

Wildfire: Prevention, Preparation, and Protection

Grade Level: 3-5
Duration: Three class periods

Objectives:

- Learn basic facts about the science behind fire and wildfires.
- Discuss preventing wildfires, preparing for a wildfire, and protection from wildfire.
- Create wildfire-safety posters for the school.

Materials:

- Computer with Internet access
- Print resources about fire and wildfire safety
- Poster board, markers, paint, colored pencils, glue, scissors

Procedures:

This lesson may be used to recognize National Fire Prevention Week (annually the week in which October 9 falls). The observance is sponsored by the National Fire Protection Association (NFPA)

1. Start by asking students to brainstorm a good definition of the word "wildfire." Do the terms "wildfire" and "forest fire" mean the same thing? Are all wildfires forest fires? Explain that a forest fire is one type of wildfire. A wildfire is any unplanned and uncontrolled fire, and can happen in areas covered by forest, shrub, or grassland.
2. How do wildfires start? Ask students for ideas, then write them on the board. Correct answers include: lightning, campfires, house fires in high-risk areas, ash from chimneys, outdoor barbecues.
3. What kind of weather makes wildfires more likely, or makes them spread more quickly? Drought, extreme heat, high winds.
4. What percent of wildfires is caused by human carelessness?
Answer: More than 4 out of 5!
5. Explain that, according to the National Fire Protection Association, a fire is reported every 15 seconds; in most cases, these fires are preventable. Make three columns on the board labeled PREVENT, PREPARE, and PROTECT. Ask students what they can do to prevent fires in their home. Record their answers under PREVENT. See below for examples:
 - Have an Emergency Supply Kit and Family Emergency Plan in place in case a wildfire occurs in your region. You may be forced to evacuate before or during the wildfire, or you may be stranded without supplies after a wildfire.
 - See www.ready.gov for information.
 - Don't play with candles, lighters, or matches.
 - Don't throw water on a grease fire; use salt, baking soda, or a fire extinguisher.
 - Create a 30 foot "safety zone" of fire-resistant space around your home. Offer to help your elderly neighbors remove brush and vegetation from around their houses.
 - Do not store propane tanks or firewood piles near your house.
 - Learn about campfire safety.
 - Learn about burning brush and debris.

6. Ask students how they might prepare for a fire, then record their responses under PREPARE. See below for examples:
 - Install smoke alarms—one on each floor of the house—and test them regularly.
 - Develop and practice home fire drills.
 - Keep a fire extinguisher in the kitchen. Make sure every person in the family—adults and kids—knows how to use it.
 - Keep a list of important numbers, including the fire department, near the phone.
7. Ask students how they would protect themselves if they were caught in a fire. Record their answers under PROTECT. See below for examples:
 - Leave the house immediately. Once you are out, stay out. NEVER go back inside to get something.
 - Tell an adult if you think there is a person left behind in the house.
 - Don't open a hot door. (To check, touch it quickly with the back of your hand.)
 - If there's smoke, crawl on the floor, where the smoke is not so heavy.
 - If your clothes catch fire, roll on the floor, but do not run.
8. Tell students that they will work with a partner to create wildfire-safety posters for their school. Their first assignment is to consult fire-safety resources to find additional information about wildfire prevention, preparation, and protection.
9. Have students use print and Web resources in their research. Start with these sites:

www.ready.gov: Wildfires

<http://www.ready.gov/america/beinformed/wildfires.html>

FEMA for Kids: Wildfires

<http://www.fema.gov/kids/wldfire.htm>

Smokey Bear's Home Page

<http://www.smokeybear.com/wildfires.asp>

Learn the science behind wildfires and learn how to prevent them.

USFA (U.S. Fire Administration) for Kids

<http://www.usfa.dhs.gov/kids>

Wildfire Education

http://www.wildlandfire.com/docs/wildfire_edu.htm

Facts on Fire

<http://www.usfa.fema.gov/public/facts.shtm>

NFPA Fact Sheets

<http://www.nfpa.org/Research/NFPAFactSheets/NFPAFactSheets.asp>

USFA Kids Page

<http://www.usfa.fema.gov/kids/>



DiscoveryEducation.com/ReadyClassroom

Fire Prevention Week

http://www.nfpa.org/FPW/Kids_Area/kids_area.asp

Fire-Safety Sites

http://www.education-world.com/a_sites/sites056.shtml

Fire Safety and Protection Tips

<http://www.firesafetytips.com/default.htm>

10. The main feature of the posters should be the message, written in clear, direct language and large, easy-to-read letters. Posters should also include an explanation, example, statistics, or other important information from the students' research, as well as a picture or diagram to help illustrate their message.
11. Hang posters in a school hallway or the cafeteria during National Prevention Week. You may want to create three display sections: PREVENT, PREPARE, and PROTECT.

Extension:

What is the Fire Triangle?

Explore the science behind fire using the Smokey Bear website and other resources. Then present a two-minute explanation of the "fire triangle" to the class. What creative props can you use to illustrate this?

Smokey Bear's Home Page

<http://www.smokeybear.com/wildfires.asp>

Home extension:

Access the Family Emergency Plan from the Ready Classroom website (where you downloaded this lesson plan) or at <http://www.ready.gov/america/makeaplan> and send home with your students.

- Families should plan in advance of an emergency, and complete the form together.

National Preparedness Awareness Events:

Event: National Preparedness Month, sponsored by the Ready Campaign

Dates: September 1-30

Description: A Nationwide coordinated effort held each September to promote emergency preparedness in the home, workplace, school, and community. The U.S. Department of Homeland Security and a wide variety of public and private sector organizations will participate in events and activities to highlight the importance of emergency preparedness. For info: Visit www.ready.gov/america, or e-mail ready@dhs.gov.

Event: National Fire Prevention Week

Dates: Annually, the week in which October 9 falls

Description: Fire Prevention Week was established to commemorate the Great Chicago Fire, the tragic 1871 conflagration that killed more than 250 people, left 100,000 homeless, destroyed



more than 17,400 structures, and burned more than 2,000 acres. The fire began on October 8, but continued into and did most of its damage on October 9, 1871. For more info: Visit <http://www.nfpa.org/>.

State Preparedness Awareness Events:

Each state has its own weather awareness week/s. Learn more about the weather awareness week/s in your state, and find out what you can do in support of state-wide initiatives with your class.

<http://www.weather.gov/os/severeweather/severewxcal.shtml>

Online Games and Activities:

Smokey Bear's Kids Page

<http://www.smokeybear.com/kids/default.asp>

Learn facts about wildfire safety and play online games like Smoke Jumper, Trail Blazer, Put Out the Fire, and Amazing Mazes.

USFA (U.S. Fire Administration) for Kids

<http://www.usfa.dhs.gov/kids>

Online games, word search and crossword puzzles

Printable Fire Escape Maze

<http://www.usfa.dhs.gov/kids/downloads/maze.pdf>

Evaluation:

Use the following three-point rubric to evaluate students' work during this lesson.

- 3 points: Students actively engaged in class discussions; thoroughly researched their fire-safety message; created a poster that met all requirements, including a clear message, with an explanation, example, statistics, or other important information to support the message, and an engaging diagram or image.
- 2 points: Students participated in class discussions; satisfactorily researched their fire-safety message; created a poster that met most requirements, including a clear message with an explanation, example, statistics, or other information to support the message, and an engaging diagram or image.
- 1 point: Students did not participate in class discussions; incompletely researched their fire-safety message; created a poster that met few or no requirements and contained incorrect information, an unclear or unsupported message, and/or a diagram or image that was simplistic or not relevant to the fire-safety message.

Vocabulary:

combustible

Definition: Able to catch fire or burn; flammable.

fire triangle

Definition: The three elements that are necessary for a fire to burn: oxygen, heat, and fuel.



smoke alarm

Definition: An electronic tool that detects smoke in the air and beeps to warn of a possible fire; also called a "fire detector".

Standards:

National Academy of Sciences

The National Science Education Standards provide guidelines for teaching science as well as a coherent vision of what it means to be scientifically literate for students in grades K-12. To view the standards, visit <http://books.nap.edu>.

This lesson plan addresses the following science standards:

- Science in Personal and Social Perspectives: Natural hazards; Risks and benefits.

Mid-continent Research for Education and Learning (McREL)

McREL's Content Knowledge: A Compendium of Standards and Benchmarks for K-12 Education addresses 14 content areas. To view the standards and benchmarks, visit link:

<http://www.mcrel.org/compendium/browse.asp>

This lesson plan addresses the following national standards:

- Language Arts—Viewing: Uses viewing skills and strategies to understand and interpret visual media; Writing: Uses the general skills and strategies of the writing process, Gathers and uses information for research purposes.