. Which is an opinion from the article?
 - a. Many pine trees cannot reproduce without the help of fire.
 - b. By June 6, the fire had consumed more than 20,000 hectares of land.
 - c. Most certainly, the lives of the people who watched the fire swallow up so much of the land have been forever changed.
 - d. Many natural forest fires are started by lightning.
3. What is a spot fire?
 - a. a smaller fire burning in the middle of the main fire
 - b. a fire set on the boundaries of a wildfire to control it
 - c. a fire started away from the main wildfire by embers from it
 - d. a fire intentionally set to control undergrowth and brush

Activity 1 (continued)

**Short
Answer**

- 4. What caused the Cerro Grande fire to consume so much land so quickly?
 - a. too much undergrowth
 - b. spot fires erupting
 - c. heavy rain
 - d. strong winds

- 5. What is the author's attitude toward the National Park Service? Use information from the article to support your answer.

- 6. How would the article change if the author was writing it for a newspaper in Los Alamos, where many people lost their homes?
