



Fire Craft

Objectives

1. The boys will be able to list the fire safety rules for a campfire.
2. The boys will be able to assemble four forms of tinder, some kindling, and some fuel.
3. The boys will be able to demonstrate how to build a tepee fire.
4. The boys will be able to assemble campsite fire-fighting equipment.

Materials

- Merit Answer Guide
- MLR 2 "Safety Rules for Campfires"
- Overhead projector and transparency
- Kindling approximately six to ten inches in length (three per boy)
- Additional kindling
- Four kinds of tinder (dried grass, pine needles, paper, small sticks)
- Fuel (hardwood, charcoal)
- Two five-gallon buckets (one filled with water and the other filled with sand or dirt)
- Shovel
- Table
- *Adventures in Camping*

Preliminary Information

This lesson is best suited for an outdoor setting. Arrange to have all the equipment, fuel, and materials outside. The boys will be working in their workbook during the Advancement time, so have them leave their workbook inside. Make an overhead transparency of MLR 2 "Safety Rules for Campfires."

Before the boys arrive, place all the materials on the table. Place the fire-building materials in a pile near the table. It is not important to have the materials sorted. As you explain the lesson, the boys will learn the differences. When the boys

are instructed to assemble their samples of tinder, kindling, and fuel, they will pull them from the pile.

Some types of fire-building materials are tinder, kindling, and fuel. Kindling is generally softwoods, and other fuels are hardwoods. There are several varieties of hardwoods in the United States: oak, maple, birch, walnut, hickory, elm, Osage orange, magnolia, sweet gum, and sycamore. Softwoods include pine, cedar, juniper, cottonwood (tamarack), willow, mulberry, sugarberry, and sassafras.

Lesson

Review by asking the boys what they should have prior to making a fire. (*Fire-fighting equipment should be set up near the campfire area.*) Have the boys gather these materials. (*Bucket of water, bucket of sand or dirt, and a shovel.*) Then ask the boys to list the three ingredients of a fire. (*Heat, oxygen, and fuel.*) Explain to the boys that

in today's lesson they will learn about fire-building materials, fire safety rules, and how to assemble materials to build a tepee fire.

Fuel. Fuel is a material that is used to produce heat or power by burning. Explain the three different types of materials to build a fire.

Tinder is a material that catches on fire very

easily. Some examples of tinder include peelings of cedar or birch; bark; shavings of softwoods; pine splinters; dead twigs the size of a match; dead grass; pine needles; pinecones; any dead, dry, fuzzy-type vegetation; and fuzz sticks. Show the boys some examples. Allow each boy to go to the pile and pull out four different kinds of tinder.

Kindling is easily combustible material used for starting a fire. Some examples include larger dead twigs and dry softwoods up to finger thickness. It is best to use sticks that bend and snap. Larger pieces of wood can be easily shaved or cut down to make kindling. Allow each boy to go to the pile and pull out one example of kindling.

Fuel is generally hardwood, although charcoal can also serve as a fuel. Hardwoods make steady, hot fires and burn into good hot coals for cooking. The size of wood ranges from branches to logs. The best hardwoods are hickory, oak, maple, and ash, although there are many more varieties in the United States. Allow each boy to go to the pile and pull out one example of fuel.

Have the boys keep these materials throughout the lesson. They will use them to build a tepee fire in the Advancement section.

Fire Safety Rules. Ask the boys if they have ever been able to help make a campfire on a campout. Then ask them if they know the ten safety rules for setting up a campfire. (Allow several boys to respond.) As you explain each rule, demonstrate each step, or ask the boys if the current conditions are safe to make a campfire (e.g., if it is windy, the boys should say that it is not safe to start a campfire today).

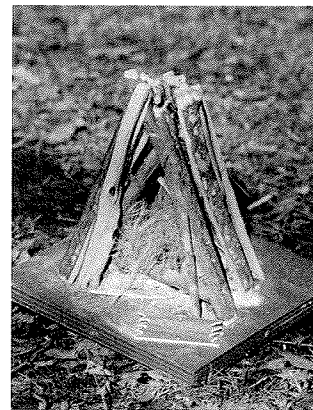
1. Look up to see the blue sky. Make sure no branches or other items are over the campfire.
2. Always clear a circle-shaped area. Check your local forest service for the proper size of circle. They vary from six to fifteen feet in diameter. (Select an open area. The fire will need to be built on solid earth or rock. Scrape all the ground cover, such as moss, leaves, and wood debris to one side. If you

are building the fire in a grassy area, then you will need to remove the sod in squares and place them to one side. Save this ground cover so that it can be used to return the site to its original condition after camping.)

3. Surround the outside edge of the fire area with rock, dirt, or a trench fire ring. (Do not use river rocks for the fire ring. This is for safety reasons. River rocks have been known to explode when heated up.)
4. Use only dead or down trees. Do not cut green trees for a fire or use firewood that throws sparks.
5. Build the campfire only as large as is needed.
6. Have a shovel, bucket of water, and bucket of sand near the campfire area.
7. Do not build a campfire on a windy day.
8. Do not leave a campfire unattended.
9. Always put the campfire out completely.
10. Always leave the site cleaner than you found it. Replace the ground cover if an area was cleared for the campfire.

Tepee Fire. Explain that a tepee fire is an easy fire to build and start. It gives a quick, hot fire and is used to build other types of campfires. It is shaped in the form of a tepee. Show the boys how to make a tepee fire by first making an A-frame fire and then making a tepee fire over the top. Gather sticks of approximately the same length and stand them up over the top of the A-frame fire. Leave space for air to flow through. Remind the boys that the tepee can be set up over a pile of shavings, tinder, or around a fuzz stick.

Return to the classroom.



Advancement

Display MLR 2 on an overhead and have the boys complete requirement 1 in their workbook. As a group or individually have the boys build an

A-frame fire with a tepee fire over the top. (Note: *Do not* have the boys light their fire.) Sign off on requirement 1 in their workbook.