



FIRE PREVENTION AND SAFETY

K-2

LESSON PLAN 1

“The Shape of Fire” Activity

KEY TERMS AND CONCEPTS

- fire
- fuel
- heat
- oxygen
- fire triangle
- heat source
- burning
- combustion

PURPOSE

- To introduce the students to the components of fire and to help the students understand how the components interact.

OBJECTIVES

The students will—

- Name the three elements of the fire triangle.
- Create their own paper “fire” triangles.

Linking Across the Curriculum

Language Arts



Together, we can save a life

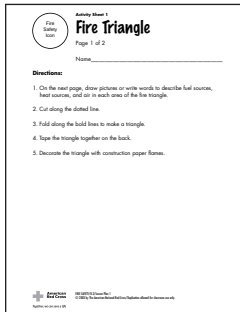
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Materials:

- Sidewalk chalk or stick
- Poster board for signs
- Red, yellow, and orange construction paper cut into flame shapes
- Tape
- Crayons or markers
- **Activity Sheet 1: Fire Triangle**



Activity Sheet 1:
Fire Triangle



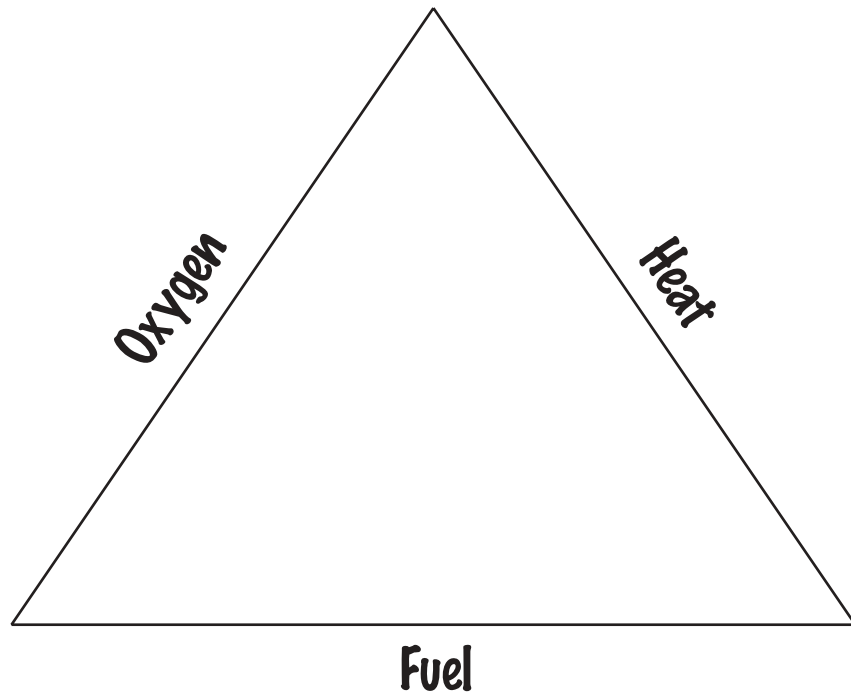
“The Shape of Fire” Activity

(set up: 20 minutes; conduct: two 20-minute sessions)

1. Before you begin: Make poster board signs that show or say the following: paper, wood, cloth, cardboard, plastic, flame, spark, lighted match, candle, electric cord, heater, stove, air.
2. Go outside and use chalk to draw a large triangle on a paved area. (If no paved area is available, use a stick to draw a triangle in sand or dirt.) Have the students sit in a circle around the triangle. Discuss the shape: How many sides does a triangle have? What happens if you take away one side? Do all the sides have to be the same length?

Teaching Note: If you cannot go outside, use masking tape on the floor.

3. Next, have the students describe flames or fire. Where have they seen flames? What started the flame? What was burning?
4. Tell the students that three things are needed to start and keep a fire burning. Based on when they have seen fire, can they think what those things are? Help them brainstorm to reach the conclusion that you need the following components: something to start the fire (heat), something to burn (fuel), and air to keep the fire going (oxygen). Write these three words along the sides of your large triangle on the ground.



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5. Hold up one of the poster board signs and have the students identify on which side of the triangle it belongs.
Answer:
Heat: flame, spark, match, candle, electric cord, heater, stove
Oxygen: air
Fuel: paper, wood, cloth, cardboard, plastic
6. Tell several students that they are going to be “fire.” Hand each of them a paper flame shape. Remind them that they can “flame up” only if all three sides of the triangle are filled.
7. Now, at random, hand a poster board sign to a student. Have the student walk to the correct side of the triangle and stand. Continue handing out signs. Each time the triangle is completed, the students with the flames should run into the triangle to “flame up.” As soon as you ask the students on one side of the triangle to sit down, the flames should go away. Mix and match the sides of the triangle and let the students take turns being the flames.
8. Back in class, distribute **Activity Sheet 1: Fire Triangle**. Have the students draw, write, and cut to create their own fire triangles. Distribute pieces of red, yellow, and orange construction paper so the students can add their own flames. Be sure they are able to explain what would happen to the flames if they took away any part of the triangle.



Wrap-up

Discuss: How can knowing about the fire triangle help reduce the risk of fire?

Answers will vary, but should include things like—

- If you know that paper is a fuel source, you will not put it next to a heat source.
- If you know that a spark from an electric cord can start a fire, you will be sure to keep all fuels away from the wall socket.



Linking Across the Curriculum

Language Arts

What do people mean when they say you are “fanning the flames” of an argument?

What would fanning real flames do? Why? (Increase the size or strength of the fire by adding more oxygen.)





Challenge

If fanning a flame increases its size, what happens when you blow on a candle?

Answer: Sometimes when you blow, the flame actually increases because you are moving more oxygen to the flame. If you blow hard enough, however, the flame goes out because you are blowing the flame (the heat source) away from the candle (the fuel source), breaking the fire triangle.

