

THE 4 ELEMENTS CHALLENGE GUIDES



PROGRAM COMMITTEE

INTRODUCTION

We are going to learn about **FIRE**, **WATER**, **AIR** and **EARTH**! Read through the activities under each element. **Complete at least one item from under each element** that will be most interesting, challenging, and FUN for your Unit.

FIRE

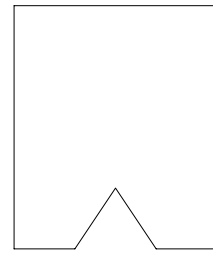
1. **Sing a song about fire**, while participating in a Bridging campfire with other Units.
2. **Build and light a fire**. For extra challenge you could try this in the rain and see if they can keep it burning for 3 minutes.
3. **Learn to light a match with supervision**. Play a candle lighting relay – each girl lights the match, lights the candle, blows out the match, and blows out the candle, in a team relay game.
4. **Boil water in a paper cup on a wood fire**. Fill a paper cup $\frac{3}{4}$ full of water. Place it gently in a wood fire – just on top of a piece of wood, or in the coals (use oven mitts). Watch what happens.
5. **Do a service project to raise money for your local burn unit or fire station**.

WATER

1. **Go swimming, snowshoeing, skiing, or skating**.
2. **Make up a rap, song or cheer about fresh water**.
3. **Make a boat**. Optional instructions are provided at the end of this section.
4. **Make an ice sculpture**. Consider using ice cubes or blocks of ice made in small containers or buckets.
5. **How much water does it take to brush your teeth?** Try it the way we do it at camp, with just a small amount in a cup. Try it at a sink if you let the water run the whole time you are brushing. Try it at a sink if you only turn on the water for the rinsing part.

Soap Powered Boat

- Cut a small boat shape out of cardboard as shown.
- Wedge a small piece of hard soap in the notch in the back end.
- Rinse your hands to remove all soap.
- Partially fill a clean container or sink with water. Place your boat in the water and watch it.
- Try placing the notch on the boat in different spots, such as closer to one side. Put fresh water in the container and try again.



EARTH

1. **Cook using the earth.** Optional instructions provided at the end of this section.
2. **Magnetism** – find out which metals in the earth are magnetic by dragging a magnet through upturned earth.
3. **Go for a walk and discuss what contaminates the earth, e.g. litter, pollution, misuse of each.**
Scavenger Hunt Bingo: make a bingo card of the things that pollute the soil (empty food wrappers, bottles, gasoline spills, paint spills, cardboard boxes, cigarette butts, etc.) and have the girls check them off as they find examples on their walk.
4. **Do a cave drawing with rock or sidewalk chalk.**
5. **Create an item of pottery and have it fired.** This can be done in a campfire with proper adult supervision.

Cooking Ideas:

- Line a clay pot with wax paper. Prepare muffin or cake batter according to your own recipe, then pour into the clay pot. Bake in an oven at the temperature and time required by your recipe.
- Wrap a hamburger patty in cabbage leaves, then wrap with a layer of moistened newspaper, then add a layer of mud to the outside. Place the package on the coals in the fire and cook for about 20-30 minutes (depends on the thickness of the clay).
- Place charcoal briquettes in the bottom of a clay pot and light them. Once they are white, place the food directly on top of them to cook.
- Build a clay oven: Dig a hole for the fire and place a grate over the top of the hole. Lay a large tin can on its side on the grate, leaving some of the grate open to the air for a smoke hole behind the can. Cover the tin can with hard packed, damp sand. Cover this with a mud / clay mixture and let harden. Remember to leave the smoke hole open at the back. A quicker version is to cover the sand with sod, as you don't have to wait for the clay to dry. Pre-heat the oven using briquettes in the fire hole. When the coals are ready, you can use the oven to bake whatever you like.

AIR

Activity instructions and the Beaufort Scale are provided at the end of this section.

- 1. Estimate the speed of the wind using the Beaufort Scale.**
- 2. Dramatize a Wind Dance.**
 - Using the Beaufort Scale as a guide, act out the intensity of wind, steadily getting faster, throw in a hurricane at the peak, then reduce the intensity of the wind until it is a light breeze again, then calm air.
- 3. Play a balloon game.**
 - Each girl blows up a balloon, but doesn't knot it. She should aim it at a chosen spot, such as a rock or a tree, and let go of the balloon, trying to have the balloon hit the spot as it is deflating. Continue until successful.
- 4. Play the "What is the weather, Mother Nature?" game using the Beaufort Scale.**
- 5. Find a few songs to sing about air and wind.**

"What is the weather, Mother Nature?" game using the Beaufort Scale.

- The group says "What is the weather, Mother Nature?"
- Mother Nature (who has a copy of the Beaufort Scale) responds with "There is a Gentle Breeze, take 3 steps".
- The group gets to take 3 steps because that is the Beaufort Number for Gentle Breeze.
- Repeat with different answers.
- When Mother Nature says "The air is calm", she gets to chase the rest of the group and try to catch someone else to be Mother Nature.

Beaufort Scale

Beaufort Number	Description	Wind		Speed	Observations
		mph	kph	Knots	
0	Calm	0	0	0	Tree leaves don't move; smoke rises vertically.
1	Light Air	1-3	1-5	1-3	Tree leaves don't move; smoke drifts slowly; Direction of wind shown by smoke, not by vane;
2	Slight Breeze	4-7	6-11	4-6	Tree leaves rustle; flags wave slightly; Vanes show wind direction
3	Gentle Breeze	8-11	12-19	7-10	Leaves and twigs in constant motion; small flags extended;
4	Moderate Breeze	13-18	20-29	11-16	Small branches move; flags flap.
5	Fresh Breeze	19-24	30-38	17-27	Small trees sway; flags flap and ripple;
6	Strong Breeze	25-31	39-50	22-27	Large branches sway; umbrellas used with difficulty; flags beat and pop;.
7	Moderate Gale	32-38	51-61	28-33	Sea heaps up, white foam streaks; whole trees sway; difficult to walk;
8	Fresh Gale	39-46	75-86	34-40	Twigs break off trees;
9	Strong Gale	47-54	75-86	41-47	Branches break off trees; tiles blown from roofs;
10	Whole Gale	55-63	87-101	48-55	Some trees blown down; damage to buildings
11	Storm	64-74	102-120	56-63	Widespread damage to trees and buildings; mountainous waves.
12	Hurricane	75+	120+	64+	Severe and extensive damage.

Challenge Created By:
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