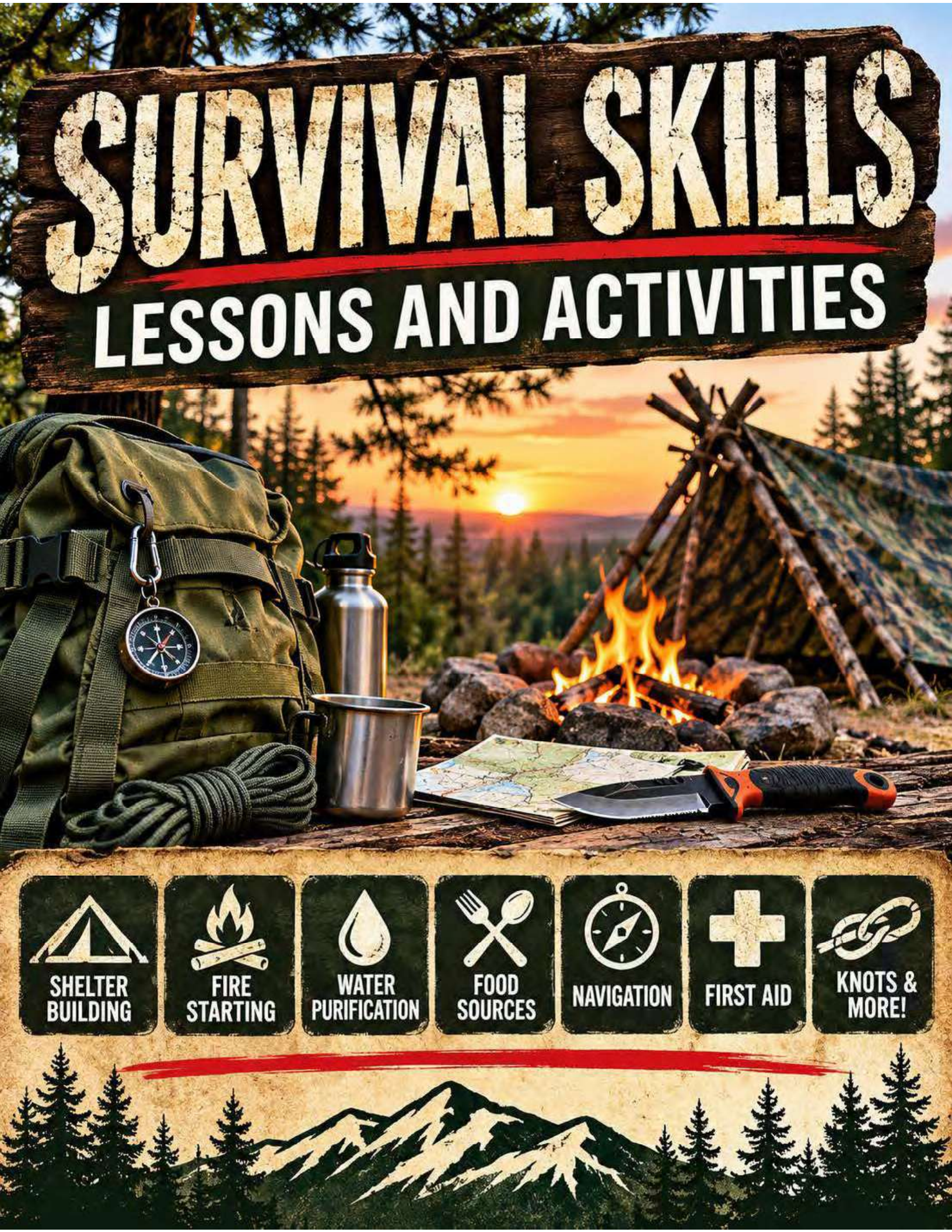

SURVIVAL SKILLS
LESSONS AND ACTIVITIES
SHELTER BUILDING
FIRE STARTING
WATER PURIFICATION
FOOD SOURCES
NAVIGATION
FIRST AID
KNOTS & MORE!

YOUNG MARINES
SURVIVAL SKILLS
TABLE OF CONTENTS
Lessons 1 – 75

Awareness and Preparation
Lesson 1: Awareness Is Your Most Important Survival Skill
Lesson 2: The STOP Rule
Lesson 3: Planning Before You Go Outside
Lesson 4: Dressing for the Outdoors
Lesson 5: Knowing Your Limits

Weather Awareness and Temperature Management
Lesson 6: Watching the Sky for Weather Changes
Lesson 7: Understanding Storm Warnings
Lesson 8: Lightning Safety Basics
Lesson 9: Staying Safe in Hot Weather
Lesson 10: Staying Warm in Cold Weather
Lesson 11: Wind, Rain, Snow, and Ice Awareness
Lesson 12: Emergency Warmth Basics
Lesson 13: Choosing Safe Clothing for Changing Weather
Lesson 14: Knowing When Weather Becomes Dangerous

Shelter Skills
Lesson 15: Choosing a Safe Shelter Location
Lesson 16: Understanding Wind Direction
Lesson 17: Using Natural Features for Shelter
Lesson 18: Basic Tarp Shelter Setup
Lesson 19: Building a Simple Lean-To

Knots and Rope Skills
Lesson 20: Why Knots Matter
Lesson 21: The Overhand (Thumb) Knot
Lesson 22: The Square Knot

Fire Safety and Fire Basics
Lesson 23: Fire Is a Tool, Not a Toy
Lesson 24: The Fire Triangle
Lesson 25: Gathering Safe Fire Materials
Lesson 26: Alternatives to Campfires

Water and Hydration Skills
Lesson 27: Signs of Dehydration
Lesson 28: Choosing Safer Water Sources
Lesson 29: Boiling Water for Safety
Lesson 30: Using Water Filters and Purifiers
Lesson 31: Carrying Enough Water
Lesson 32: Conserving Water Outdoors
Lesson 33: Knowing When to Ask for Help

Water Safety and Crossings
Lesson 34: Respecting Moving Water
Lesson 35: Safe River Crossing Decisions

Navigation, Signaling, and Staying Found
Lesson 36: Using Landmarks to Stay Oriented
Lesson 37: Understanding Directions
Lesson 38: Basic Map Awareness
Lesson 39: Trail Markers and Signs
Lesson 40: What To Do If You Think You Are Lost
Lesson 41: Why Staying Put Helps Rescuers
Lesson 42: Using a Whistle for Help
Lesson 43: Emergency Signals

First Aid and Body Awareness
Lesson 44: Staying Calm During Minor Injuries
Lesson 45: Cleaning Small Cuts and Scrapes
Lesson 46: Treating Blisters Early
Lesson 47: Sprains and Twists
Lesson 48: Recognizing Serious Injuries
Lesson 49: Nosebleeds and Minor Bleeding
Lesson 50: Recognizing Allergic Reactions
Lesson 51: Basic First Aid Kit Awareness
Lesson 52: When to Stop and Ask for Help

Nature, Terrain, and Wildlife Awareness
Lesson 53: Reading the Trail
Lesson 54: Wildlife Awareness Basics
Lesson 55: Insects and Bites
Lesson 56: Recognizing Poisonous Plants
Lesson 57: Animal Tracks and Signs
Lesson 58: Fresh and Old Tracks
Lesson 59: Respecting Boundaries and Signs
Lesson 60: Moving Safely Through Natural Areas
Lesson 61: Leave No Trace Awareness

Wildlife Encounters
Lesson 62: What to Do If You See a Bear
Lesson 63: What to Do If You See a Snake
Lesson 64: Respecting Large Animals
Lesson 65: Animal Families and Young Wildlife

Camping Skills and Camp Life
Lesson 66: Setting Up a Tent Properly
Lesson 67: Choosing a Safe Campsite
Lesson 68: Keeping Camp Organized
Lesson 69: Packing a Backpack Correctly
Lesson 70: Morning Camp Routine
Lesson 71: Nighttime Camp Routine
Lesson 72: Outdoor Bathroom Awareness
Lesson 73: Leaving Camp Better Than You Found It

Survival Kits and Outdoor Tools
Lesson 74: What Is a Survival Kit?
Lesson 75: Tool Safety Basics

SURVIVAL SKILLS

LESSON 1:

AWARENESS IS YOUR MOST IMPORTANT SURVIVAL SKILL

WHAT IS AWARENESS?

Awareness means paying attention to what is happening around you and inside your body. It helps you notice changes early, before they become problems.

WHY IT MATTERS

- Notice weather changes.
- Spot hazards like slippery rocks or sharp branches.
- Recognize when you are tired, hungry, or thirsty.
- Stay aware of where your group is and what is nearby.
- Help you slow down, think clearly, and make safer choices.

KEY TAKEAWAY

The most important survival skill is not fire, shelter, or knots. It is **AWARENESS.**

AWARENESS CHECK

Let's practice paying attention to your surroundings and your body.

1. Find a safe outdoor or indoor space.
2. Stand still for one full minute.
3. During that minute, notice:
   - Three things you can **SEE.**
   - Two things you can **HEAR.**
   - One thing you can **FEEL** in your body.
4. After the minute is over, think about anything you did not notice at first.
5. Share what you saw, heard, and felt.

SLOW DOWN • PAY ATTENTION • STAY SAFE

Survival Skills

Lesson 1

Activity 1

Train Visual Memory

Materials

- 24 Assorted Objects
- A Blanket
- Paper & Pencil for each player/team
- Stopwatch



Instructions

1. Arrange 24 different objects on a blanket, well separated.
2. Cover the blanket and gather the group around in a circle.
3. Uncover exactly 60 seconds and cover again.
4. Each one writes silently all the objects he/she remembers.
5. Count the correct answers and compare results without mockery or rankings.
6. Ask those who remember the most what strategy they used and share it.



Variants

- With the requirement to also remember the exact position.
- Removing three objects and detecting which ones are missing.
- With objects all similar to each other, it is much more difficult.

SURVIVAL SKILLS

LESSON 2:

THE STOP RULE

WHAT IS THE STOP RULE?

A simple four-step process that helps you stay calm, think clearly, and make safe choices when you are in the outdoors and something is not right.



THE STOP RULE STEPS

S — STOP
- Stop what you are doing.
- Stay calm and take a breath.

T — THINK
- Think about what is happening.
- What is the problem?
- What are your choices?

O — OBSERVE
- Look around carefully.
- Check the weather, terrain, and your surroundings.
- Notice any risks or changes.

P — PLAN
- Make a safe plan.
- Decide what to do.
- If needed, get help from an adult or your group leader.

STOP
THINK
OBSERVE
PLAN

STOP • THINK • OBSERVE • PLAN

SURVIVAL SKILLS

★ Activity 2 ★

Kim from Olores



Objective:

Identify substances only by smell.

Materials:

- 12 Numbered Opaque Bottles
- Aromatic Substances
- Cotton
- Blindfolds/Scarves
- Paper & Pencil



Instructions:

1. Prepare 12 opaque jars with cotton, scented with different scents.
2. Use spices, herbs, citrus, coffee, soap, moist soil, and wood.
3. Blindfolded participants pass and smell each jar.
4. They write down their answer or dictate it to a fellow writer.
5. When they are all finished, the contents are revealed one by one.
6. Comment on what personal memories each smell awakened.



Variations:

- Only with the smells of the camp: firewood, tarpaulin, cord, food.
- Matching jars with the same smell, without identifying them.
- With natural smells collected on the spot by themselves.

SURVIVAL SKILLS

Awareness and Preparation

Lesson 3: Planning Before You Go Outside



Good trips start before you leave.

Planning helps you avoid surprises and feel more confident outdoors. Before going outside, it is smart to check the weather, bring water and snacks, wear the right clothing, and know when you will be back.



Even short outings are safer with a simple plan.

Make a Simple Plan

Choose a short outing such as:

- A walk around the block
- Playing in the yard
- Visiting a nearby park





Before you go, answer these questions:

1. Where are you going?
2. Who are you going with?
3. What should you bring?
4. When will you be back?



Say your plan out loud or write it down.

Simple planning helps keep you safe, even on short trips.

SURVIVAL SKILLS

Activity 3

The Swamp Crossing



Objective:

Plan as a team, with the use of scarce resources, and execute the plan.

Materials:

- 4–6 Boards or Bricks per team
- Cones for the Edges
- Marking Tape



Instructions:

1. Divide into teams of 4 to 8 Young Marines.
2. Mark two lines, fifteen meters apart: they are the banks of the swamp.
3. Give each team 3 to 7 boards, always one less than the number of people per team.
4. No one can touch the swamp floor; you only step on the boards.
5. A board without human contact is swept away by the current: you take it out of the game.
6. If someone touches the ground, the whole team returns to the start.
7. Give five minutes of quiet planning before allowing the first move.

Variants:

- With a bandaged person who must be guided by the team.
- Carrying a fragile object that cannot fall.
- With a total time limit that forces you to decide quickly.

SURVIVAL SKILLS

Awareness and Preparation

Lesson 4: Dressing for the Outdoors



Objective:

Learn how to choose and wear the right clothing to stay comfortable and safe outdoors.

Materials:

- Sample clothing layers (base, middle, outer)
- Pictures or examples of outdoor clothing
- Weather cards (optional)



Key Information:

Clothing protects your body from heat, cold, wind, and rain.
The best way to dress outdoors is in layers:



- **Base Layer:** Helps keep sweat off your skin.
- **Middle Layer:** Helps keep you warm.
- **Outer Layer:** Blocks wind and rain.



Remember:

Avoid cotton whenever possible. Cotton holds moisture and can make you cold. If your clothes get wet, change into dry clothing as soon as possible.

Clothing Check:

Look at what you are wearing today.
Ask yourself:



- Does this keep me warm or cool enough?
- Will it protect me from wind or rain?
- Would it still work if the weather changed?



Variations:

- Set up a "Dress for the Weather" challenge using different weather scenarios.
- Have teams build the best layered outfit from a gear supply.
- Discuss how to adjust clothing for hotter, colder, or wetter conditions.

Think about one change you would make if it got colder, hotter, or wetter. Knowing how to adjust your clothing helps you stay comfortable and safe.

SURVIVAL SKILLS

Activity 4

The Costume Chest



Objective:

Create characters with reused material.

Materials:

- Old Clothes
- Fabrics
- Cardboard
- Newspaper
- Adhesive Tape
- Scissors



Instructions:

1. Gather a trunk with old clothes, fabrics, and reusable materials.
2. Each team draws five items at random without being able to choose.
3. They must create a complete character for each member with them.
4. Each character needs a name, a story, and a way of walking.
5. They have twenty-five minutes for creation and rehearsal.
6. They parade on stage presenting themselves in character, without ever leaving it.



Variants:

- Only with newspaper and tape.
- Characters at the service of a common history between teams.
- With historical or local nature themes.



SURVIVAL SKILLS

Awareness and Preparation

Lesson 5: Knowing Your Limits



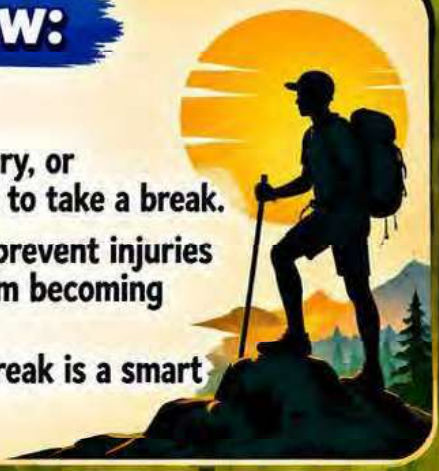
Key Point:

Everyone has limits, and knowing yours is an important survival skill.

- Drink water.
- Eat a snack.
- Take a break.
- Ask for help.

What to Know:

- Pay attention to your body.
- If you feel tired, thirsty, hungry, or uncomfortable, it may be time to take a break.
- Listening to your body helps prevent injuries and keeps small problems from becoming emergencies.
- Telling someone you need a break is a smart and responsible choice.



Body Check-In:

Sit quietly for a moment and check in with how you feel.

Ask yourself:

- Am I thirsty?
- Am I hungry?
- Am I tired?
- Do I need a break?

If the answer to any of these is yes, decide what to do next.

Paying attention to your body helps prevent problems before they start.

SURVIVAL SKILLS

Activity 5

Tug of War



Objective:

Coordinate the strength of an entire team in a single, synchronized effort.

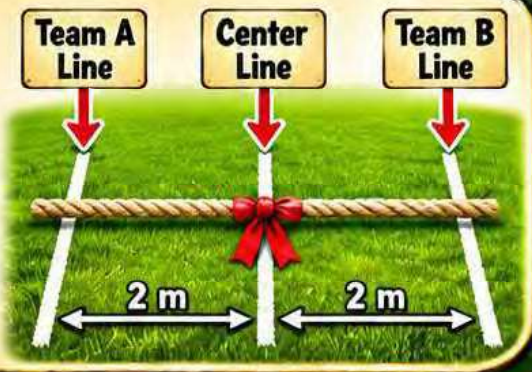
Materials:

- Thick Rope (at least 15 meters)
- Center Marking Tape
- Chalk



Instructions:

1. Mark three lines on the ground: the center, and one on each side, two meters from center.
2. Tie a ribbon in the exact center of the rope and align it with the center line.
3. Each team takes the rope; the last player cannot wrap it around their body.
4. At the signal both teams pull; the winner is the one who drags the ribbon beyond its line.
5. Play the best of three sets with a two-minute break between them.
6. Close by rotating teams so that everyone plays with everyone.



Variants:

- With four teams and a cross rope pulling from four directions.
- Seated version, much more confident and surprisingly even.
- With mixed teams matched by total weight, not by number.



Afterwards:

Discuss how their bodies feel.

- Tired?
- Sore?
- Ready to take a break?
- Ready to play again?



SURVIVAL SKILLS

Weather Awareness and Temperature Management

Lesson 6: Watching the Sky for Weather Changes



Key Point:

The sky gives clues about what the weather may do next. Learning to notice these clues helps you prepare instead of being surprised.

Watch For:

- Dark clouds (a storm may be forming)
- Fast-moving clouds
- Clouds that grow taller
- A sudden change in wind
- A drop in temperature

Remember:

- Clear skies can change quickly, especially in the mountains or open areas.
- Look up often to notice changes sooner.
- Pay attention to how the sky looks when the weather is calm so you can spot when something is different.

Types of Clouds

Cirrus
High, thin clouds that look like feathers.

Cirrostratus
Thin clouds that form a halo around the sun.

Cirrocumulus
Small, patchy clouds like a mackerel sky.

Altostratus
Mid-level clouds that cover the sky.

Altocumulus
Mid-level clouds in patches or layers.

Stratus
Low, uniform clouds that cover the sky.

Stratocumulus
Low clouds in layers of fluffy lumps.

Cumulus
Low, fluffy clouds that look like cotton.

Cumulonimbus
Tall clouds that can bring thunderstorms.

Clouds come in many shapes and sizes, and help make our weather!

SURVIVAL SKILLS

★ Activity 6 ★

Cloud Observatory

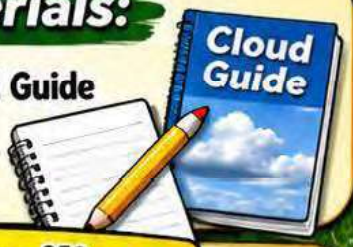


Objective:

Identify cloud types and use them to predict the next day's weather.

Materials:

- Visual Cloud Guide
- Notebook
- Pencils



Instructions:

1. Everyone should lie on their backs, looking atm sky.
2. Two minutes of silent observation before saying a single word.
3. It has the three main families: high cirrus, middle cumulus clouds and strata low.
4. Each one draws the clouds they see and tries to classify them with the guide.
5. Record the date, time, type of cloud, and wind direction.
6. Each one writes down their weather prediction for tomorrow and signs it.

Main Cloud Families:

High Clouds – Cirrus

- Thin, wispy clouds
- Usually mean fair weather

Middle Clouds – Cumulus

- Puffy, cotton-like clouds
- Can mean changing weather

Low Clouds – Strata

- Flat, layered clouds
- Often bring rain or drizzle

Variants:

- With daily registration throughout a camp and final verification.
- Combined with reading a home barometer.
- With photographs compared against the official guide.



Weather Prediction:

- ☐ My cloud type: _____
- ☐ Wind direction: _____
- ☐ My prediction for tomorrow:

_____

SURVIVAL SKILLS

Weather Awareness and Temperature Management

Lesson 7: Understanding Storm Warnings



Key Point:

Storms can bring strong wind, heavy rain, lightning, or hail.Knowing when a storm may be coming helps you stay safe.

Signs of an Approaching Storm:

- Darkening clouds
- Wind picking up suddenly
- Thunder in the distance
- Air feeling cooler or heavier



If you hear thunder, lightning is close enough to be dangerous. It is important to move to a safe place right away.



Remember:



- Never ignore storm warnings or weather alerts.
- Follow instructions from leaders or official alerts.

Stay Safe During Storms:

- Move to a sturdy shelter.
- Stay away from tall trees, open fields, and metal objects.
- Do not return outside until it is safe.

SURVIVAL SKILLS

Activity 7

Build an Anemometer



Objective:

To Measure Wind Speed.

Materials: (Per Team or Individual)

- Five paper cups – Three-ounce size
- Two straight plastic soda straws
- 1 Straight pin
- 1 Sharp pencil with eraser



Additionally:

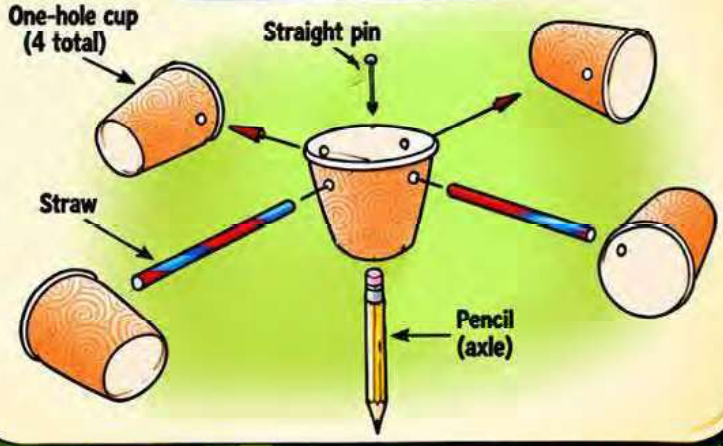
- Paper punch
- Stapler
- Felt tip marker
- Watch or timers



Instructions:

1. Using a paper punch, punch a hole in four paper cups about 1/2-inch below the rim of the cups.
2. Punch four equally spaced holes in a fifth paper cup about 1/4-inch below the rim, and a fifth hole in the center of the bottom of the cup (use the pencil to make the hole in the bottom).
3. Push a soda straw through the hole in one of the first four cups. Flatten the end of the straw and staple it to the side of the cup opposite the hole. Repeat this step with the other straw and another of the first four cups.
4. Slide one of the cup and straw assemblies through two opposite holes in the side of the fifth cup. Push another one-hole cup onto the straw and turn this cup so that the open ends of the two cups on the straw face in opposite directions. Flatten the end of the straw and staple it to the side of the second cup. Measure the distance between the centers of the two cups. This is the diameter of your anemometer.

Assembly Diagram



How It Works:

The wind pushes the cups and makes them spin. By counting the turns over a set time, you can find the wind speed.



Key Takeaway:

You can build a simple tool to observe and measure wind, an important part of weather awareness and safety in the outdoors.

SURVIVAL SKILLS

Weather Awareness and Temperature Management

Lesson 8: Lightning Safety Basics



Key Point:

Lightning can strike far from a storm and move very fast. Learn lightning safety and act early to stay safe.

When to Take Action:

- You hear thunder.
- You see lightning.
- The storm is getting closer.
- The sky looks dark and stormy.



If you hear thunder, stop what you are doing and move away from open areas, water, and tall objects like trees or poles.



Remember:



- Act early—never wait to see if the storm gets closer.
- Follow the guidance of your leaders and adults.

Stay Safe During Storms:

- Go inside a building or an enclosed vehicle.
- Stay low and move to a safer area if you cannot get indoors right away.
- Avoid open areas, water, and tall objects.

SURVIVAL SKILLS

Weather Awareness and Temperature Management

Activity 8: The Aluminum Pie Pan Lightning Plate

Objective:

Make a miniature electrical spark that mimics a real cloud-to-ground lightning strike.

Materials:

- Styrofoam plate (or to-go box)
- Aluminum pie tin
- Pencil with a clean eraser
- Thumbtack
- Wool sock or wool cloth
- Metal fork or your finger



Instructions:

1. Push the thumbtack through the center of the bottom of the aluminum pie pan.



2. Press the pencil's eraser onto the sharp point of the thumbtack to act as an insulated handle.



3. Rub the Styrofoam plate vigorously and fast with the wool sock for about 2 minutes to build up negative static charges.



4. Pick up the aluminum pie pan by the pencil handle and place it directly on top of the charged Styrofoam plate.



5. Turn off the room lights, then slowly bring your finger or a metal fork close to the edge of the pie tin to see and hear a tiny spark.





The Science:

The wool rubs extra electrons (negative charges) onto the Styrofoam. When you touch the metal pan, those charges jump to create a micro-discharge, just like real lightning in a storm.

SURVIVAL SKILLS

Weather Awareness and Temperature Management

Lesson 9: Staying Safe in Hot Weather



Key Point:

Hot weather makes your body work harder. You can lose water faster and can overheat without realizing it.

To Stay Safe in the Heat:

- Drink water often.
- Take breaks in the shade.
- Wear light-colored clothing.
- Move more slowly.

Signs of Heat Exhaustion:

- Heavy sweating
- Dizziness
- Nausea
- Weakness
- Headache





If someone shows these signs, move to shade, rest, and drink water. Tell an adult immediately.

Heat problems can worsen quickly if ignored.

Activity: Hot Weather Body Check

On a warm day, take a short walk. Stop and ask yourself:

- Am I thirsty?
- Am I sweating?
- Do I feel tired or dizzy?



Remember:

- Drink water and rest in the shade.
- Noticing these signs early helps prevent overheating.

SURVIVAL SKILLS

Weather Awareness and Temperature Management

Activity 9: Heat Stroke and Hydration



Objective:

Recognize the signs of heat stroke and establish a real heat stroke protocol.

Materials:

- Canteens
- Scales
- Thermometer
- Urine Color Chart
- Wet Clothes

Instructions:

1. Explain the difference between heat exhaustion and heat stroke.
2. Review the warning signs: confusion, hot and dry skin, absence of sweat.
3. Practice the protocol: shade, remove clothing, actively cool down, and warnings.
4. Present the urine color chart as a simple hydration indicator.
5. Calculate the water needed per person per hour according to the activity and the weather.
6. Define the group's protocol: when you drink and who remembers it.

Heat Exhaustion

- Heavy sweating
- Dizziness
- Nausea
- Weakness

Heat Stroke

- Confusion
- Hot and dry skin
- Absence of sweat
- Can be life-threatening!

Heat Protocol:

- Move to shade.
- Remove extra clothing.
- Actively cool down (wet clothes, fan, etc.).
- Get help and follow warnings.

Urine Color Chart – Hydration Indicator



Variants:

- Weigh before and after a march to calculate the actual loss.
- Prepare homemade rehydration serum with correct measurements.
- Specific hypothermia protocol for cold climates.

Hydration Reminder:

Drink water often and don't wait until you feel thirsty!

SURVIVAL SKILLS

Weather Awareness and Temperature Management

Lesson 10: Staying Warm in Cold Weather



Key Point:

Cold weather can affect your body faster than you expect. Stay warm by using layers, staying dry, and blocking the wind.

Stay Warm in Cold Weather:

- Wear layers of clothing.
- Keep your clothing dry.
- Block the wind.
- Move gently to keep your body warm without overheating.

Signs of Hypothermia:

- Shivering
- Slurred speech
- Clumsiness
- Confusion



Cold Weather Gear:

- Hats
- Gloves
- Dry socks
- Warm, dry layers

If Someone Shows Signs:

>> Move to a warm, dry place, keep them warm, and tell an adult right away.

Activity: Cold Weather Readiness Check

Look at what you are wearing today. Think about:

- What layers you have on.
- What might help if it got colder.
- How you would stay dry.

Talk About:

- Why shivering is a warning sign.
- Why confusion is serious.
- Why staying dry is important.
- Why telling an adult immediately is the safest step.

SURVIVAL SKILLS

Weather Awareness and Temperature Management

Activity 10: What Melts Faster?



Objective:

Test which household substance, like salt, sugar, or warm water, makes an ice cube melt the fastest.

Materials:

- 4 to 6 ice cubes (of equal size)
- 4 to 6 bowls, plates, or a muffin tin
- Table salt
- Sugar
- Warm water
- Cold water
- A timer or stopwatch
- (Optional) Food coloring



Instructions:

1. Place one ice cube into each separate bowl or muffin tin compartment.
2. **Make Predictions:** Guess which ice cube will melt first and which will melt last.
3. **Apply the Variables:**
   - One cube plain (control)
   - One with a pinch of salt
   - One with a pinch of sugar
   - One with a spoonful of cold water
   - One with a spoonful of warm water
4. **Time and Observe:** Start the timer and check the ice cubes every few minutes (at 1 minute, 5 minutes, 10 minutes, and 30 minutes).

The Science:

- Salt lowers the freezing point of water, which helps ice melt faster.
- Sugar can also make ice melt faster, but usually not as fast as salt.
- Warm water adds heat, which makes the ice melt more quickly.
- Cold water keeps the ice cold, so it usually melts more slowly.

Think About It:

- Which ice cube melted first? Which melted last?
- How did salt, sugar, and temperature affect the ice?
- What happens to the snow and ice on roads when salt is used?

SURVIVAL SKILLS

Weather Awareness and Temperature Management

Lesson 11: Wind, Rain, Snow, and Ice Awareness



Key Point:

Different types of weather create different risks. Wind can knock you off balance or make it feel colder. Rain can soak clothing and make surfaces slippery. Snow and ice can hide hazards and make walking difficult.

Stay Safe in Bad Weather:

- Slow down in bad weather.
- Choose safer paths.
- Take extra care with each step.
- Small changes in weather can still be dangerous.

Wind



Can knock you off balance and make you feel colder.

Rain



Can soak clothing and make surfaces slippery.

Snow



Can hide hazards and make walking difficult.

Ice



Can be hard to see and very slippery.

Activity: Weather Walk

Go outside during poor weather. Notice:

- How the ground feels.
- If the wind affects your balance.
- If rain, snow, or ice changes how you walk.

Slow down when needed and talk about why.

Remember:

- Be aware of changing weather.
- Use the right clothing and gear.
- Watch your footing.
- Stay safe, stay prepared, and adjust to the conditions.

SURVIVAL SKILLS

Weather Awareness and Temperature Management

Activity 11: Weather Detectives



Objective:

"Weather Detectives" is an interactive youth activity designed to teach kids how to stay safe and aware during wind, rain, snow, and ice.

What You'll Do:

- Rotate through 4 hands-on stations.
- Learn how different weather can be dangerous.
- Practice simple skills to stay safe.

Station 1 — The Wind Whipper (Wind Awareness)



The Concept: Understand how wind moves and how to identify severe wind hazards.

The Action:

- Use a "Wind Gauge" (paper streamer or ribbon on a stick).
- Use a hair dryer on different speed settings to see how it reacts.

Safety Takeaway: Look up and look out. High winds can blow down trees and power lines. Stay indoors away from windows when it's very windy.

Station 2 — The Sponge Storm (Rain & Flood Awareness)



The Concept: Visualize how the ground absorbs water and what happens when there is too much rain.

The Action:

- Pour a small cup of water on a sponge to show how it absorbs rain.
- Pour a whole pitcher of water quickly to show how "flooding" can occur.

Safety Takeaway: Turn around, don't drown. Never walk, swim, or play in moving floodwater or deep puddles, as the water can be deceptively deep and strong.

Station 3 — The Layering Race (Snow Awareness)



The Concept: Learn how to dress properly to prevent hypothermia and frostbite.

The Action:

- Divide into teams for a relay race.
- Run to a pile of winter clothes, correctly put on oversized gear (coat, hat, gloves, scarf, and boots), do three jumping jacks, take them off, and run back to tag the next player.

Safety Takeaway: Dress in layers. Staying dry is just as important as staying warm when playing in the snow.

Station 4 — The Penguin Shuffle (Ice Awareness)



The Concept: Navigate slippery surfaces safely to prevent falls.

The Action:

- Walk across a smooth blue tarp or plastic sheet to feel how slippery it is.
- Practice the "Penguin Walk": feet slightly outward, bend knees slightly, keep hands out of pockets, and take short, shuffling steps.

Safety Takeaway: Assume all wet surfaces are icy. Look out for "black ice" (invisible ice on pavements) and walk slowly like a penguin.

Wrap-Up: The Weather Pledge



End the activity by having the youth raise their right hands and take the Weather Detective Pledge:

"I promise to watch the skies, dress for the skies, and stay inside when the weather gets wild!"

Reward:

Provide a small prize, like a thermometer sticker or a hot cocoa packet.

SURVIVAL SKILLS

Weather Awareness and Temperature Management

Lesson 12: Emergency Warmth Basics



Key Point:

If you get cold unexpectedly, staying calm helps you warm up faster. Use simple actions and gear to block wind and hold in heat.

Helpful Gear:

- Emergency blanket
- Jacket (wind and water resistant)
- Backpack (for extra layers and gear)

Emergency Warmth Practice:

Practice warming up safely. Pretend you got cold suddenly. Try these actions:



Curl into a smaller shape.



Use a jacket or blanket to block wind.



Keep your hands close to your body.

Remember:

- Staying calm helps you warm up faster.
- Block the wind and keep in your body heat.
- Use layers and available gear.
- Tell an adult right away if you are very cold or shivering uncontrollably.

Think About It:

- When would you use an emergency blanket?
- Why is it important to keep your hands close to your body?
- When should you ask for help?

Key Takeaway:

Staying warm, staying dry, and getting help early can prevent serious problems in cold weather.

SURVIVAL SKILLS

Weather Awareness and Temperature Management

Activity 12: Emergency Warmth Activities



Objective:

Practice two hands-on activities to learn how to keep body heat and stay safe in cold conditions.

Activity 1: Space Blanket Science



- Get a standard Mylar emergency blanket.
- Wrap it around yourself to feel how quickly it reflects about 90% of your body heat back to you.
- Watch a demonstration to see that the shiny side must face inward to work effectively.

Key Fact:

A Mylar space blanket reflects about 90% of your body heat back to you.



Activity 2: The Shiver & Shake Game



- A variation of freeze tag.
- When the "Winter Storm" (the IT) tags a player, they must stand still and "shiver" to simulate early hypothermia.
- To be unfrozen, a teammate must wrap them in an emergency space blanket or a jacket for 5 seconds.

Remember:

- Shivering is an early warning sign of getting too cold.
- Wrap up quickly to hold in heat.
- Work together to help others stay warm and safe.



Safety Takeaway:

Use simple gear and teamwork to keep body heat, prevent hypothermia, and stay safe in cold weather.



SURVIVAL SKILLS

Weather Awareness and Temperature Management

Lesson 13: Choosing Safe Clothing for Changing Weather



Key Point:

Weather can change during the day, so clothing choices matter. Be prepared with layers and the right gear to stay comfortable and safe.

Good Clothing Choices:

- Bring extra layers.
- Use a light jacket or rain layer.
- Choose clothing that dries quickly.
- Be ready for changes in temperature.

Why It Matters:

- A light jacket or rain layer can make a big difference.
- Clothing that dries quickly works better than clothing that stays wet.
- Being prepared for changes helps you stay comfortable longer.

Layers Work Best:

Use layers to adjust as the weather changes.

Base Layer (wicks moisture) → **Middle Layer** (keeps you warm) → **Outer Layer** (blocks wind and rain)

Clothing Adjustment:

Imagine different weather changes and choose one clothing change that would help.

- It starts raining. → Add a rain jacket or poncho.
- The wind picks up. → Put on a windbreaker or another layer.
- The temperature drops. → Add a warm layer, like a fleece or jacket.

SURVIVAL SKILLS

Weather Awareness and Temperature Management

Activity 13: Layer-Up Relay & DIY Barometer Project



Objective:

Practice two hands-on activities to learn how to choose safe clothing and how to observe weather changes using a simple barometer.

Activity 1: Relay Race Layer-Up

A team activity that builds quick thinking and smart clothing choices for changing weather.

How to Play:



1. Divide the youth into teams.
2. Place a bin of assorted clothing (synthetic tees, fleece jackets, raincoats, cotton sweaters, jeans) at the far end of the room.
3. Call out a sudden weather shift (e.g., "A cold rain just started!"). One player from each team runs to the bin, correctly chooses and puts on a safe layer, and runs back to tag the next player.

Think About It:

- Which clothing worked best for each weather shift?
- Why are quick-drying and water-resistant clothes safer?

Activity 2: DIY Barometer Project

Build a simple barometer to see how changes in air pressure can signal changing weather.

Materials:

- Glass jar
- Balloon
- Straw
- Ruler



Instructions:

1. Cut the balloon and stretch it over the jar's opening, keeping it tight.



2. Tape the straw to the center of the balloon so one end sticks out.



3. Place the ruler next to the jar so the straw points to the numbers.



How It Works:

When air pressure changes, the balloon will bulge out or dip in, causing the straw to move up or down. Higher readings mean high pressure and likely good weather, while lower readings suggest lower pressure and possibly a storm approaching.



Higher Pressure (Likely Good Weather)



Lower Pressure (Possible Storm)

Observation and Record-Keeping

Keep a weather journal to get the most out of your barometer.

- Record the straw's position on the ruler at the same time each day.
- Note the weather conditions, temperature, and anything else you notice.
- Look for patterns over time to understand how changes in air pressure relate to changes in weather.



SURVIVAL SKILLS

Weather Awareness and Temperature Management

Lesson 14: Knowing When Weather Becomes Dangerous



Key Point:

Sometimes the safest choice is to stop or turn back. If weather becomes too hot, too cold, too windy, or stormy, tell an adult and make a plan together.



Dangerous Weather Can Include:









When to Stop Decision Practice:

Practice making safe choices. With another person, talk through what you would do in these situations:



The weather getting worse. → ? What would you do?



Feeling too hot or too cold. → ? What would you do?



The group getting tired. → ? What would you do?

Remember:



- Watch for changes in the weather.
- Listen to your body.
- Check on your group.
- Talk with an adult or leader.
- Be ready to stop, turn back, or find shelter when it's not safe to continue.

Key Takeaway:

There is no prize for pushing through unsafe conditions. Knowing when to stop is a strong outdoor skill.



SURVIVAL SKILLS

Weather Awareness and Temperature Management

Activity 14: "When to Walk Away" Roleplay



Objective:

Practice speaking up and making a safe choice when weather becomes dangerous, even when there is pressure to keep going.

How It Works:

Give small groups scenarios where peer pressure or excitement might make them ignore dangerous weather (e.g., "You are winning a soccer championship but you see dark clouds and the wind suddenly turns freezing cold").

The Action:

Have groups act out how they would speak up to an adult or their friends to prioritize safety over completing the game.



Sample Scenarios to Roleplay:



You are winning a soccer championship, but you see dark clouds and the wind turns freezing cold.



You are on a hike, and it is getting much hotter than expected. The group wants to keep going.



You are at an outdoor event, and the wind picks up with snow in the forecast. Your friends want to stay longer.

The Takeaway:

Empowers youth with the social confidence to speak up when environmental conditions turn hazardous, recognizing that no game is worth risking safety.



Remember:

- Watch for changes in the weather.
- Listen to your body and your group.
- Speak up and make a safe choice.
- It's okay to stop, turn back, or wait for better conditions.



SURVIVAL SKILLS

Shelter Skills

Lesson 15: Choosing a Safe Shelter Location



Key Point:

Before you build any kind of shelter, you must choose the right place. A good shelter in a bad location can still be unsafe.



Things to Look For:

- Flat, level ground.
- Dry ground (not muddy or wet).
- Stable, solid soil.
- Areas free of dead branches.
- Places away from steep slopes.



Avoid These Places:



Low areas (where water can collect)



Dead trees and loose branches



Cliffs and steep slopes



Areas with a risk of falling branches or rolling rocks

Remember:



- Think about what is above you (as well as what is below you).
- Falling branches and rolling rocks can be dangerous.
- A safe shelter location helps keep you dry, warm, and protected.

Shelter Site Inspection:

1. Visit a park, campground, backyard, or other outdoor area.
2. Look for the safe location clues shown above.
3. Identify one good shelter location and one poor shelter location.
4. Explain why one spot is safer than the other.

GOOD LOCATION (EXAMPLE)



- Flat and stable ground
- Dry (not in a low area)
- No dead branches overhead
- Away from steep slopes

POOR LOCATION (EXAMPLE)



- Low area (can collect water)
- Dead branch overhead (could fall)
- Closer to a steep slope

SURVIVAL SKILLS

Shelter Skills

Activity 15: Choosing a Safe Shelter Location



Objective:

Teach youth how to evaluate environments for safety during severe weather or emergencies.



Materials:

- 4 Cones or ropes (to mark zones)
- Printed "Scenario Cards"
- A whistle



Setup & Preparation:

1. Define the Zone: Use a large room, gym, or outdoor field.
2. Mark the Four Corners: Designate each corner of the space as a different "Shelter Option" using cones or signs:

Corner 1: Basement / Interior Room (No windows)	Corner 2: Mobile Home / Trailer	Corner 3: Under a Large Tree	Corner 4: Inside a Car / Vehicle
			

Instructions:

Step 1: The Briefing (3 minutes)

Explain to the youth that they are caught in changing weather environments. Their goal is to survive the elements by sprinting to the safest possible shelter when a disaster scenario is called out.

Step 2: The Gameplay Loop (15 minutes)

1. Have all players gather in the exact center of the room ("The Open Field").
2. Read one of the Disaster Scenarios (below) out loud.
3. Blow the whistle and shout, "Find Shelter!"
4. Players have 10 seconds to run to the corner they think is the safest.
5. Once everyone has chosen a corner, reveal the correct answer and explain why using the guide below.
6. Eliminate players who choose the wrong corner (or give points to those who chose correctly if you prefer a non-elimination format).
7. Reset to the center and play the next round.

Sample Scenario Cards:



Thunderstorm Approaching!
Dark clouds, lightning, and heavy rain are coming fast.
✓ Best Choice: Basement / Interior Room (No windows)



Sudden Freeze!
The temperature is dropping quickly, and strong winds are picking up.
✓ Best Choice: Inside a Car / Vehicle



High Winds!
A strong storm with powerful winds is moving into the area.
✓ Best Choice: Mobile Home / Trailer (more stable than a large tree)

The Takeaway:

Choose a shelter that protects you from the current danger. Avoid hazardous spots like under trees, in low areas, or on steep slopes.

Remember:

- ✓ Look for flat, dry, and stable ground.
- ✓ Stay away from dead trees and loose branches.
- ✓ Avoid low areas where water can collect.
- ✓ Think about what is above you and what is below you.



SURVIVAL SKILLS

Shelter Skills

Activity 15: Disaster Scenarios & Answer Key



Objective:

Review disaster scenarios from the shelter location activity and learn the safest choice for each situation.



Round 1 — Tornado Warning



- **Scenario:** The sirens are blaring, the sky has turned a dark greenish color, and a large funnel cloud is forming nearby!
- ✓ **Safest Corner: Corner 1 (Basement / Interior Room)**
- **Lesson:** Flying debris is the biggest danger in a tornado. Underground or inside a room with no windows offers the strongest protection. Mobile homes and being near trees are extremely dangerous.

Round 2 — Sudden Lightning Storm



- **Scenario:** You are hiking when dark clouds roll in. Suddenly, bright flashes of lightning strike close by, followed instantly by loud thunder.
- ✓ **Safest Corner: Corner 4 (Inside a Car)**
- **Lesson:** A hard-topped metal vehicle routes lightning safely around you into the ground. Never stand under a tree (Corner 3), as trees attract lightning and can split or drop branches on you.

Round 3 — Extreme Flash Flood



- **Scenario:** Heavy rain has been falling for hours. Water is quickly rising up the driveway, and the street looks like a rushing river.
- ✓ **Safest Corner: Corner 1 (If it means moving to the highest floor) OR None of the above (Head to high ground)**
- **Lesson:** Basements fill with water instantly during floods. The safest choice is to get to the highest ground possible, never stay in a low-lying area, and never try to drive through floodwaters (eliminating the car).

Round 4 — High Wind / Hurricane Gale



- **Scenario:** Tropical storm-force winds are snapping power lines and blowing patio furniture across the yard.
- ✓ **Safest Corner: Corner 1 (Interior Room)**
- **Lesson:** Stay away from windows that could shatter from flying objects. Vehicles can be flipped or crushed by falling debris, and trees are highly likely to fall.

Quick Reflection Questions:

1. What was the most surprising danger you learned about today?
2. Why is a tree almost never a safe shelter option?
3. If you are at home and an emergency happens, where is your family's designated safe spot?
   (Ask your parents about this when you get home.)

Shelter Options Recap:

✓ **Good Options:** Basement or interior room (no windows), or a hard-topped car (during lightning).

✗ **Avoid:** Mobile homes, under large trees, low areas that can flood, and areas near cliffs or steep slopes.

SURVIVAL SKILLS

Shelter Skills

Lesson 16: Understanding Wind Direction



Key Point:

Wind affects how warm or cold you feel and can blow rain into your shelter. Before setting up shelter, notice which direction the wind is coming from.

Understanding the Wind:

- Whenever possible, place your shelter so the opening faces away from the wind.
- Blocking wind helps you stay warmer and more comfortable. Even light wind can make cold weather feel much colder.



Wind Detective

Go outside and spend a few minutes observing the wind. Look for:

- Moving leaves
- Swaying grass
- Drifting clouds
- Flags or ribbons



How to Tell Wind Direction:



The flag blows this way (→).



The grass leans this way (→).



The clouds move this way (→).

The wind is coming **FROM** the opposite direction (←) and going **TOWARD** the right (→).

Good Shelter Setup:



- Opening faces away from the wind.
- Blocks wind and rain.
- Keeps you warmer and drier.

Poor Setup:



- Opening faces the wind.
- Lets in cold air and rain.
- Makes it harder to stay warm and dry.

Remember:

Try to determine which direction the wind is coming from. Then choose the best direction for a shelter opening. Understanding wind can help you stay warmer and drier outdoors.

SURVIVAL SKILLS

Shelter Skills

Activity 16: Make a DIY Wind Vane



Objective:

Make a DIY Wind Vane. A wind vane shows the direction the wind is coming from (for example, a "north wind" blows from the north toward the south).



Materials:

- A plastic or paper straw
- Stiff cardstock paper (cut into a small triangle pointer and a larger triangle tail)
- A pushpin
- A pencil with a clean eraser at the top
- A small amount of clay or playdough
- Scissors, tape, and a compass



Instructions:

1. Cut a small arrow head and a larger tail out of the cardstock. Tape one to each end of the straw.



2. Push a pin right through the balanced center of the straw and stick it into the pencil eraser so the straw can spin freely.



3. Stick the bottom of the pencil upright into a ball of clay to make a steady base.



Test It!

1. Use a compass to mark North, South, East, and West on the ground or on the clay base.
2. Take the wind vane outside on a breezy day.
3. The wind pushes against the larger tail, which forces the smaller arrow-pointer to face into the wind (the direction the wind is coming from).
4. Record which cardinal direction the arrow points every 15 minutes to track how the wind shifts.



Remember:

- The arrow points into the wind (the direction it's coming from).
- Check it often to see if the wind changes.
- Use wind direction to help choose and set up a better shelter.

SURVIVAL SKILLS

Shelter Skills

Lesson 17: Using Natural Features for Shelter



Key Point:

Nature already provides many helpful shelter features. Large rocks, fallen logs, hillsides, and thick bushes can block wind and rain, so you need fewer materials to stay protected.



Using Nature Safely:

- Look for natural features that can block wind and rain.
- Use what is already there to build a better shelter.
- Never dig into hillsides or disturb animal homes.
- Choose places that are stable and safe.
- Using natural features helps protect the environment and keeps you safer.



Examples of Natural Shelter Features:

Large Rocks



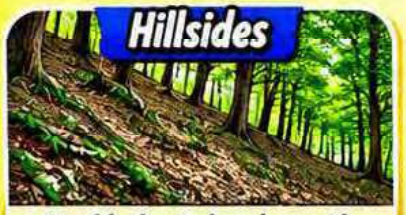
Can block wind, rain, and keep you drier.

Fallen Logs



Can create a windbreak and a solid base for a shelter.

Hillsides



Can block wind and provide cover from the weather (choose a stable slope).

Thick Bushes



Can block wind and rain and give extra cover.

Natural Shelter Hunt:

1. Explore an outdoor area (such as a park, campground, or wooded trail).
2. Look for natural features that could help with shelter.
3. For each feature you find, explai how it could provide protection (e.g., block wind, keep you drier, give cover).
4. Share your findings with the group.

LOOK FOR:

- ☑ Large rocks
- ☑ Fallen logs
- ☑ Hillsides
- ☑ Thick bushes

Remember:

- Use natural features to help build a safe shelter.
- Choose stable, safe locations.
- Avoid digging or disturbing animal homes.
- Respect the environment.



SURVIVAL SKILLS

Shelter Skills

Activity 17: Mini-Den Designers



Objective:

Teams compete to build the most weatherproof, structurally sound miniature shelter using a real-world natural land frame as their foundation.



Materials:

- One small plastic action figure, toy animal, or "tissue creature" per team
- A water spray bottle (for the final test)



The Scouting Phase (5–10 Mins)

1. Divide into teams of 2 to 4 players and hand each team their toy figure.
2. Scout the area for a distinct natural feature to anchor your shelter. Build against or inside this feature to utilize natural protection.

Examples of Natural Foundations:



Tree Roots



Rock Faces



Earth Mounds



Fallen Logs

The Foraging Phase (10 Mins)



1. Teams hunt for fallen, dead natural materials.
2. Follow the "Leave No Trace" and Etiquette Rule: Only collect items already on the ground; never pick live leaves or break branches off living plants.

- ✓ **Structural Elements:** Sturdy twigs, thick bark pieces, and small stones.
- ✓ **Thatching & Insulation:** Dry leaves, pine needles, moss, and ferns.

The Construction Phase (15 Mins)

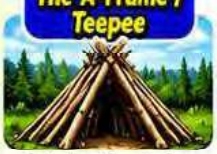
Build a miniature shelter tailored to the size of your toy figure. Choose a classic wilderness design adapted to your natural feature:

The Lean-To



Prop twigs at an angle against a fallen log or rock face.

The A-Frame / Teepee



Interlocking twigs in a cone or tent shape over a hollow space.

The Debris Hut



Create a thick layer of leaves and moss over a branch frame to completely cover the toy.

The "Storm Test" & Judging (10 Mins)



1. **The Rainstorm:** The facilitator visits each shelter with the toy figure placed safely inside. Give the top of the mini-den 5 to 10 sprays with the water bottle.
2. **The Evaluation:** Remove the toy figure to see if it stayed completely dry.
3. Award points or titles such as:

- ✓ Most Waterproof
- ✓ Best Use of Natural Features
- ✓ Most Creative Architecture

Pro Tips for Success:

- ✓ Use a natural feature (rock, log, root, or mound) for support.
- ✓ Build a solid frame with interlocking sticks.
- ✓ Add a thick, overlapping layer of leaves or moss.
- ✓ Make sure the shelter sheds water and blocks wind.



Remember:

- ✓ Use what is already on the ground.
- ✓ Leave No Trace — respect the environment.
- ✓ Be creative, work as a team, and build a safe, strong shelter.



SURVIVAL SKILLS

Shelter Skills

Lesson 18: Basic Tarp Shelter Setup



Key Point:

A tarp is one of the most useful shelter tools. It can be tied between trees to block rain or sun. The tarp should be pulled tight so water runs off instead of pooling.



Tarp Shelter Observation:

Look at a tarp shelter or pictures of different tarp setups.

Observe:

- How the tarp is supported
- Where the water would run off
- How the shelter blocks wind



Why Does Tension Matter?

Loose Tarp:



- Water can pool and leak.
- Flaps in the wind (noisy).
- Can tear more easily.

Tight Tarp:



- Water runs off quickly.
- Stays quiet and stable.
- Blocks wind and rain better.

Tarp Shelter Setup Examples

Use one tarp and some paracord to make many different shelters:


A-FRAME


ARROWHEAD


BASIC FLY


BODY BAG


ENVELOPE


FOREST TENT


LEAN TO


RAIN FLY


SQUARE ARCH


TREKKING POLE


TREKKING POLE / PERSON


WINDSHED WEDGE

Remember:

- Use strong knots and pull the tarp tight.
- Angle the tarp so water runs off.
- Block the wind with the tarp and natural features (trees, rocks, or bushes).
- A good tarp setup helps keep you dry, warm, and comfortable.

SURVIVAL SKILLS

Shelter Skills

Activity 18: Build a Tarp Shelter



Objective:

Build shelters from natural and manmade materials.



Materials:

- Tarpaulin
- Tent pegs
- Guy lines or rope
- Poles
- Bushcraft knives



Before You Start:

- Lay out the tarpaulin and decide where the front of the shelter will be.
- Think about the weather conditions and the wind direction.



Step-by-Step Instructions:

1 Lay Out the Tarp



Lay out the tarpaulin and decide where the front of the shelter will be.

2 Secure the Back Corners



Firmly peg the loops on the back two corners. Tuck in the corner flaps, or if there are no loops, gather the tarp, tie a guy line around a pebble and the tarp, then stake it down.

3 Create the Door Opening



Move the front left corner loop 30 cm to the right and peg it down. Move the front right corner loop 30 cm to the left and peg it down. This makes the door opening.

4 Choose the Pole



Get a pole for height and rigidity. If using an adjustable pole, it should be about three feet tall. If using natural resources, choose wood about 2½ cm (1 in) in diameter (such as hazel).

5 Install the Center Pole



Put the pole under the first central loop at the front entrance. If your tarp doesn't have reinforced ridge loops, use strong tape to reinforce it so the pole doesn't tear through.

6 Make a Pole Foot



If the ground is soft, make a pole foot to stabilize the pole and stop it from sinking. Use a piece of wood and an awl or the point of a strong knife to dig a hole for the pole. Make sure the wood is firmly supported.

7 Add the Front Flap



You should have a stable tent-like structure with a flap at the front. Take the two corners of the flap and pin them along the side using a guy line and peg.

Optional: Slit-Like Entrance



For a slit-like entrance, pin one side of the flap. Attach a guy line to the central loop at the front and peg it about a meter (≈ 3 ft) from the entrance to tighten the front and give more support.

Tips for Success:

- Use strong knots and pull the tarp tight.
- Keep the tarp smooth so water runs off.
- Block wind with the tarp and natural features (trees, rocks, or bushes).

Remember:

- Build a shelter that is stable and safe.
- A good setup helps keep you dry, warm, and comfortable.

SURVIVAL SKILLS

Shelter Skills

Lesson 19: Building a Simple Lean-To



Key Point:

A lean-to is a basic shelter made by leaning branches against a strong support to create a simple, protective shelter from wind and rain.



How It Works:

- Choose a sturdy log, fallen branch, or rope line as the main support.
- Lean smaller branches against it at an angle.
- Cover the branches with leaves, pine needles, or grass to block wind and rain.
- The thicker the covering, the better the shelter works.



Remember:

- Only use branches that are already on the ground.
- Do not break live trees.
- Face the open side away from the wind.
- Use plenty of natural covering for better protection.



Step-by-Step: Build a Lean-To

1 Choose a Support



Find a sturdy log, fallen branch, or rope line for the main support.

2 Lean the Branches



Lean smaller branches against the support at an angle.

3 Add Covering



Cover the frame with leaves, pine needles, or grass.

4 Finished Lean-To



A simple shelter that can block wind and rain.

SURVIVAL SKILLS

★ Shelter Skills ★

Activity 19: Mini Tabletop Lean-To Activity



Objective:

Build shelters from natural and manmade materials.



Materials:

- Craft sticks (popsicle sticks) or small garden twigs
- Twine, yarn, or rubber bands
- Clay, playdough, or a small piece of cardboard (for the base)
- Leaves, moss, or scrap fabric scraps (for roof insulation/ camouflage)



Key Build Steps:

1 Create the Ridge Beam



Push two small balls of clay onto a cardboard base (or use two forked twigs). Lay a longer stick horizontally across them.

2 Angle the Rafters



Lean shorter sticks or craft sticks against the ridge beam at a consistent 45-degree slope.

3 Thatch the Roof



Weave smaller twigs, grass, or green leaves across the angled frame to "shingle" or cover the shelter.

4 Test & Challenge



Test the model's strength by gently placing a small toy figure inside, or challenge the group to see whose lean-to can withstand a "wind test" (using a small fan or hairdryer on low setting).

Make Sure:



Explain:

Explain how the shelter protects someone from weather. Building models is a great way to practice outdoor skills safely.



Remember:

- Use safe, simple materials.
- Build a sturdy frame.
- Add enough covering to block wind and rain.



SURVIVAL SKILLS

Knots and Rope Skills

Lesson 20: Why Knots Matter



Key Point:

Knots are used every day in outdoor activities. They secure tarps, tie down gear, hang equipment, and organize supplies. A good knot stays secure when needed and can be untied later without damaging the rope.



Why Learn Knots?

- Different knots are designed for different jobs.
- Some create loops, some join ropes together, and some keep a rope from slipping.
- Learning a few basic knots gives you another useful outdoor skill.



Rope Exploration

Examine a piece of rope. Notice:

- Its thickness (diameter)
- Its length
- How flexible it is (how easily it bends)
- How it feels when pulled tight (strength and resistance)



Ways Rope Is Used Outdoors:



Secure tarps and build shelters.



Tie down and secure gear.



Hang equipment (lanterns, food, etc.).



Organize and carry supplies.

Remember:



- Use the right knot for the job.
- Make sure the knot is secure but can still be untied.
- Check rope for any damage before use.
- Practice regularly to build skill and confidence.

Activity Discussion:

- What did you notice about the rope's thickness, length, and flexibility?
- How does the rope feel when pulled tight?
- What are some different ways you could use rope outdoors?



SURVIVAL SKILLS

Knots and Rope Skills

Activity 20: Memory of Knots



Objective:

Recognize knots that have already been made, not just know how to execute them.



Materials:



- Knot Photo Cards (with knot names)
- Pre-tied Knots (one for each knot)
- Blanket to Cover

The Knots for This Activity:


Thumb Knot


Figure Eight Knot


Double Figure Eight Knot


Square Knot


Clove Hitch


Half Hitch

Instructions:

1. Prepare the six knots and place them on a table.
2. Cover the table with a blanket and gather the group around it.
3. Uncover for 30 seconds and cover again.
4. Each team must write down the names of all the knots they can remember.
5. Score one point for each correct knot and subtract one point for each invented knot.
6. Go over the knots that no one was able to identify together.



Variants:

- With poorly made knots mixed in that teams must detect.
- Touch version inside an opaque bag (identify by feel).
- With applications: not only the name but what each knot is used for.



Remember:

- Look closely at the knot's shape and turns.
- Think about how the rope crosses and wraps.
- Different knots have different uses around camp, with shelters, and for securing gear.



YOUNG MARINES

SURVIVAL SKILLS

Knots and Rope Skills

Lesson 21: The Overhand (Thumb) Knot



Key Point:

The overhand knot is one of the simplest knots you can learn. To tie it, make a loop in the rope and pass the end through the loop. Pull both ends tight.



What Is It Used For?

- A stopper knot to prevent a rope from slipping through a hole or opening.
- A building block for many more advanced knots.



The Clove Hitch Knot

The clove hitch is used to secure a rope to a spar, pole, or similar fitting.

- Can be easily tied.
- Holds tight when one end is weighted.
- Can slip or bind and is not as effective on a square post.



Knot Instructions

Overhand (Thumb) Knot



1. Make a loop in the rope.
2. Pull both ends tight.

Clove Hitch Knot



1. Hang rope from the support.
2. Loop around the support with the end.
3. Pass it from behind the rope.
4. Pull to tighten.
5. The knot is complete.

Practice: Overhand & Clove Hitch

Using a short piece of rope, practice tying an overhand knot and a clove hitch knot several times.

After each attempt:

- Check that the knot is secure.
- Untie it.
- Try again.



Remember:

- The overhand knot is simple and useful as a stopper.
- The clove hitch secures a rope to a pole or spar.
- Make sure your knots are snug and neat.
- Practice until you can tie them smoothly without looking at instructions.



YOUNG MARINES

SURVIVAL SKILLS

Knots and Rope Skills

Activity 21: Blind Clove Hitch

Objective:

Internalize the knot with your hands, without depending on your eyes.



Materials:

- A rope per person
- Blindfolds or scarves
- Sticks or poles



Clove Hitch Review:

A quick look at the clove hitch before the activity.



1. Hang rope from the support.
2. Loop around the support with the end.
3. Pass it from behind the rope.
4. Pull to tighten.
5. The knot is complete.



Instructions:

1. Go over the clove hitch until everyone does it correctly three times.
2. Blindfold the whole group.
3. Ask them to tie the knot on the stick just by touch.
4. Check and give verbal clues without touching anyone's hands.
5. In the end, each one uncovers their eyes and checks their own knot.



Variants:

- Behind his back instead of blindfolded.
- Inside an opaque bag where only the hands fit.
- In pairs where one guides with one's voice the one who is blindfolded.



Remember:

- Keep the wraps neat and crossing.
- The clove hitch holds well on a round object, like a stick or pole.
- Practice by feel to build confidence and skill.



YOUNG MARINES
SURVIVAL SKILLS
★ Knots and Rope Skills ★
Lesson 22: The Square Knot

Key Point:
The square knot is used to join two ends of rope together.



Easy to Remember:
"Right over left, then left over right."

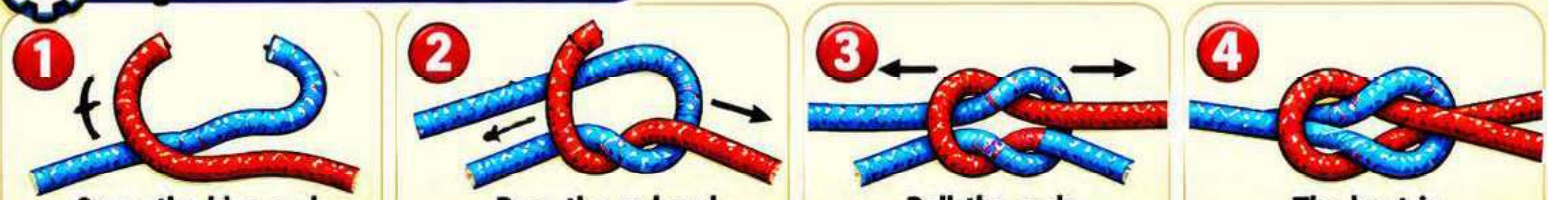
About the Square Knot:
- Joins two ends of rope.
- Lies flat when tied correctly.
- Useful for light-duty tasks such as tying bundles or securing rolled sleeping bags.



Safety Tip:
Always have an adult check your knot while you are learning.



Square Knot Instructions:



1. Cross the blue and red ends.
2. Pass the red end through the blue loop.
3. Pull the ends to tighten.
4. The knot is complete.

Try It:
- Tie a square knot.
- After tying it, gently pull on both ends to see whether it stays together.
- Have an adult check your work and help you identify any mistakes.



Remember:
- Right over left, then left over right.
- Use it for light-duty jobs.
- The knot should lie flat and be neat.
- Practice and learn from mistakes to build your skill.

YOUNG MARINES

SURVIVAL SKILLS

Knots and Rope Skills

Activity 22: The Lightning Knot

Objective:

Automate the six basic knots until you can do them without thinking.



Materials:

- 1 Rope per person
- 1 Pole or Rod per team
- Stopwatch



The Six Basic Knots:



Thumb Knot



Figure Eight Knot



Double Figure Eight Knot



Square Knot



Clove Hitch



Half Hitch

Instructions:

1. Distribute a rope to each participant and review the six basic knots.
2. Teams line up in front of the pole.
3. You shout the name of a knot and the first in each row runs to execute it.
4. You check the knot: if it is correct, add a point, if it is not, return to the row.
5. Continue to change knots until they have all passed three times.
6. The team with the most correct knots wins, not the fastest.



Variants:

- Blindfolded for those who have already mastered the technique.
- With one hand, simulating an injury.
- Chain knot: each one must make a different one from the previous one.



Remember:

- Focus on accuracy, not speed.
- Tie each knot neatly and correctly.
- Practice builds muscle memory.
- Work together and learn from mistakes.



YOUNG MARINES

SURVIVAL SKILLS

Fire Safety and Fire Basics

Lesson 23: Fire Is a Tool, Not a Toy

Lesson Focus:

Fire is a powerful tool that can help us outdoors, but it must always be treated with respect and used safely and responsibily.



Key Points:

- Fire can help us stay warm, cook food, and be useful outdoors.
- Fire can spread quickly, even from small flames.
- Wind, dry leaves, and nearby materials can make fire move faster than expected.



Remember:



- Children should never build or light a fire without direct adult supervision.
- Understanding fire as a tool helps you use it responsibly.

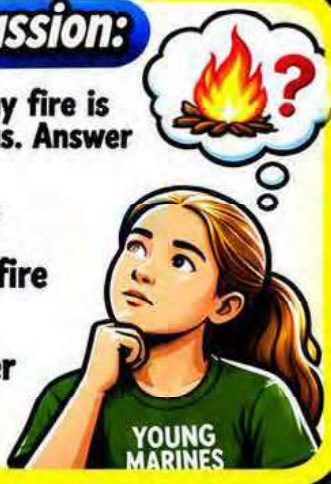
Fire Is Useful For:



Fire Safety Discussion:

With someone else, talk about why fire is useful and why it can be dangerous. Answer these questions:

1. What can fire help us do?
2. What could happen if the fire spreads?
3. Why should children never light fires alone?



Key Takeaway:

Fire is a tool, not a toy. Use it safely, with respect, and with adult supervision.



YOUNG MARINES

SURVIVAL SKILLS

Fire Safety and Fire Basics

Activity 23: Fire with a Single Match

Objective:

Lighting a fire with the right preparation, not brute force or accelerants.



Materials:

- One Match per team
- Natural Tender
- Twigs of 3 thicknesses
- Bucket of Water
- Shovel



Instructions:

1. Prepare the area: circle of stones, cleared land, and bucket of water ready.
2. Each team collects fine tinder, fine sticks, medium sticks, and coarse firewood.
3. Sort the material into four piles before receiving the match.
4. Personally check that the tinder is dry and the fine pile is sufficient.
5. Assemble the pyramid structure and receive a single match.
6. Fire is considered achieved when it ignites a branch the thickness of a thumb.



Material Sorting (Example):



Tinder (very fine, dry)	Fine Sticks (pencil size)	Medium Sticks (finger size)	Coarse Firewood (thumb size and larger)

Pyramid Structure:



Variants:

- With wet tinder to learn how to look for dry material in the rain.
- Without matches, with flint or magnifying glass.
- Competition to boil water in the shortest time.



Remember:

- Build fires only in a safe, cleared area.
- Keep water and a shovel nearby.
- Use dry, properly sized materials.
- Let the fire burn until a thumb-size branch catches.



YOUNG MARINES

SURVIVAL SKILLS

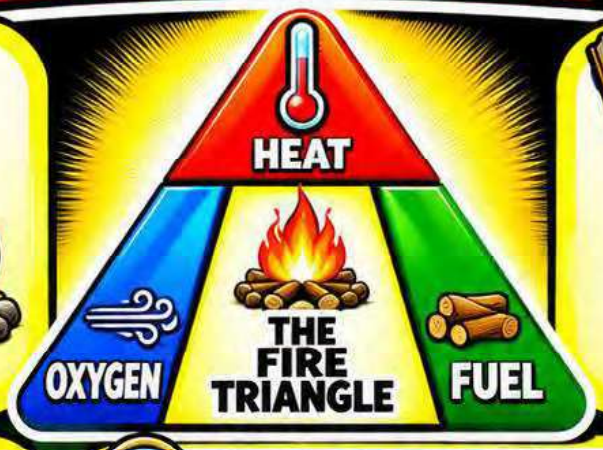
Fire Safety and Fire Basics

Lesson 24: The Fire Triangle

Lesson Focus:

Fire needs three things to burn: heat, fuel, and oxygen.
This is called the fire triangle.





Key Points:

- Heat starts the fire.
- Fuel is what burns, such as wood.
- Oxygen comes from the air.

The Big Idea:

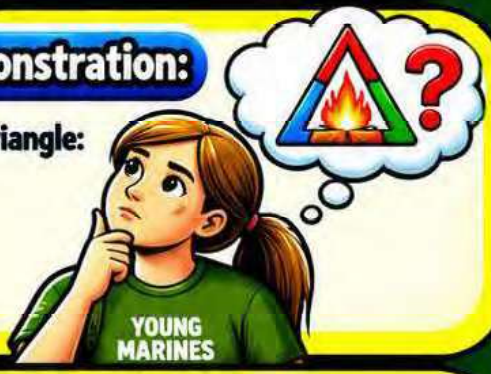
If you remove one of these three things, the fire will go out.



The Fire Triangle Demonstration:

Review the three parts of the fire triangle:

- Heat
- Fuel
- Oxygen



How to Stop a Fire:

Remove one part of the triangle:



Remove Heat

Cool it down (with water).



Remove Oxygen

Smother it (with dirt, sand, or a lid).



Remove Fuel

Take away what can burn (such as wood or dry leaves).

Discussion:

Ask an adult to explain how removing one part of the triangle would stop a fire. You do not need to light a fire for this discussion.

YOUNG MARINES

SURVIVAL SKILLS

Fire Safety and Fire Basics

Activity 24: The Three Types of Fire

Objective:

Choose the right fire structure according to what needs to be done with it.



Materials:

- Firewood of different thicknesses
- Matches
- Pots
- Water Buckets
- Rackets



The Three Types of Fire:

Cone Fire



- Easy to build.
- Quick to light.
- Good for short-term heat and light.

Log Cabin Fire



- Burns hotter and longer.
- Good for cooking.
- Sturdy and steady flame.

Pyramid Fire



- A balance of quick and long burning.
- Good for cooking and boiling water.

Instructions:

1. Explain the three types: Cone, Log Cabin, and Pyramid fire.
2. Each team builds a different one in its own circle of fire.
3. They explain to the rest what theirs is for before turning it on.
4. Light all four at the same time and observe the differences between flame and ember.
5. Put a pot with the same amount of water on top of each one.
6. Compare boiling times and coal duration.



Variants:

- Only with cooking fires for a real meal.
- Scale model with sticks, not lit, for indoor spaces.



Remember:

- Build fires safely in a cleared area.
- Keep water nearby.
- Follow adult supervision and unit safety rules.

★ YOUNG MARINES ★

SURVIVAL SKILLS

Fire Safety and Fire Basics

Lesson 25: Gathering Safe Fire Materials

Lesson Focus:

Gathering the right materials helps a fire burn properly.



Key Points:

- Firewood is grouped into three types: tinder, kindling, and larger wood.
- Only collect dead and downed wood unless local rules say otherwise.
- Never break branches from live trees.
- Often firewood bundles can be purchased.



The Three Types of Firewood:

Tinder



- Small, dry, and lights easily.
- Examples: dry grass, leaves, bark, or plant fibers.

Kindling



- Medium-size pieces that help the fire grow.
- Examples: small twigs (pencil size).

Larger Wood



- Bigger pieces that keep the fire burning.
- Examples: branches and logs (wrist size and larger).

Fire Material Sorting:



1. Collect small sticks and natural materials from the ground.
2. Sort them into groups:
   - Small, easy-to-light pieces
   - Medium pieces
   - Larger pieces
3. Talk about how each group would help a fire grow.



Remember:

- Collect only dead and downed materials.
- Follow local rules and regulations.
- Do not break branches from live trees.



YOUNG MARINES

SURVIVAL SKILLS

Fire Safety and Fire Basics

Activity 25: The Tinder & Kindling Scavenger Hunt

Objective:

The Tinder & Kindling Scavenger Hunt



Materials:

- A Paper Bag per Team



Instructions:

1. Divide youth into small teams and give each team a paper bag.
2. Assign a point system based on size and dryness (see scoring at right).
3. The team with the best-sorted, driest pile wins.



Scoring System (Based on Size and Dryness):

5 Points



A handful of dry pine needles (Tinder)

3 Points



A bundle of pencil-thick sticks (Kindling)

0 Points



Anything damp or snapped off a living plant

Goal: The team with the best-sorted, driest pile wins!

YOUNG MARINES

SURVIVAL SKILLS

Fire Safety and Fire Basics

Lesson 26: Alternatives to Campfires

Lesson Focus:

You can stay warm and cook food without building a fire.



Key Points:

- Layered clothing, wind protection, and proper shelter can keep you warm.
- Camp stoves and other cooking tools may be safer options when fire risk is high, but they require adult supervision.
- Fire is helpful, but it is not the only way to stay comfortable outdoors.



Warmth Without Fire:

Clothing Layers



- **Base Layer** (wicks moisture, keeps you dry)
- **Middle Layer** (traps heat, adds warmth)
- **Outer Layer** (blocks wind and rain)

Wind Protection



- Use a windbreaker or rain jacket.
- Face away from the wind.
- Find natural wind breaks (trees, rocks, terrain).

Shelter Choices



- Tent
- Tarp shelter (lean-to)
- Natural shelter (trees, rocks)

Warmth Plan Activity:

Create a simple plan for staying warm without using fire.

Include:

- Clothing layers
- Wind protection
- Shelter choices



Remember:

- Choose fire alternatives when fire risk is high.
- Use cooking tools only with adult supervision.
- Be prepared — good planning keeps you safe and comfortable.



Bottom Line: Fire is helpful, but preparation is even more important.



YOUNG MARINES
SURVIVAL SKILLS
Fire Safety and Fire Basics
Activity 26: DIY Solar Oven

Objective:

Making and Using a Solar Oven with Recycled Materials.

Materials:

- A pizza box
- Aluminum foil
- Plastic wrap
- Black construction paper

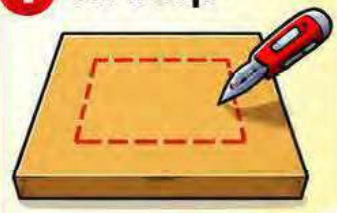




Instructions:

1. Cut a flap in the lid of the pizza box, leaving at least an inch around the edges.
2. Line the inside of the box and the underside of the flap with aluminum foil, which will reflect the sunlight into the box. Place black construction paper inside the box—it absorbs heat, which is crucial for cooking.
3. Seal the opening you cut with plastic wrap; this will create an insulation effect, trapping the sun's heat inside the box.
4. Prop the flap open with a stick or a straw to catch as much sunlight as possible, and your homemade solar oven is ready!

1 Cut a flap.



2 Line with foil and add black paper.



3 Seal with plastic wrap.



4 Prop open the flap.

Cooking with the Sun:



- A fun experiment that requires patience and practice.
- Great for heating snacks or simple meals.
- Place food on a small plate or wrap it in foil.
- Best foods to start with: mini pizzas, cookies, or hot dogs.
- Cooking is slower than conventional methods.

S'mores Recipe!

1. Gather: graham crackers, chocolate, and marshmallows.
2. Break graham crackers into squares and place half on a plate.
3. Top each with a piece of chocolate and a marshmallow.
4. Put the plate in your solar oven, close the lid, and let the sun melt the marshmallows and chocolate.
5. Carefully remove (it might be hot), add the remaining graham crackers on top, and press down gently. Enjoy your sun-cooked treat!



Safety Reminders:

- Never use your solar oven to cook raw meat or anything that requires a high temperature to be safe to eat.
- Stick to simple, fun recipes and always have an adult check the food's temperature to ensure it's warm enough to eat safely.

★ YOUNG MARINES ★

SURVIVAL SKILLS

Water and Hydration Skills

Lesson 27: Signs of Dehydration

Lesson Focus:

Dehydration happens when your body loses more water than it takes in.



Early Signs of Dehydration:





If It Gets Worse:

If dehydration gets worse, you may feel:

- Dizzy
- Weak
- Confused ??



What to Do:

- Drink water before you feel very thirsty.
- If you feel unwell, tell an adult right away.



Dehydration Awareness Practice:

During a safe activity, pause and ask yourself:

- Am I thirsty?
- Does my mouth feel dry?
- Do I feel tired or unfocused?



Remember: Drink water before you feel very thirsty. Practicing early awareness helps prevent bigger problems.



★ YOUNG MARINES ★

SURVIVAL SKILLS

Water and Hydration Skills

Activity 27: Water Source Relay

Objective:

Move water as a team using simple tools and teamwork.



Materials:

- Buckets or large containers (one full, one empty per team)
- Carrying tools: cups, large sponges, or serving spoons (one per team)
- Markers or cones (to map lanes)
- Open outdoor space (lawn, playground, or camp field)



Instructions:

1. Set up a start line and finish line for each team.
2. Place one full bucket at the start and one empty bucket at the finish.
3. Teams move water using cups, sponges, or spoons.
4. The team that moves the most water in the time limit wins!



Variants:

The Line Pass (Over-the-Head)



Players stand in a single-file line holding cups or small buckets. They scoop water and pass it backward over their heads from person to person, dumping the final amount into a bucket at the rear.

The Leaky Bottle Challenge



Teams are given plastic bottles with small holes poked in them. Players must run with a bottle, or group together to cover the holes with their fingers to save as much water as possible before reaching the end.

Firefighter Brigade



A classic camp variation where players line up and rapidly pass full cups down a chain from a hose/refill station directly into a target bucket.

Remember:

✓ Work as a team. ✓ Use one tool per team. ✓ Be safe and keep the area clear.



★★ YOUNG MARINES ★★

SURVIVAL SKILLS

Water and Hydration Skills

Lesson 28: Choosing Safer Water Sources

Key Points:

- Not all water is safe to drink.
- Fast-moving water (streams) is usually safer than still water (ponds).
- Clear-looking water is not always clean.
- Avoid water that smells bad, looks cloudy, or is near animals or waste.



Remember:

- Never drink from natural water sources without adult guidance and proper treatment.



Why Natural Water Must Be Treated:

Natural water can contain bacteria, parasites, and other harmful organisms that are too small to see. Even clear, cold water from a mountain stream may not be safe without treatment.



Treatment Methods:

Boiling, filtering, or using purification tablets can help make water safer.



Boil
(kills germs)



Filter
(removes dirt and some germs)



Purification Tablets
(kill harmful organisms)

Water Source Comparison:

Look at these water sources and decide which is likely safest, and why.



Fast-Moving Stream
(Usually Safer)



Still Pond
(More Risk)



Muddy Puddle
(Unsafe)

Clean vs. Clear:



Looks Clear
(May Still Have Germs)



Looks Dirty
(Likely Unsafe)

- Clear water is not always clean.
- Germs can be invisible.
- Water must still be treated even when it looks safe.

Bottom Line:

Choose the safest water source, treat it properly, and always have adult supervision.



★ YOUNG MARINES ★
SURVIVAL SKILLS
Water and Hydration Skills
Activity 28: Build an Aquifer in a Cup

Objective:

Build a simple model of an aquifer to see how groundwater is stored, moves, and can be affected by pollution.



Materials:

- Clear plastic cup (about 2¾" deep x 3¼" wide)
- White play sand (about ¼" deep)
- Aquarium gravel or small pebbles (about ½ cup, rinsed clean)
- Modeling clay or floral clay (enough for a 2" pancake)
- Water (in a small pitcher or cup)
- Red food coloring (optional)
- A straw (to act as a well)



Instructions:

1 Add the Aquifer Base.



Pour about ¼ inch of white play sand into the cup. The sand represents the porous rock and sediment that hold groundwater.

2 Add the Rocks and Gravel.



Place the aquarium gravel or small pebbles on top of the sand, sloping them slightly to create a small hill and a lower valley.

3 Insert a Confining Layer.



Flatten a piece of modeling clay into a 2-inch pancake and press it over a portion of the gravel/sand layer. This acts as an impermeable confining layer.

4 Add Water to Store Groundwater.



Slowly pour in clean water until it fills the spaces between the sand and gravel grains. Watch how the water settles below the surface. The top line is your water table.

5 Build a Well.



Push a straw straight down into the gravel and sand layer (avoiding the surface water pool). Watch as water fills up inside the straw—this represents a real groundwater well.

6 Simulate Rain (Recharge).



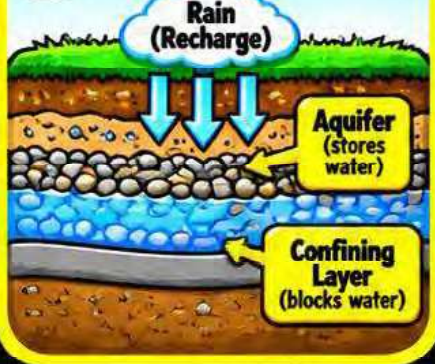
Add a little more water from the top to mimic a rainstorm. Watch the water table rise as the groundwater supply recharges.

7 Test Pollution (Optional).



Put a drop of red food coloring on the gravel hill to represent a surface contaminant. Pour a little water over it and watch how the color seeps down through the sand and rocks into the drinking water supply.

The Big Picture:



Remember:

- Groundwater is stored in spaces between sand and rocks (an aquifer).
- A confining layer can block water from moving.
- Pollution on the surface can seep down and contaminate groundwater.

YOUNG MARINES

SURVIVAL SKILLS

Water and Hydration Skills

Lesson 29: Boiling Water for Safety

Lesson Focus:

Boiling water is one of the simplest ways to make it safer to drink.

Key Information:

- When water reaches a rolling boil, heat kills many harmful organisms.
- After boiling, the water must cool before drinking.
- Boiling requires fire or a stove.
- Knowing how boiling works helps you practice safe water habits.



Boiling Steps Review:

Say the steps out loud:

1. Bring water to a rolling boil.
2. Keep it boiling long enough, at least one minute.
3. Let it cool safely.



Ways to Boil Water:



Safety Reminders:

- Use a stable pot or cup made for heating.
- Keep a safe distance from the fire or hot stove.
- Use a handle or gloves (or a cloth) to avoid burns.
- Let the water cool before drinking.



Remember:

Boil water for at least one minute, then let it cool before drinking. Reviewing the steps builds confidence.

★ YOUNG MARINES ★

SURVIVAL SKILLS

Water and Hydration Skills

Activity 29: The "Boil Alert" Relay Race

Objective:

Reinforces the mandatory CDC rule of boiling clear water for at least 1 full minute to kill pathogens.



The Setup:

- Set up two buckets for each team:
  - One "dirty" water bucket (dyed with a safe color or mixed with floating leaves)
  - One empty "clean" bucket
- Give each team a cup.
- Place a designated "Safe Stovetop" (a hula hoop) across the play area.



The Action:

1. Scoop water from the "dirty" bucket.
2. Run to the "Safe Stovetop" (hula hoop).
3. Sit down in the hula hoop, count aloud to 60 (to simulate the 1-minute rolling boil), then pour the water into the clean bucket.



Why It Matters:



- Boiling for at least 1 full minute kills many harmful organisms (pathogens).
- It helps make water safer to drink.

Success Tips:

- Count clearly and altogether as a team.
- Keep the water steady to avoid spills.
- Work together and keep moving!



Remember: Boil clear water for at least 1 full minute, then let it cool before drinking.

SURVIVAL SKILLS

Water and Hydration Skills

Lesson 30: Using Water Filters and Purifiers



Objective:

Learn how water filters and purifiers make water safer to drink and why they must be used correctly.



Key Information:

- Water filters remove many harmful particles from water.
- Different filters work in different ways.
- Some remove bacteria and parasites.
- Filters must be used correctly to work properly.

Filter Familiarity:

If available, look at a real water filter. If not, view a picture. There are many types of filters.

Talk about:

- What the filter removes.
- Why it must be used correctly.



Common Types of Filters:

Pump Filter



- Pushes water through a filter.
- Removes sediment, bacteria, and parasites.

Gravity Filter



- Uses gravity to pull water through a filter.
- Can filter large amounts of water.

Straw Filter



- A small, portable filter you drink through.
- Removes many harmful germs and particles.

Bottle Filter



- A built-in filter (sometimes in a water bottle).
- Helps remove particles and harmful organisms.

The Takeaway:

Understanding and using the right filter, the right way, helps remove harmful particles and can make water safer to drink.



Remember:

- Use the filter as instructed by the manufacturer.
- Dirty or damaged filters may not protect you.
- Choose a filter that works for your situation (consider the pump, weight, and ease of use).



SURVIVAL SKILLS

Water and Hydration Skills

Activity 30: The Home Water Filter



Objective:

Understand in layers how water is clarified and why this does not make it drinkable.



Materials:

- Cut plastic bottles
- Sand
- Gravel
- Charcoal
- Cotton
- Cloudy water



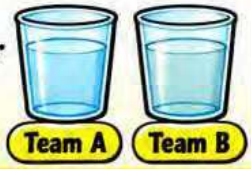
Instructions:

1. Cut a bottle in half and use the top inverted as a funnel.
2. Layer the materials: cotton (bottom), then charcoal, fine sand, coarse sand, and gravel.
3. Prepare cloudy water by mixing soil, leaves, and a little oil.
4. Pour the water slowly through the filter and observe what comes out.
5. Compare the result of all the equipment against the original sample.
6. Explain that the water is clarified but not drinkable, and why.



Variants:

- Compete to get the clearest water with the same layers.



- Add a boiling stage and explain the real difference.



- Use a solar distiller as an alternative method.



The Takeaway:

A simple filter can remove dirt and many particles, which makes water clearer (clarified), but it is still not safe to drink.



Remember:

- Filtering makes water clearer.
- It does not remove germs, bacteria, or viruses.
- Use additional treatment (like boiling, a purifier, or treatment tablets) to make water safe to drink.



SURVIVAL SKILLS

Water and Hydration Skills

Lesson 31: Carrying Enough Water



Objective:

Learn to plan for and carry enough water, understand electrolytes, and make smart hydration choices during outdoor activity.



Key Information:

- Bringing enough water is part of good planning.
- Hot weather, long walks, and physical activity increase how much water you need.
- Keep water easy to reach so you can drink regularly.
- Planning ahead helps prevent dehydration.

Electrolytes and Body Balance:



- When you sweat, you lose more than water. You also lose minerals called electrolytes.
- Electrolytes help your muscles and nerves work properly.
- In hot weather or during long activity, snacks or electrolyte drinks may help replace what your body loses.



Hydration Planning:

Plan a short outing. Answer:

- How long will you be gone?
- How hot might it be?
- How much water should you bring?



Electrolyte Awareness Talk:

Talk about what happens when you sweat. Discuss:

- Why snacks matter during long activity.
- Why water is still the main drink.
- When extra electrolytes might help.



The Takeaway:

Water is still the most important drink, but balanced nutrition supports hydration. If you feel weak or crampy, tell an adult.



Remember:

- You should be drinking one to two liters of water a day, which is between five to ten glasses of water.
- The older and more active you are, the more water you need.



SURVIVAL SKILLS

Water and Hydration Skills

Activity 31: The Water Jug Relay



Objective:

Physically experience how heavy a day's worth of water feels and learn why proper packing and durable straps matter.



The Setup:

- Divide youth into teams.
- Give each team an empty backpack.
- Set up a pool of water bottles or heavy jugs of water at a central station.



The Gameplay:

1. One by one, players load a designated amount of water into their backpack.
2. Race to a turnaround point.
3. Come back.
4. Pass the bag to the next player.



The Lesson:

This activity demonstrates how heavy a day's worth of water feels, teaching why proper packing and durable straps matter.



Key Takeaways:

- Water is heavy—plan and pack smart.
- Use a backpack that is strong and fits well.
- Distribute weight and secure the straps for comfort and safety.



Remember:

- Carry enough water for the activity and conditions.
- Use the right gear (a durable backpack and straps).
- Plan ahead so you can stay hydrated and keep going safely.



SURVIVAL SKILLS

Water and Hydration Skills

Lesson 32: Conserving Water Outdoors



Objective:

Learn why water may be limited outdoors, how to use it wisely, and how to make choices that help it last longer.



Key Information:

- Sometimes water is limited.
- When water supplies are low, you may need to use it carefully.
- Drinking is the first priority.
- Cleaning and other uses may need to wait.

Water Use Priority Plan:

Imagine you have a limited supply of water.
Decide the order you would use it for:

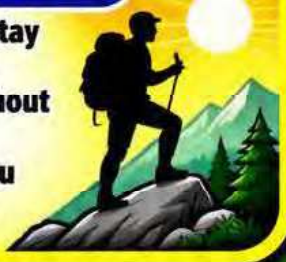
1. Drinking
2. Cooking
3. Cleaning



Explain why drinking should come first.

Why Drinking Comes First:

- Your body needs water to stay alive and work properly.
- You can survive longer without cooking or cleaning.
- Staying hydrated helps you make good decisions and stay safe.



Conserving Water Tips:

- Plan ahead and bring enough water.
- Use only what you need.
- Avoid wasting water (e.g., pour just the amount you need).
- Save water for the most important uses.



The Takeaway:

Planning how to use water wisely helps it last longer and protects you and whoever is with you.



Remember:

- Drinking is the top priority.
- Be careful and use only what you need.
- Good planning makes your water supply last longer.

SURVIVAL SKILLS

Water and Hydration Skills

Activity 32: Ecological Earthenware Washing



Objective:

Apply the three-bucket system and understand why dirty water doesn't go to the ground.



Materials:

- 3 Buckets
- Biodegradable Soap
- Sponges
- Strainer
- Shovel



Instructions:

1. Prepare three buckets: hot soapy water, rinse water, and water disinfection.
2. Before washing, everyone scrapes their food scraps into an organic container.
3. Wash in the first bucket, rinse in the second, and dip in the third.
4. Drain and air dry on a rack or net, never with rags.
5. Filter the dirty water with a strainer and collect the solid remains.
6. Pour the filtered water into an infiltration well more than thirty meters from the water.



The Three-Bucket System:



1. **WASH** — Remove food and dirt with biodegradable soap.
2. **RINSE** — Rinse off soap and remaining dirt.
3. **DISINFECT** — Dip in a sanitizing solution (e.g., diluted bleach or camp-safe sanitizer).

Variants:

- With sand and ash instead of soap, a traditional method without residues.
- Individual washing system with canteen for gears.
- With metering of the water used to reduce it in the next shift.



The Takeaway:

A simple, low-impact way to keep equipment clean, use water wisely, and protect the outdoors.



Remember:

- Use biodegradable soap when possible.
- Keep food scraps separate (use an organic container).
- Filter and dispose of gray water in an infiltration well more than 30 meters (about 100 feet) from water sources.



SURVIVAL SKILLS

Water and Hydration Skills

Lesson 33: Knowing When to Ask for Help



Objective:

Learn to recognize signs of water problems and practice speaking up and asking for help at the right time.

Key Information:

- Water problems can be serious if ignored.
- If you run out of water, feel dizzy, feel confused, or are unsure whether water is safe, tell an adult immediately.
- Asking for help is not a weakness. It is responsible decision-making.
- Staying aware and speaking up keeps everyone safer.

Speaking Up Practice:

Practice clearly saying:

- "I am feeling dizzy."
- "I think we need more water."
- "I am not sure if this water is safe."



Speaking clearly and early keeps everyone safer.

Know the Warning Signs:

Speak up if you notice:

- Dizziness or lightheadedness
- Confusion or trouble thinking clearly
- Extreme thirst
- Very dark urine or not urinating
- Not enough water for the group
- Uncertainty about whether water is safe



What to Do:



- Tell a leader, instructor, or trusted adult right away.
- Explain what you are feeling or what the concern is.
- Follow their guidance (e.g., rest, hydrate, get safe water, or adjust the plan).

The Takeaway:

Know the signs, speak up early, and ask for help when needed. It is a smart and responsible way to stay healthy, hydrated, and safe outdoors.



Remember:

- Listen to your body.
- Do not ignore signs of a water problem.
- It's okay to ask for help.
- Stay aware of your water supply and safety.



SURVIVAL SKILLS

Water and Hydration Skills

Activity 33: The Tower of Densities



Objective:

Visualize the concept of density by stacking liquids that do not mix.



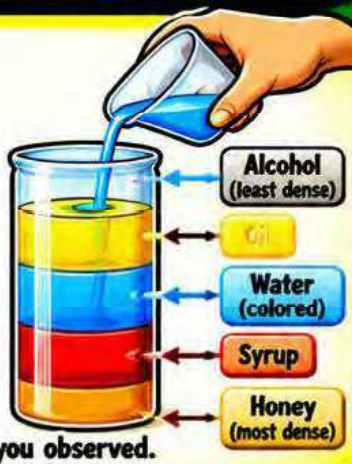
Materials:

- Tall test tubes or jars
- Honey
- Syrup
- Water with coloring
- Oil
- Alcohol
- Syringe
- Small objects



Instructions:

1. Present the five liquids and ask them to predict the order of density.
2. Write down each team's predictions before pouring anything.
3. Pour the liquids slowly down the wall of the jar, from the densest to the least dense.
4. Compare the actual result with the predictions you wrote down.
5. Drop small objects and observe which layer each one stops on.
6. Explain the relationship between mass, volume and density with what you observed.



The Science: Density, Mass and Volume

- Density is how much mass is in a given volume.
- Liquids with greater density sink below liquids with lower density.
- Mass is the amount of matter.
- Volume is the amount of space something takes up.

$$\text{Density} = \frac{\text{Mass}}{\text{Volume}}$$



Variants:

- With real density measurement weighing equal volumes.
- Applied to explain why a boat floats.
- With only three layers for younger groups.



The Takeaway:

Different liquids have different densities, which is why they can form layers without mixing. Density also explains why some objects float and others sink.



Remember:

- [x] Pour liquids slowly and carefully.
- [x] Be observant and record your results.
- [x] Use what you learned to explain real-world examples, such as why a boat floats.

