



Daisy Outdoor Challenge #8

Sizes of Wood: Tinder, Kindling, and Fuel

Materials: various sizes of wood

Objective: Girls will be able to identify the three sizes of wood used to build a fire.

Directions:

Activity:

1. Explain that in order to make a fire, there are different sizes of wood that are needed.
2. Explain the three types of wood:
 - a. Tinder
 - i. We like to call this teeny, tiny tinder. It is called this because tinder is about the thickness of a matchstick.
 - ii. Tinder is the stuff that helps get a fire going quickly.
 - b. Kindling
 - i. Kindling should be about as thick as your thumb.
 - ii. Kindling is the stuff that keeps the small flame going after the initial lighting.
 - c. Fuel
 - i. Fuel should be about the size of your wrist.
 - ii. Fuel is the stuff that can keep a fire going for hours. Just like in a car, you add fuel to keep your car going, the fuel of the fire keeps the fire going.
3. Explain rules of collecting wood
 - a. All wood should be dead and down – we don't pick branches off of live trees.
 - b. Wood should be as dry as possible.
 - c. You should be able to safely get to and transport the wood.
 - i. Don't go in prickly bushes or poison ivy to collect wood.
 - ii. Don't go to edges of cliffs or other drop offs to collect wood.
 - iii. Anything you collect, you should be able to carry yourself.

4. Gather and Sort

- a. Have girls get on partner groups. With their partner they should gather the three sizes of wood, enough to get a good fire going.**
 - i. General rule of thumb to get a fire going is to gather:**
 - 1. A double handful of tinder.**
 - 2. A two-arm huggable amount of kindling.**
 - 3. A knee-high pile of fuel.**

Brownie Outdoor Challenge #8

Lighting a Match

Materials: q-tips, red marker, matches, match box, bucket with water

Objective: Girls will be able to safely light a match.

Directions:

****Please remember you need a GSEP Basic Outdoors Skills trained adult in order to have a fire.****

Activity:

1. Cut one end off of a q-tip, leaving one cotton end.
2. Color the cotton end red. This represents a matchstick.
3. Demonstrate how to light a match
 - a. Hold the q-tip matchstick between the thumb and one or two fingers of your dominant hand.
 - b. Hold the matchbox in your non-dominant hand.
 - c. Firmly, but not too hard, press the red end of the match against the striker on the match box downward and away from your body.
 - d. As soon as it strikes and is lit, hold the match so that the flame burns up and not towards your hand.
4. Have the girls practice.
 - a. Have the girls each take their q-tip matchstick and demonstrate how to properly light a match.
5. Make sure a bucket of water is readily available.
6. Make a safety circle.
 - a. Make sure all girls have a circle around them that no one else is in.
7. Demonstrate with a real match.
 - a. Demonstrate how to light a match, using the technique above. Then show how to safely blow it out and place it in the bucket of water.
8. Have the girls each light a match and extinguish it one at a time. Make sure the extinguished match is placed in the bucket of water.

Junior Outdoor Challenge #8

Edible Campfires

Materials: cups, water, forks or spoons, mini marshmallows, paper plates, potato sticks, thin stick pretzels, pretzel rods, red hots, licorice bites, toothpick

Objective: Girls will be able to identify the parts of a fire and how to feed it as it grows.

Directions:

Activity:

1. In order to build a fire, you need an area clear of dried grass and debris.
 - a. Place the paper plate in front of you to represent this area.
2. Next, it is preferred to have a fire inside an established fire ring.
 - a. Use the mini marshmallows like rocks to create a fire circle.
3. Now, make sure you have safety equipment ready to go. You should have a fire bucket and a shovel or rake.
 - a. Fill a paper cup with water and place it beside your fire circle.
 - b. Have a spoon for a shovel or fork for a rake beside the fire circle.
4. Now it is time to build the fire. Start by laying out kindling in the shape of an A.
 - a. Use the thin pretzel sticks to create an A shape.
5. Next, you put tinder over the kindling, leaving air in the bottom.
 - a. Use potato sticks and pile over the A.
6. Now you can light your fire, make sure you get underneath the tinder to light it.
 - a. Use a toothpick to represent a match and use your imagination to light the fire.
7. As the fire starts to go, you will see small flames.
 - a. Add red hots to represent the flames.
8. After the flames are going steadily, it is time to add your fuel.
 - a. Add pretzel rods to the fire, by gently placing them on the fire.
9. Finally, you will see larger coals, which are great for cooking on.
 - a. Add licorice bites to represent the coals.
10. Voila! You have a campfire, well an edible campfire!

Cadette Outdoor Challenge #8

A-Frame Campfire

Materials: wood, matches, fire bucket, shovel or rake

Objective: Girls will be able to build an a-frame style campfire.

Directions:

****Please remember you need a GSEP Basic Outdoors Skills trained adult in order to have a fire.****

Activity:

1. Have girls collect fire wood, all three sizes, tinder, kindling, and fuel.
2. Have girls make sure they and the area is safe for a fire to be built.
 - a. Pull back hair, preferably cover with a hat or bandana.
 - b. Take off any loose jewelry.
 - c. Look above the area where the fire is about to be built, to make sure there are no low hanging branches.
 - d. Clear the area of dried leaves and sticks.
 - e. Put water in the water bucket.
 - f. Make sure a rake and/or shovel is readily available.
3. Start with kindling, and place sticks in an a-frame shape. Lay two sticks on the ground in a V and cross a third stick over the first two to make an A.
4. Next, place tinder on top of the last a-frame, leaving air underneath.
5. Light a match and light the fire from underneath the tinder.
6. As soon as the tinder lights, start placing more kindling on the fire, make sure not to smother the fire, by placing too many sticks.
7. As the kindling lights, start gently laying fuel on top of the fire.
8. Your fire should only be as big as what you are using it for. There is never a need for a bonfire.
9. As you finish with your fire, spread it out and let it die. Stir it occasionally to make sure all embers are out.
10. You can sprinkle water on the fire, but never pour water on to extinguish a fire.
11. Make sure that the fire is out and cool before leaving it.



Senior Outdoor Challenge #8

Log Cabin and Teepee Campfires

Materials: wood, matches, fire bucket, shovel or rake

Objective: Girls will be able to build log cabin and teepee style campfires.

Directions:

****Please remember you need a GSEP Basic Outdoors Skills trained adult in order to have a fire.****

Activity:

1. Have girls collect fire wood, all three sizes, tinder, kindling, and fuel.
2. Have girls make sure they and the area is safe for a fire to be built.
 - a. Pull back hair, preferably cover with a hat or bandana.
 - b. Take off any loose jewelry.
 - c. Look above the area where the fire is about to be built, to make sure there are no low hanging branches.
 - d. Clear the area of dried leaves and sticks.
 - e. Put water in the water bucket.
 - f. Make sure a rake and/or shovel is readily available.
3. Log Cabin
 - a. Start with kindling, and place sticks in a log cabin shape.
 - i. Lay the first stick on the ground.
 - ii. Lay the next stick at a 90 degree angle over lapping the first stick slightly.
 - iii. Lay the third stick parallel to the first stick, overlapping the second stick slightly.
 - iv. Lay a fourth stick over lapping the third and first.
 - v. Continue this pattern for a couple of layers.
 - b. Next, place tinder on top of the log cabin, leaving air underneath.
 - c. Light a match and light the fire from underneath the tinder.
 - d. As soon as the tinder lights, start placing more kindling on the fire, make sure not to smother the fire, by placing too many sticks.
 - e. As the kindling lights, start gently laying fuel on top of the fire.
4. Teepee

- a. **This method is usually used when you are looking for a larger fire or a fire for ambiance.**
 - b. **Start by laying an a-frame (see Cadette challenge for May)**
 - c. **Before lighting the a-frame, build a teepee over the a-frame using kindling or fuel, depending on the size you want.**
 - d. **Light a match and light the fire from underneath the tinder.**
 - e. **As soon as the tinder lights, start placing more kindling on the fire, make sure not to smother the fire, by placing too many sticks.**
 - f. **Feed the fire as needed.**
- 5. **Your fire should only be as big as what you are using it for. There is never a need for a bonfire.**
 - 6. **As you finish with your fire, spread it out and let it die. Stir it occasionally to make sure all embers are out.**
 - 7. **You can sprinkle water on the fire, but never pour water on to extinguish a fire.**
 - 8. **Make sure that the fire is out and cool before leaving it.**

Ambassador Outdoor Challenge #8

Matchless Fires

Materials: lint, plastic magnifiers, concave mirrors, magnifying glasses, water bucket, strikers, flint, char cloth

Objective: Girls will be able to light a campfire without a match.

Directions:

****Please remember you need a GSEP Basic Outdoors Skills trained adult in order to have a fire.****

Activity:

1. Have girls collect fire wood, all three sizes, tinder, kindling, and fuel.
2. Have girls make sure they and the area is safe for a fire to be built.
 - a. Pull back hair, preferably cover with a hat or bandana.
 - b. Take off any loose jewelry.
 - c. Look above the area where the fire is about to be built, to make sure there are no low hanging branches.
 - d. Clear the area of dried leaves and sticks.
 - e. Put water in the water bucket.
 - f. Make sure a rake and/or shovel is readily available.
3. Magnifying Method
 - a. Start by building a small fire base, with good, dry tinder or lint.
 - b. Use the magnifiers, plastic magnifiers, concave mirrors, and/or magnifying glasses to reflect the sign.
 - c. Work to get a pinpoint reflection directly on your tinder or lint.
4. Striker and Sparker Method
 - a. Flint and Steel
 - i. Place the char cloth against the flint.
 - ii. Flick the flint at a 45-degree angle to create a spark.
 - iii. Once the char cloth has a spark, put it in the tinder or lint.
 - iv. Blow on it to get the tinder to catch.
5. Your fire should only be as big as what you are using it for. There is never a need for a bonfire.

- 6. As you finish with your fire, spread it out and let it die. Stir it occasionally to make sure all embers are out.**
- 7. You can sprinkle water on the fire, but never pour water on to extinguish a fire.**
- 8. Make sure that the fire is out and cool before leaving it.**