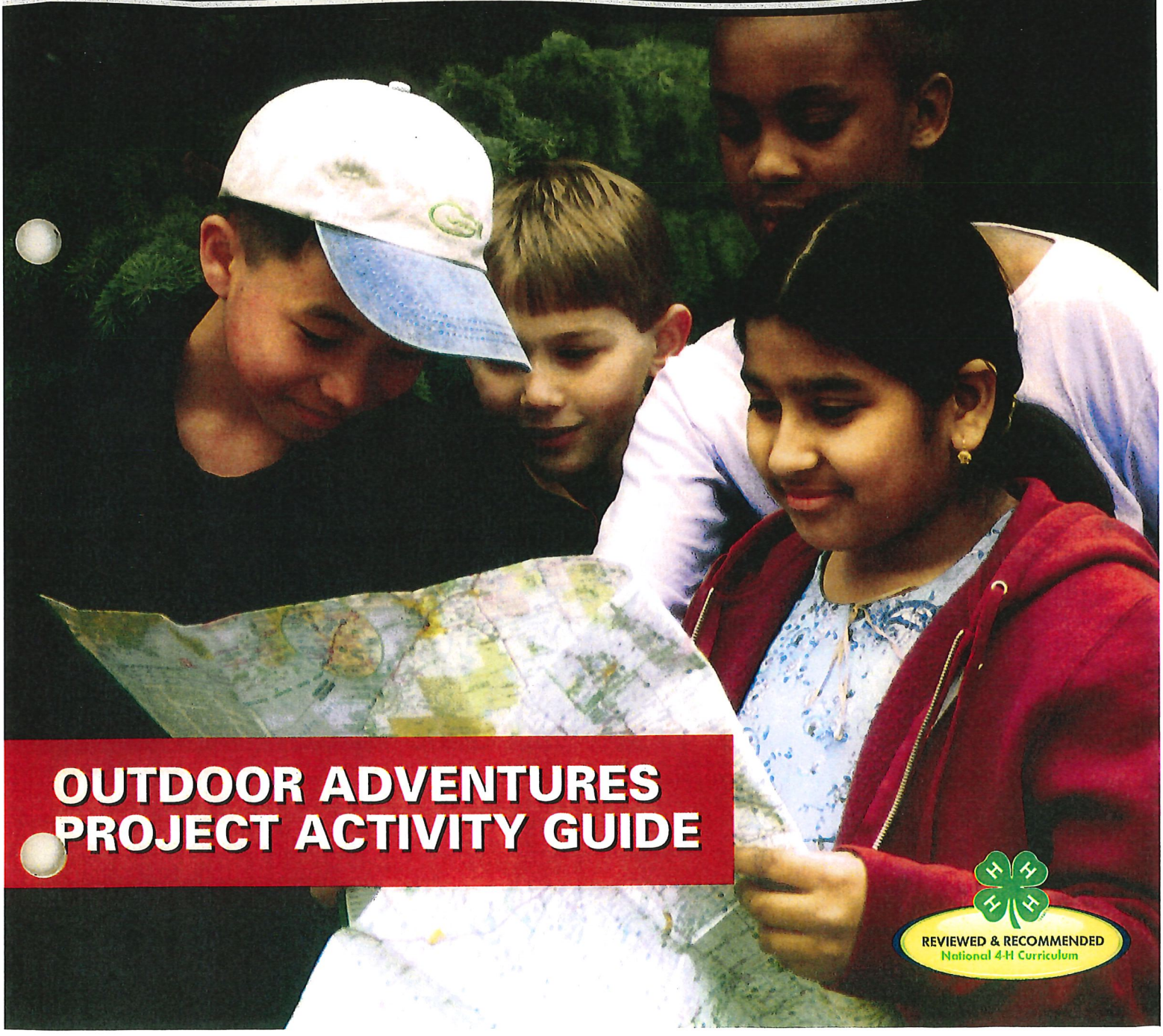
National 4-H Curriculum
BU-08043

Name _____

County _____

Hiking Trails

LEVEL 1



OUTDOOR ADVENTURES PROJECT ACTIVITY GUIDE

REVIEWED & RECOMMENDED
National 4-H Curriculum

Planning the Journey

My Project Goals

What I want to learn about day hiking:

_____

_____

_____

_____

_____

_____

_____

My Hiking Goals:

_____

_____

_____

_____

_____

_____

What Do You Know?—Before and After

Here is a great way to see if you learn something new and develop important skills in this project. Before you start doing the activities in this guide indicate what you know **NOW**. Then when you complete the Backpacking Expeditions Advancement Program indicate what you know **AFTER**. You may be surprised what you learned. Share the results with your helper.

Begin each skill with the words – **I know how to_____**.
Then circle **1** (to a great extent); **2** – (somewhat); or **3** – (not at all)

Hiking Trails	Before	After
Plan a day hike.	1 2 3	1 2 3
Select items for a day hike.	1 2 3	1 2 3
Organize and pack a backpack for a day hike.	1 2 3	1 2 3
Select appropriate outdoor clothing.	1 2 3	1 2 3
Plan the food you will take on a day hike.	1 2 3	1 2 3
Prepare a first aid kit.	1 2 3	1 2 3
Demonstrate blister prevention and care.	1 2 3	1 2 3
Identify examples of Leave No Trace principles.	1 2 3	1 2 3
Demonstrate the use of a compass.	1 2 3	1 2 3
Practice safety procedures for potentially dangerous. weather conditions.	1 2 3	1 2 3
Identify outdoor safe shelters.	1 2 3	1 2 3
Observe plants and animals.	1 2 3	1 2 3

My Day Hike Log

Date	Location	Hiking Goals	Challenges

Hiking Trails

Achievement Program

Guidelines

1. Complete at least six activities each year. It is recommended that you complete two activities in Chapter 1 before heading out on your first short (1–2 hours) day hike; two activities in Chapter 2 before doing a half day hike; and two activities including the Leave No Trace activity in Chapters 3 and 4 before hitting the trail for a full day hike.
2. Complete at least 20 of the Hiking Trails and Reach the Peak activities within three years to complete this achievement program and receive a completion certificate.
3. Ask your project helper to initial the activities as you complete and discuss them.

Activities	Date Completed	Helper's Initial
Chapter 1: Planning Your Trek		
So, You Want to Take a Hike?		
Hiking Essentials		
Get Packing!		
Outdoor Duds: Don't Lose Your Cool		
Layer Upon Layer		
These Boots Are Made for Walkin'		
Chapter 2: Healthy Hiking		
Food Matters		
What's in a First Aid Kit?		
Hot Topics		
Chapter 3: Out in the Wide World		
Leave No Trace		
Happy Hikers		
In the Right Direction		
A Bad Spell of Weather		
Chapter 4: Your Niche on the Trail		
Protective Places		
Whose Footprints Are These?		

Discovering treasures on a hike can be fun!

Select any of the Reach the Peak activities. Record the page number of each activity you complete and discuss with your helper.

Page	#	Date completed	Helper's initials

Write your own activity.

Date_____ Helper's Initials_____

Write your own activity.

Date_____ Helper's Initials_____

Write your own activity.

Date_____ Helper's Initials_____

Chapter 1

So You Want to Take A Hike!?!

Planning Your Trek

Outdoor Skill:
Planning a day hike

Life Skill:
Planning and organizing

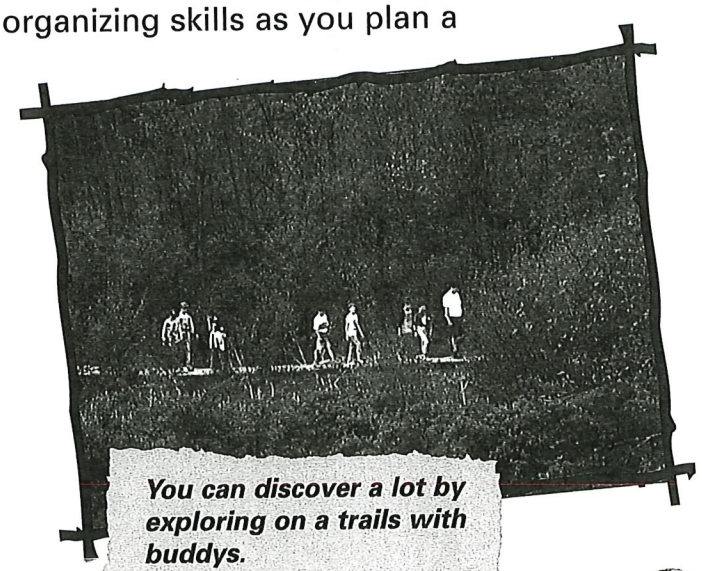
Educational Standard:
NPH.K–12.3 Physical Activity

Success Indicator:
Plans and organizes a day hike.

So, you want to take a hike? Hiking on the trail will give you the chance to have some exciting outdoor experiences and learn about the natural world. You might even discover something new about yourself! In this activity you'll practice your planning and organizing skills as you plan a hike.

Get in Gear

Here is your chance to plan your own day hike. First choose an area you have always wanted to explore. Then answer the questions included in the Day Hike Planning Checklist. The information in Outdoor Tips will help you complete the checklist.



You can discover a lot by exploring on a trails with buddys.

Day Hike Planning Checklist

When are you going? _____

_____

How are you getting there? _____

_____

Who is going? _____

_____

_____

_____

_____

Where will you go? _____

_____

_____

Why are you going? _____

_____

_____

_____

_____

What are you going to do along the way and/or when you get here? _____

_____

_____

_____

_____

_____

What costs are involved with this day hike?

_____

_____

Other plans _____

_____

_____

_____

_____

_____

Talk it Over

Share the Experience

- What did you include in your planning chart?
- What do you want to get out of your hike?
- What are some safety issues to consider?

Reflections

- How did answering the questions help you plan your trip?
- What did you learn about planning and organizing?

Now What?

- What are some other situations where these questions would be helpful in making decisions?

Glossary Words

Leave No Trace (LNT) ***• Pristine • Terrain***

Outdoor Tips Trip Planning Questions

When are you going? What date are you planning this day hike? What time will you leave and return? What season of the year are you planning your hike? You'll need to consider what to bring based on the local temperatures and weather conditions. If you are thinking about planning a hike in a busy state park or a National Park you may need to consider trail use and permits.

How will you get there? Will you drive to the trailhead with your family? With friends? Will you be able to walk right to the trailhead from the park campground where you might be staying?

Who is going? It is always a good idea to bring a friend and/or an adult on a hike. Not only will you have someone to share in the joys of walking and exploring together, but you also have a buddy in case of an emergency.

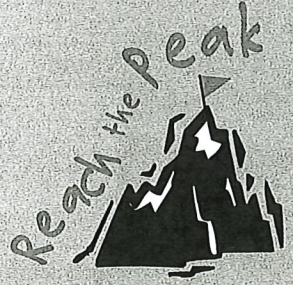
Where are you going? Make sure you have looked over the maps before you go! Have you looked over the road map to the trailhead if you are driving? Have you checked the mileage for your trip? What will the *terrain* be like?

Why are you going? Will you simply be exploring some new terrain on this hike? Are you going to a more remote stream or pond for a dip on a hot summer day? Are you taking on a challenging hike to reach a personal goal?

What will you do when you get there? Do you plan on eating lunch along the trail or at a scenic overlook? Will you take a camera or your sketch book to capture the beauty of the environment you are hiking in?

Are there any costs involved with this day hike? Will you need to buy or borrow any gear for your hike? Will you stop by the grocery store to pick up some trail snacks?

- **The average adult walks about 2½ miles an hour. Youth usually walk slower than adults.**



1. Research local places where you could take a day hike with your family or your group. Use local hiking guide books, maps or information from a ranger. Share what you find with your helper or your family.

2. Determine how far you and a friend can walk in one hour. Walk for an hour on a trail with mileage markers, a quarter-mile track or someplace else where the distance is known.

Acknowledgment: Activity written by Bob Peterson.

Hiking Essentials

Outdoor Skill:
Choosing items to take on a day hike

Life Skill:
Making decisions

Educational Standard:
NPH.K–12.7 Understanding Challenge

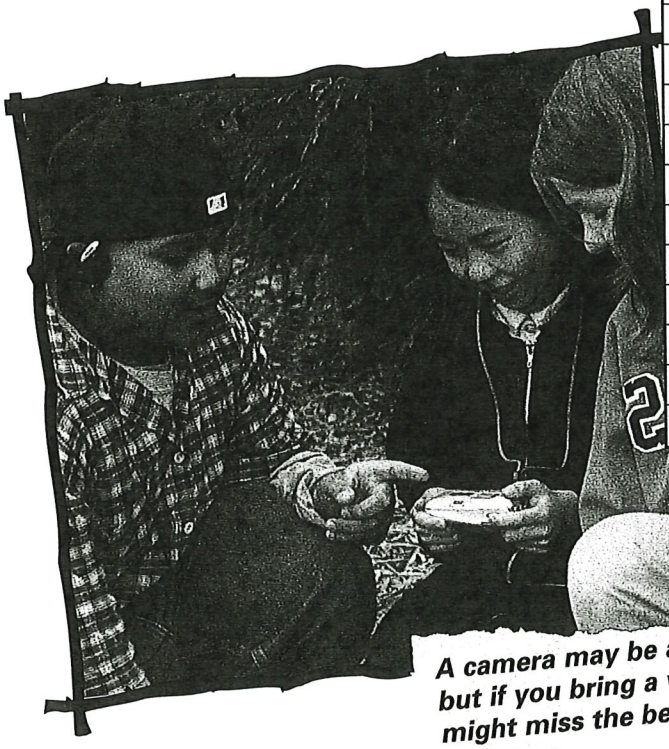
Success Indicator:
Selects items for a day hike.

You've found your backpack and checked the maps. As soon as you pack your back pack you'll be ready to go. What do you plan to pack to make sure you are as safe and comfortable as possible? Being a well prepared hiker is all about making good decisions about what to pack and anticipating your needs. In this activity you'll decide what items are essential, helpful or not needed for your hike.

Get in Gear

From this list of possible items to take with you on a hike, check those you believe are essential, those that might be helpful to have and the items that are not needed.

Item	Essential	Helpful to Have	Not Needed
Bandana			
Binoculars			
Camera			
Cell Phone			
Clothing, Extras			
Cooking Gear			
Duct Tape			
First Aid Kit			
Flashlight, Batteries			
Food			
Map, Compass			
Matches, Fire Starter			
Mirror			
Pocket Knife			
Rain Gear			
Rope			
Sun Protection			
Toilet Paper			
Towel			
Walkman			
Water			
Whistle			



A camera may be a good choice, but if you bring a walkman, you might miss the beautiful sounds of nature.

Talk it over

Share the Experience

- How did you decide what to pack?
- What would be the advantages/ disadvantages of each item?
- What additional items would you want to take?

Reflections

- How do you feel about the decisions you made in selecting the items?
- How could your decisions impact the success of your hike?

Now What?

- What are other situations where it is important to have the right items with you?
- How might your list change if you were going on a longer hike, or a different kind of hike?

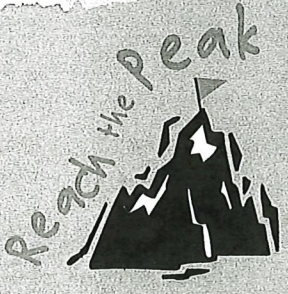
Hiking Essentials

Always pack:

- ☐ **Clothing** – extras in case you get wet or chilled.
- ☐ **First Aid Kit** – hopefully you won't need it, but accidents do happen and it's better to be prepared.
- ☐ **Flashlight and Batteries** – a day hike should mean "day", but what if you don't get back before nightfall?
- ☐ **Food** – hiking burns calories and you will need to refuel often.
- ☐ **Map/Compass** – knowing where you are and where you are going is important while you are hiking.
- ☐ **Matches/Fire Starter** – a day hiker may not plan to use them, but in an emergency situation or if you became lost, these can be helpful.
- ☐ **Pocket Knife** – handy and necessary for all sorts of tasks.
- ☐ **Rain Gear** – the weather can be unpredictable and protection from being cold and wet is often necessary.
- ☐ **Sun Protection** – a sunburn makes for an unhappy hiker. Your sun protection should include hat, sunscreen and sun glasses.
- ☐ **Water** – you need it to survive—no matter how clean a stream looks, it may not be safe to drink without treatment.

Helpful items

- Additional helpful items might include: binoculars, duct tape, mirror, rope, toilet paper and a whistle. A cell phone seems like a valuable items to have on a hike but reception may not be possible in remote locations.
- Look at the information describing the location for your hike. Depending on the site and what's available, you may not need to pack as many items.
- Check the weather conditions for the area where you plan to hike—that will give you a clue as to the type of climate to prepare for.
- Put your supplies in brightly colored stuff sacks or pouches to enable you to find them more quickly.



1. ***Gather up your gear for your day hike. Try to pack it all in your backpack...if it does not all fit, share the load with your hiking companions.***
2. ***Help your hiking partners pack their backpacks.***

Acknowledgment: Activity written by Jill Martz.

Get Packing

Outdoor Skill:
Packing a backpack

Life Skill:
Planning and organizing

Educational Standard:
NPH.K–12.7 Understanding Challenge

Success Indicator:
Organizes and packs a backpack for a planned day hike.

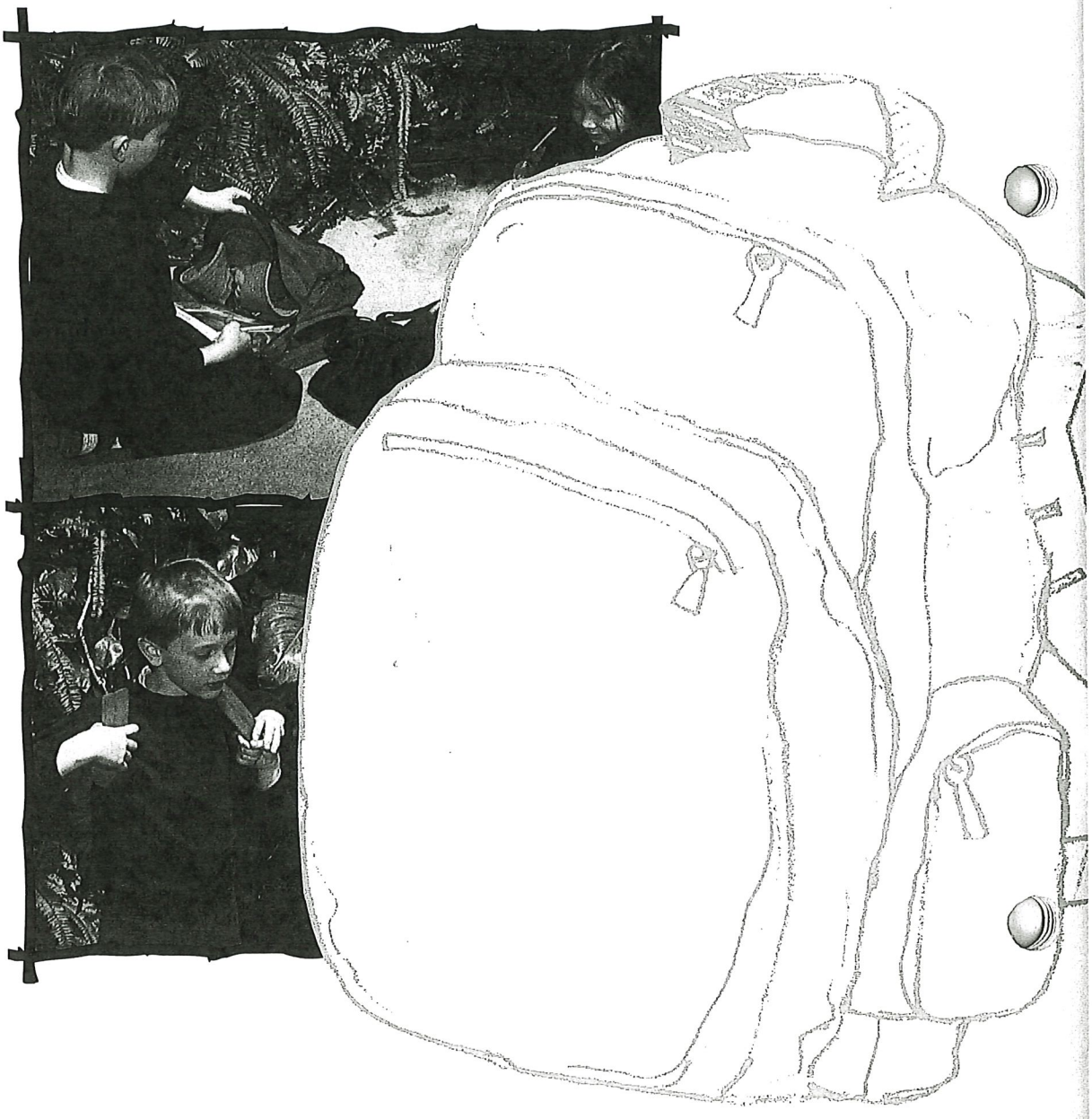
Good packing is essential for a positive hiking adventure. Now that you know what to put in your pack for a day hike, this activity will help you learn the parts of your pack and how to pack it so it adjusts to your body.

Get in Gear

Pack the items you selected in the previous activity into your backpack or bag. Draw on the outline of the backpack where you packed each of the essential and possibly helpful items. When you have everything you want to take on your day hike walk around your yard or neighborhood, go up and down stairs or a steep slope to see how comfortable your backpack is. Finally practice adjusting each part of your backpack so it best fits your body and your hiking needs.

Day hiking back pack.

Extended day hike back pack
(1–2 day overnight)



Talk it Over

Share the Experience

- What did you decide to pack your items in?
- How did you feel after carrying your bag or pack for five, fifteen or thirty minutes?

Reflections

- How could your choice of a backpack and packing method affect your hiking experience?

Now What?

- How is packing a backpack like making decisions about what resources (time, money, energy) to use in other situations?

Selecting and Packing a Backpack

Selecting a Backpack

- Consider using a school backpack for a simple day hike.
- A backpack used for day hiking should fit comfortably, have wide straps that do not cut into your shoulders and distributes the weight evenly to allow your hands to remain free.

Packing a Backpack

- Place heavy items close to your back and near the bottom of your pack.
- Pack items you'll need in a hurry near the top, especially rain gear.
- Pack clothing and other lighter weight items around heavier items.
- Use a waterproof pack cover in case of rain or pack your things in a garbage bag or re-sealable plastic bags.

- Improperly packing and carrying heavy backpacks in school can lead to back problems.

1. Name the parts of the backpack.

2. Practice adjusting your backpack with different weights in it.

Acknowledgment: Activity written by Jill Martz.

Outdoor Duds—Don't Lose Your Cool

(or Your Warmth)

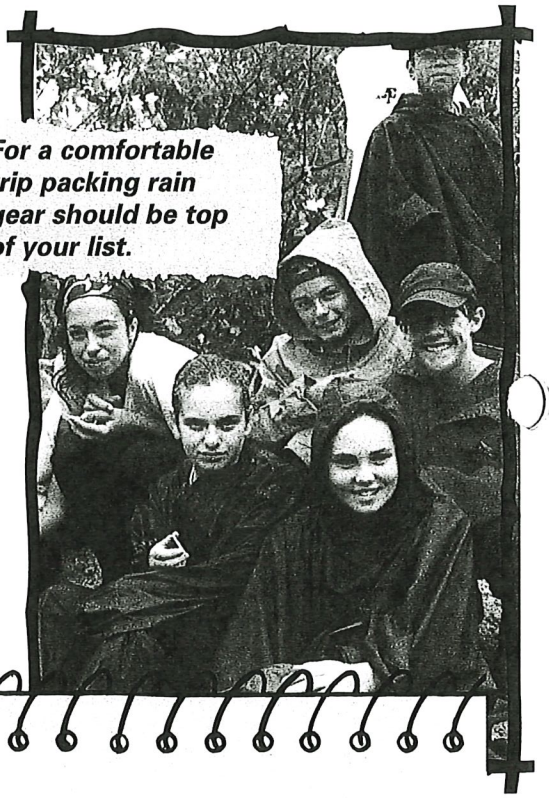
Outdoor Skill:
Understanding body heat principles and clothing types

Life Skill:
Making decisions

Educational Standard:
NS.K–4.1 Science as Inquiry

Success Indicator:
Selects appropriate outdoor clothing.

On a hike you can experience many different types of weather conditions. It might be sunny at the base of the mountain and cool or rainy at the top. Making good clothing decisions while hiking will help you have a fun, safe experience. In this activity you will learn about body heat, how clothing can trap or release body heat, the types of fabrics used in outdoor clothing and how to layer clothing.



For a comfortable trip packing rain gear should be top of your list.

Get in Gear

Find pieces of different types of fabrics. Notice how the fabrics are similar or different. Now fill a small bowl with water and dunk each piece of fabric in the water. Check to see which fabrics absorb or don't absorb water. Record your findings on the chart. Finally try on clothes with the fabrics you tested and indicate which were most comfortable and which were warmest or coolest.

Put each of the fabrics on. Which ones feel the most comfortable? Which ones feel the warmest? Which ones feel the coolest? Complete the chart below with what you discover.

Clothes In My Closet

Clothes	Fabric Type	Feel	Absorbs Water	Sheds Water	Most Comfortable	Warm (W) Cool(C)

Talk it Over

Share the Experience

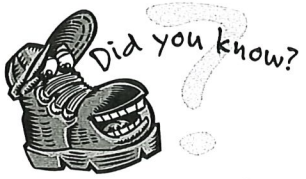
- What types of fabrics are you wearing today?
- What fabrics listed in this activity did you find in your own drawers and closets?

Reflections

- What did you learn about each of the fabrics you found?
- Why do you need to know how your body gains and loses heat when you spend time outdoors?

Now What?

- How will you prepare yourself for your next outdoor adventure?
- Describe other situations in which you have to think about safety before beginning an activity.



- **Between 50–80% of your body heat is lost through your head. (So, when your hands are cold, put on a hat.**

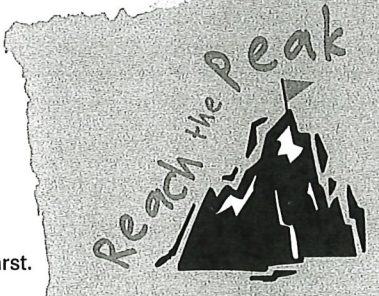
Body Heat Science

Outdoor clothing has two purposes. It protects you from wind, rain, snow and it insulates your body and keeps you warm. To understand how clothing keeps you warm, you first have to understand your body and how you lose body heat. You can lose body heat in four different ways—***conduction***, ***convection***, ***radiation*** and ***evaporation***.

- ***Conduction*** - Grab a piece of ice from your freezer. Notice the ice immediately warms up and starts to melt—and your hand gets cold! Your hand gets cold when you touch the ice because of the process called **conduction**. Heat always flows from a warmer object into a cooler object when they come in contact with each other. On a cold day, clothing helps insulate you from cold things that you might touch.
- ***Convection*** - Go outdoors on a breezy day. (Or you can do this inside with a fan). Notice how your skin gets cooler when moving air hits it. This is caused by **convection** —heat loss that occurs from air movement across a surface. Your body maintains a thin layer of warm air next to your skin, but wind or rain against your bare skin reduces that thin, warm layer of air. Windproof clothing stops convection from making you get cold.
- ***Radiation*** - All exposed skin radiates heat through **radiation**. Put on a hat and a scarf. You will most likely find yourself feeling warmer. That's because you radiate as much as 50–80% of your body heat through your head. Adequate clothing for your head and neck keeps radiant heat loss to a minimum.
- **Evaporation** - Breathe. That's right—breathe. You may not notice, but you lose heat through the vaporization of water in your mouth. This is a type of **evaporation**. Now run around a room or yard for 2–3 minutes. If you start to sweat, you are experiencing another type of evaporation. Breathing and sweating cause us to lose heat through evaporation of body moisture.

Sleeping Bag Warmth

Ever gotten cold sleeping inside a sleeping bag? Perhaps you were wearing too much, rather than too little. If you wear a lot of clothes inside your sleeping bag, you will prevent your body heat from warming the air inside of your sleeping bag. You may be a little cold at first but will feel warmer the rest of the night.



1. Take a trip to your local outfitter or retail store and find clothes that are made with each of the different fabrics identified in this activity.

Acknowledgment: Activity written by Barry Garst.

Layer Upon Layer

Outdoor Skill:
Discovering the "layering" principle

Life Skill:
Making decisions

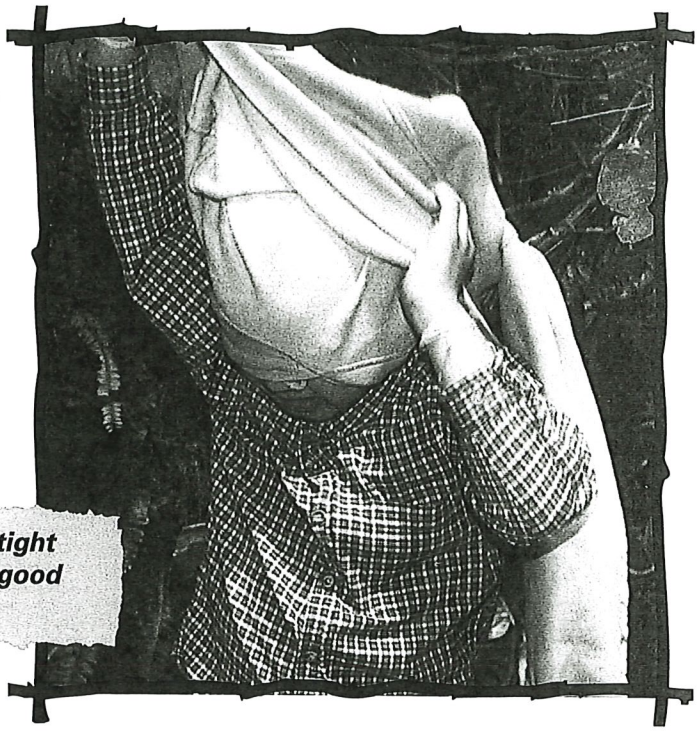
Educational Standard:
NS.K–4.6 Personal and Social Perspectives

Success Indicator:
Uses layering to regulate body temperature in the outdoors.

Ready for the layered look? Dressing appropriately for the outdoors involves choosing the right clothing, the right fabric for the weather conditions and layering. See what happens to your body temperature when you "layer".

Get in Gear

To begin to "layer" put on a t-shirt, then a sweater or fleece and finally some type of raingear or poncho. Record your body's response. Discuss with your helper how you feel after each layer is added.



Third layer - a little tight over the head - but good insulation!

The Layering Principle

Layers	Type of Clothing	Reaction of Body
Core		
Second (insulation)		
Third (insulation)		
outer (protection)		

Talk it Over

Share the Experience

- What did you feel as you added layers?
- How would you dress on a chilly winter day?

Reflections

- What would happen if you wore clothing made from each of the fabrics listed in this activity, such as wool, cotton, down, fleece and polypropylene, on a hot day? During a rain storm? Or a snow storm?
- What fabrics are best suited to specific weather conditions?

Now What?

- How will you apply the "layering" principle to your next outdoor adventure?

Outdoor Tips: The Layering Principle

As physical activity increases, your body produces more heat. As physical activity decreases, you produce less heat. So, being comfortable outdoors depends on adding or taking off layers of clothing. Did you know that clothing doesn't warm your body directly, but provides insulation that traps a "pocket of air" next to your skin. Warmed by the heat your body produces as you move, this air provides you with a layer of warmth.

A rule of thumb called the "layering principle" suggests that dressing in several thin layers is the best way to make sure you stay comfortable outdoors during many kinds of weather conditions. The layers are made of different fabrics, rather than one large, thick layer. Layering allows a pocket of air to trap heat next to the skin and between each of the fabric layers. Each layer traps some of the heat produced by your body.

When you have too few layers, your body cannot produce enough body heat to stay warm. If you wear too much clothing, you will soon feel too hot. The trick is finding the proper balance between the number of layers you wear and the types of fabrics appropriate for the weather conditions and your activity level.

Depending on the weather, you may choose to have between 2–4 layers: Core Layer, Second Layer, Third Layer and Outer Layer.

Core Layer – absorbs perspiration and moves moisture away from the skin
Second Layer – insulation (loose fitting, covers neck and wrists, easily vented)
Third Layer – insulation (wool sweater, fleece jacket)
Outer Layer – protection from the weather (i.e., wind, rain, snow, etc.)

1. Visit a local outfitter or retail store and try on clothes made with different fabrics identified in this activity.

Acknowledgment: Activity written by Barry Garst.

These Boots are Made for Walkin'

Now that you know what to wear on your body to stay warm and dry while hiking, what about your feet? In this activity you'll learn about hiking footwear—boots and lightweight shoes as well as socks.

Outdoor Skill:
Choose hiking boots or shoes to wear on a day hike

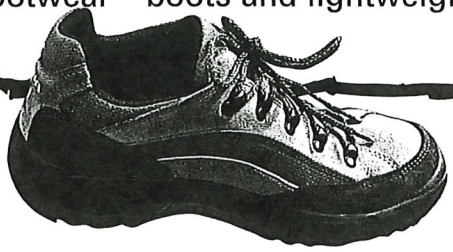
Life Skill:
Healthy life choices

Educational Standard:
NS.K–4.1 Science as Inquiry

Success Indicator:
Chooses appropriate foot wear for hiking.

Get in Gear

To learn more about the hiking footwear that will work best for you, start with getting your feet wet. Take your shoes off and stand in water in the bathtub or run the hose outside over the soles of your feet. Take a large sheet of paper (newspaper or newsprint) with you and stand on the paper so that you leave wet footprints on the paper. Your footprint tells a lot about how you walk and in turn what types of footwear you may want to consider for hiking. Circle the diagram that comes closest to your own feet. Then draw your foot shape in the frame.



Draw your foot shape in the frame.

Flat Foot
Tendency to over pronate; needs support to "create" an arch

Normal
Proper pronation

High Arches
Tendency to underpronate; needs supportive footwear to cushion and protect the arch

The right hiking shoes or boots are the most important piece of hiking equipment you can have.

Talk it Over

Share the Experience

- What did you like about making your footprints?

Reflections

- What does your footprint tell you about your feet and the type of shoe you need?

_____

_____

_____

_____

Now What?

- What would be your choice for a hiking shoe or boot?

_____

_____

_____

_____

_____

Glossary Words **Footprint**

Did you know?

During the day your feet grow. As you walk, especially with a heavy backpack on, your feet expand. Make sure you choose footwear that will be comfortable even with foot expansion.

Acknowledgment: Activity written by Josina Fluehr-Lobban and Jason Garnham.

The Backcountry Classroom, by Jack Drury and Bruce Bonney

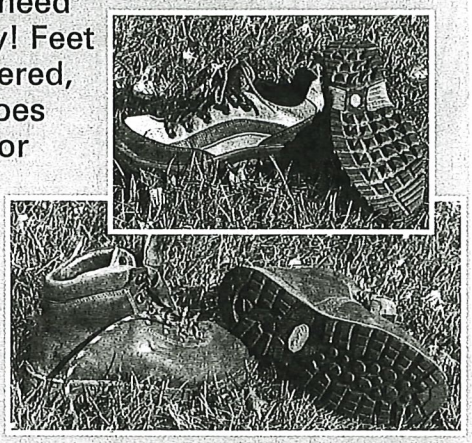
The Camper's Guide to Outdoor Pursuits, by Jack Drury and Eric Holmlund

Outdoor Tips

Hiking Boots/ Shoes and Socks

Fitting Boots

To fit your new pair of boots, put on the socks that you plan to hike in. With your boots unlaced you should be able to slide one finger in between your heel and the back of your boot. You should be able to wiggle your toes comfortably. Try to walk up and down stairs. Kick the boot toe against a solid object. Your toes should not come in contact with the toe box of the boot. Keep in mind that great-fitting, comfortable footwear is the most important piece of equipment you need to truly enjoy your hike—your feet need to be kept happy! Feet made sore, blistered, or tired from shoes that are too big or uncomfortable can ruin the fun.



Sock Systems for Comfy Feet

Finding a good sock system for hiking is important, especially for long hikes and later for backpacking trips. You already know about choosing clothing water resistant fabrics that wick moisture. The same principles apply when choosing your hiking socks. You want your sock system to keep your feet comfy and prevent blisters. Many hikers use two pairs of socks—one thin, lightweight "liner" pair that acts as a wicking layer, and another to provide cushioning. Many liner socks are made of polypropylene or silk. The cushioning pair of socks are often made of wool or a wool-blend.

Gaiters

Gaiters are not just large reptiles that live in the swamps of Florida and Georgia. Hiking gaiters look like large socks that fit over your boots and attach at either the ankle or just below the knee. Gaiters help keep debris out of your boots and keep your legs clean during muddy hikes.

Chapter 2

Food Matters!

Healthy Hiking

Outdoor Skill:
Planning and preparing food for a hike

Life Skill:
Planning and organizing

Educational Standard:
NS.K–4.6 Personal and Social Perspectives

Success Indicator:
Plans food for a day hike.

What have you eaten today? Have you been physically active? Food matters a great deal to all living things. Everyday you use food to fuel your body. Hiking requires lots of food energy to fuel you on the trail. What will you take on your next hike?

Get in Gear

See what you know about the food your body needs for hiking. Draw a line between the question in Column A and the answer in Column B. Explain your answers to your helper or parent.

Column A	Column B
1. What amount of water does a person need to drink daily?	A. Calcium and protein
2. Why is a healthy and well balanced diet important for hiking and backpacking?	B. Protein and iron
3. What beneficial nutrients come in fruits and vegetables?	C. A headache, becoming tired and cranky and being thirsty are all signs.
4. What main nutrients should your meals and snacks on the trail include?	D. 3 to 4 quarts per day
5. How many calories should you plan on eating while hiking?	E. Necessary vitamins and minerals
6. What is found in milk and cheese that makes it a healthy snack?	F. Approximately 3,000
7. What beneficial nutrients are found in nuts that make them healthy trail food?	G. Proteins, carbohydrates and fats (Sugars make up a subset of carbohydrates.)
8. How do you know when you are dehydrated?	H. Food is needed to provide energy throughout the day.

- If you are thirsty, you are already approximately 1 liter low on water. Make sure to keep sipping that H_2O!
- Dark yellow urine is a sign of dehydration.

Glossary Words

- ***Amino Acids***
- ***Carbohydrates***
- ***Dehydration***
- ***Minerals***
- ***Vitamins***

Talk it Over

Share the Experience

- What did you learn about your body's needs for a day hike?
- Why is it important to carry plenty of water when you hike?
- Why should you plan snacks and drinks before going hiking?

Reflections

- Why is it important to eat healthy meals and snacks?

Now What?

- Now that you know what your body needs while hiking, how would you apply this to your everyday food choices?

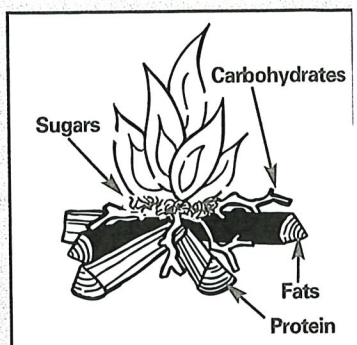
Taking a quick and energizing snack break.

Acknowledgment: Activity written by Elizabeth Sparks. *Allen and Mike's Really Cool Backpackin Book,* 2001.

Outdoor Tips

Eating Right

A healthy, well balanced diet is important on the trail as well as off the trail. Your body will be working hard as you hike and will need energy from good food sources. You can look at the way your body uses food as fuel like you would build a fire. First you begin by placing some tinder kindling in your fire ring, then you add some kindling tinder to the tinder kindling to help catch the fire and finally, once you have some good flames, you add some larger logs.



Campfire Model of Menu Planning

In the Campfire Model, the tinder represents quick burning simple carbohydrates in the form of sugars. The body processes and burns these simple carbohydrates most quickly. However, simple carbohydrates like chocolate, candy and powdered drinks only provide a quick burst of energy rather than being a source of the sustained energy the body requires. The kindling represents the more complex carbohydrates like whole grain bread that provides energy over a longer period of time. The larger pieces of wood are slower burning and therefore longer lasting and are represented by fats and protein. Protein foods tend to be processed by the body more slowly than carbohydrates but faster than fats. Protein is vital for muscle and tissue repair which is important for active people who hike and backpack.

1. Select the food that you will take on your next day hike.

2. Write down all the foods you eat in one day. Are your meals balanced? Or do you tend to eat more foods from a certain food group?

3. Record on a note pad examples of each of these food groups.

Examples of Foods

Protein	*Ex: beans*
Carbohydrates	*Ex: pasta*
Fats	*Ex: cheese*

What's in a First Aid Kit?

Outdoor Skill:
Preparing a basic first aid kit for hiking and camping

Life Skill:
Personal safety

Educational Standard:
NPH.K–4.3 Reducing Health Risks

Success Indicator:
Prepares a first aid kit.

Can you think of a time when you became sick or were injured while you were away from home? What happened? Was someone there to help you? Now imagine you are on the trail and you trip over a rock and injure your knee. How will you or someone you are with treat your injury? In this activity you'll prepare a first aid kit or medical kit.

Checking your first aid kit before heading to the trail can be one of the more important things you can do.

Get in Gear

Head to your bathroom or medicine cabinet. Gather up the supplies you think you might need in your First Aid Kit. Write down the supplies you already have at home in the chart below. Check the dates of the medications and the conditions of the supplies. Set aside the items that are current and in good condition for your First Aid Kit. Then look over the list of items in Outdoor Tips you should have in your First Aid Kit. Complete the chart with the items you will need to purchase.

First Aid Supplies I Have	First Aid Supplies I Need

Did you know?

- **In a wilderness medicine setting, trained wilderness first responders (WFR) can use sticks to stabilize possible sprains or broken bones.**

Share the Experience

- What did you find in your medicine cabinet?

Reflections

- How do you feel about handling a first aid situation on the trail?
- Why is this activity important?

Now What?

- What first aid skills would you like to learn?

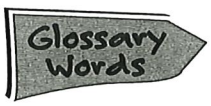
First Aid Kit

Contents

- ☐ Gloves (Latex or vinyl)
- ☐ CPR Mask
- ☐ Iodine, tincture of Benzoin or antibacterial ointment
- ☐ Gauze pads (4 x 4)
- ☐ Gauze rolls (2)
- ☐ SAM Splint (optional)
- ☐ ACE bandage
- ☐ Cravats
- ☐ Safety pins
- ☐ Band-aids
- ☐ Tweezers
- ☐ Moleskin
- ☐ Mole foam/second skin
- ☐ Scissors
- ☐ Athletic tape
- ☐ Aspirin/ ibuprofen
- ☐ Antacid
- ☐ Anti-diarrheal
- ☐ *Antihistamine*
- ☐ Risk management plan, health info for all hikers

First Aid Kit Tips

- Check to make sure the medications have not expired.
- Re-supply your med kit when you return, especially if you use lots of supplies during your trip.
- Bring supplies that match your level of care and experience.
- Consider getting some medical training—CPR and First Aid or even a wilderness certification such as Wilderness First Aid or Wilderness First Responder.
- Trail Tip: Before you hit the trail, gather up all these emergency medical supplies and place them in a brightly colored stuff sack or pouch so you will be able to find them easily if you need them.
- Always make sure you know who is carrying the First Aid Kit.



- ***Antihistamine***
- ***Expiration***
- ***CPR***
- ***First Aid***

1. Sign up for a CPR and First Aid class. Call your local American Red Cross or American Heart Association chapter.

Acknowledgment: Activity written by Josina Fluehr-Lobban and Mike Klumpp. *The Camper's Guide,* Drury and Holumlund *NOLS Wilderness Guide,* by Mark Harvey

Hot Topics: Hot Spots and Blister Care

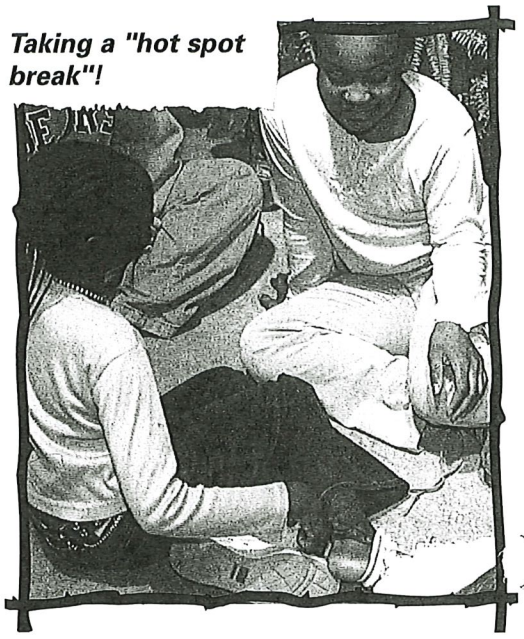
Outdoor Skill:
Caring for blisters

Life Skill:
Communicating with others

Educational Standard:
NPH.K–4.3 Reducing Health Risks

Success Indicator:
Demonstrates how to care for blisters and hot spots.

Rub your hands together for a full 30 seconds. What happens? Could you feel your hands getting warmer? During a hike, you may feel an uncomfortable heat generated from your foot rubbing inside your boot or sock. This is called a "Hot Spot". If you begin to feel this, STOP! This is the time for you to catch a hot spot before it develops into a blister. In this activity you'll practice using a "moleskin" to care for a blister and then demonstrate this technique to others.



Taking a "hot spot break"!

Get in Gear

Practice using the "moleskin" method of treating hot spots and blisters. Then plan and present a demonstration on this topic to your family or outdoor adventures group. Outline your demonstration in the space below. Check Outdoor Tips for prevention and care ideas.

Title: _____

Introduction: (Get their interest and tell them what you are going to tell them.)

_____

_____

Body: (Tell them.) _____

_____

_____

_____

_____

_____

Conclusion: (Tell them what you told them.) _____

_____

_____

_____

_____

Posters and Supplies Needed

Talk it Over

Share the Experience

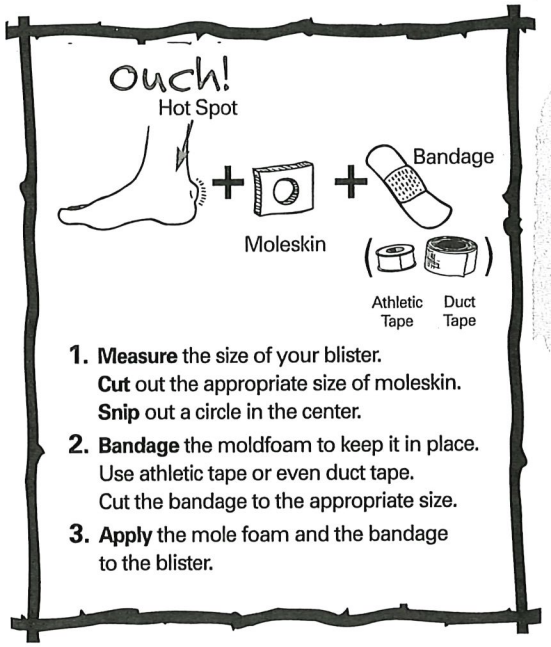
- What did you include in your presentation?
- Where did you obtain information about hot spots and blisters for your presentation?

Reflections

- Have you ever had a blister? If you have, how did you treat it?

Now What?

- How will your new knowledge of blister care and prevention be used next time you are on the trail?



Acknowledgment: Activity written by Josina Fluehr-Lobban.

Outdoor Tips: Hot Spots

Hot spots generally will be slightly tender to the touch and will often appear reddish-pink on lighter skinned people. Hot spots are easy to treat and seldom cause hikers any further problems. Blisters, on the other hand, can ruin your hike! A blister is a hot spot that has been left unattended and has developed into a raised, fluid-filled bump. Some blisters can be quite small, while others can become rather large—and very uncomfortable or even painful! Ouch!

Preventing Blisters

Make sure your boots are broken in well. If you bought new hiking boots or shoes, you'll want to wear them for a few weeks before you go on a longer hike. Even if you have boots or shoes that are fairly well broken in, but you have not worn them in a few months or a year, you should try to wear them for at least a week before you go on a hike. Use comfortable, quality socks for hiking. Many hikers wear two pairs of socks—a thin liner sock and a wool or wool-blend pair for cushioning. A polypropylene or silk liner will wick away moisture, and help-prevent blisters. Remember, while you are hiking, if you **do** feel a hot spot—stop!

Caring for Blisters

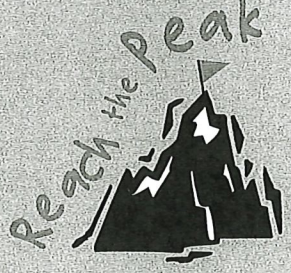
Take your boot or hiking shoe off and take a look at the spot that seems to be bothering you. Does it appear reddish?

Cut a small piece of "moleskin" to cover the hot spot. Moleskin is an adhesive bandage with a soft, smooth top. It works by creating a barrier between your foot and your sock or boot.

Did you know?
If your feet tend to get very sweaty while hiking, you can put talcum powder on your feet to help keep them dry.

Glossary Words

- ***Moleskin*** • ***Mole foam***
- ***Bandage*** • ***Dressing*** • ***Blister***



1. When you are out on your next hike, share your new knowledge of blister prevention with your hiking partners. Happy hiking!

Chapter 3

Out in the Wide World

Leave No Trace

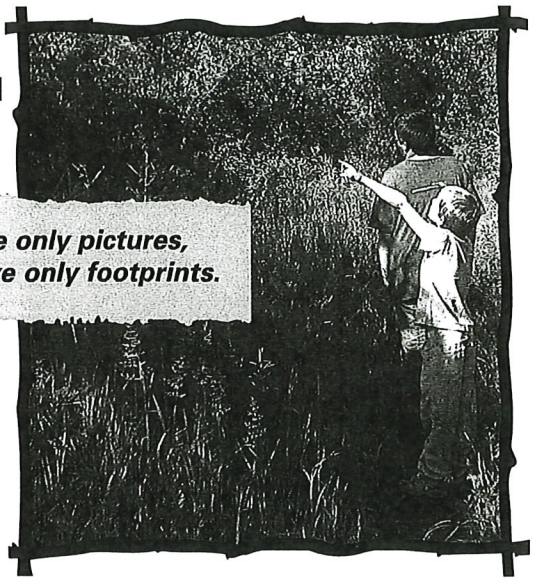
Outdoor Skill:
Practicing Leave No Trace outdoor ethics

Life Skill:
Developing self-responsibility

Educational Standard:
NS.K–4.6 Personal and Social Perspectives

Success Indicator:
Identifies examples of Leave No Trace principles.

As more people enjoy our outdoor world, fewer untouched environments are left. Learning and practicing the 7 Leave No Trace principles will help reduce your impact on our environment, keeping these places available for future generations to enjoy. In this activity, you will learn how to plan ahead and determine how you can "walk softly' in the natural world.



Take only pictures, leave only footprints.

Get in Gear

Take a trip to a park or wilderness area for lunch or dinner. While there, walk around and write down what you see others doing. Discuss with your group or family what you saw and whether what you saw was good or bad. Record in the space below at least one example of each of the seven leave no trace principles. Learn more about each of these seven principles in Outdoor Tips.

Leave no Trace Principles

My Observations of Leave No Trace Principles Being Practiced (or Not)	
Leave No Trace Principles	**What I Observed**
1. Leave what you find	
2. Minimize campfire impact	
3. Be considerate of other visitors	
4. Plan ahead and prepare	
5. Travel and camp on durable surfaces	
6. Dispose of waste properly	
7. Respect wildlife	

Talk it Over

Share the Experience

- What did you see at the park?
- What examples of the Leave No Trace principles did you observe?

Reflections

- What did you learn from this activity that you didn't know before?
- Why is it important to know about the Leave No Trace principles?

Now What?

- How will learning about the Leave No Trace ethic help you on your next hiking trip?

"Pack it in, Pack it out"

Acknowledgment: Activity written by Sarah Kleinman and Jill Martz.

Outdoor Tips

Leave No Trace Principles

America has many beautiful open spaces that many people love to visit. Outdoor recreation is a favorite national pastime, however it can be harmful to our environment. Leave No Trace is an organization dedicated to teaching people—how best to use the land and how best to minimize our impact. Here is more information about the seven Leave No Trace principles or guidelines which all users should follow.

- **Plan ahead and prepare** by knowing the regulations and special concerns of the area; being aware of the possibility of extreme conditions and packaging food to minimize waste.
- **Travel and camp on durable surfaces** like established trails, picnic sites and camp grounds. Walk single file in the middle of a trail to minimize trail erosion.
- **Dispose of waste properly** by using designated containers or by packing in and packing out all trash, leftover food and litter.
- **Protect what you find** and preserve the past by leaving cultural or historic structures and artifacts, as well as rocks, plants and other natural features as you found them.
- **Minimize the need for campfires** and lessen the impact by using only camp stoves or established camp fire rings; burn only sticks found on the ground; put out fires completely and scatter the cold ashes.
- **Respect wildlife** by observing from a distance; never feed animals, store food and trash securely and control pets or leave them at home.
- **Be considerate of other visitors** by being courteous, yielding to others on the trail, taking breaks away from trails and other visitors. Speak in a quiet voice and try not to make loud noises.

Feeding wildlife can cause health problems, change their natural behaviors, and expose them to dangers they're not used to.

Glossary Words

- ***Ethics***
- ***Impact***
- ***Steward***
- ***LNT***
- ***Philosophy***

1. Organize a clean up day in your community.

Happy Hikers

Outdoor Skill:
Developing trail etiquette

Life Skill:
Making decisions

Educational Standard:
NPH.K–12.5 Responsible Behavior

Success Indicator:
Demonstrates good trail etiquette.

How is your hiking trail etiquette? Hiking and being in nature is much for enjoyable when everyone can share the trail—respecting other hikers and the environment. In this activity you'll decide what you believe is the most appropriate way to respond to several different situation.

Looking but not picking the flowers.

Get in Gear

Read the following scenarios. Think carefully about what is happening in each case. Decide what you believe is the best action for each of these hikers to take. Record your thoughts after each of the scenarios.

1

Hiking Memories

Tara is out hiking in a state park with her family. Tara notices some beautiful flowers along the trail. Should she pick some to show her family and some to take home as a memory of her hike?

2

Steep Slopes

Carlos is hiking in the mountains with his sister. They approach a steep section of the mountain they are climbing and take a break before they start up the rocky trail. Another group of hikers is coming down the same trail. What should Carlos and his sister do?

3

Muddy Boots

Nicki and Jay are out hiking. It has been a very rainy and muddy spring. Jay is wearing his new boots and doesn't want to get them muddy. Nicki notices that the trail seems to be getting wider because other hikers have been walking on the edges of the trail, trying to avoid the mud. What should Nicki and Jay do?

Glossary Words • ***Etiquette*** • ***Respect*** • ***Trespass***

Talk it Over

Share the Experience

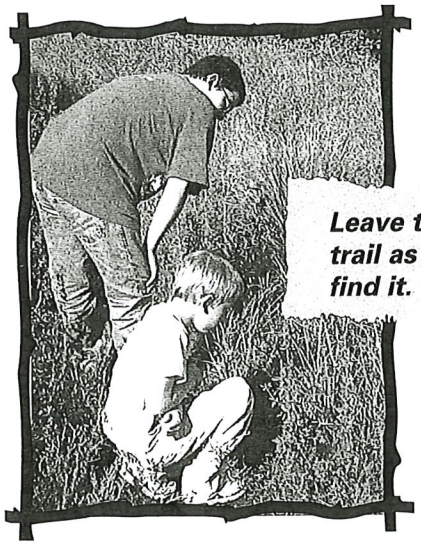
- What were your responses to the three scenarios?
- Why is it important to know about and practice good trail etiquette?

Reflections

- When have you had to respect and share something before?
- When is a time when you might have to help keep something the way you like it?

Now What?

- How will you demonstrate good trail etiquette next time you go for a hike?

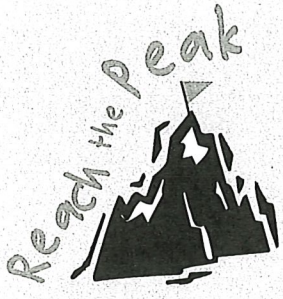


Leave the trail as you find it.

Outdoor Tips: Respecting the Trails

Using public trails requires respect for the environment, for the people who built and maintain the trail and for those who use the trail today, tomorrow and in future years. Following some basic guidelines and respecting the trails on which you travel will go a long way toward creating a positive experience for all trail users.

- Always enjoy, appreciate and respect the trail.
- Take only pictures and leave only footprints.
- Know your limits and make it known when you are too tired or need help.
- Carry garbage out. If you come across trash on the trail, be kind and pack it out.
- If you come across obstacles in the trail, like tree limbs, try to remove them to make it safe for other hikers. If they are too large for you to move, notify a park ranger.
- Avoid very muddy trails—your footprint can damage them. It is better to slosh through the mud than to widen the trail.
- Most trails are on public land—remember that others might be around. Keep your voices low to allow other hikers to have a peaceful experience.
- Let faster paced people pass on the left.
- Let someone know when you want to pass them and move around them quickly.
- Leave signs and trail markings where you find them so other hikers will not get lost.
- Be aware of and watch for bikers, horses and other hikers. Do not surprise horses.
- Leave the trail as you find it—most trails are laid out in careful consideration for plant and animal life.
- Do not trespass on private property.
- Do not frighten or disturb wildlife or livestock.
- Trails are a privilege, not a right—help keep them well maintained by volunteering your time and acting responsibly.



1. Educate others on these tips for happy hiking.

2. Organize a clean up day at a local state park or forest to help keep the trails beautiful.

3. Learn more about National Trails Day on the internet.

Acknowledgment: Activity written by Sarah Kleinman.

In the Right Direction

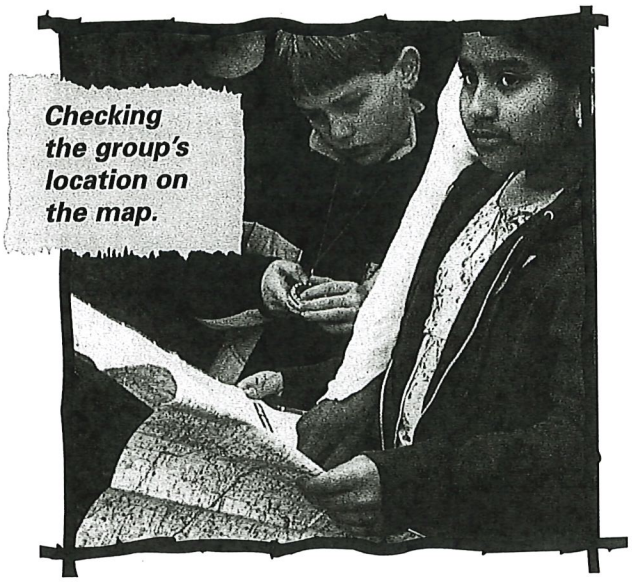
Outdoor Skill:
Practice using a compass

Life Skill:
Problem solving

Educational Standard:
NM–GEO.3–5.4 Visualization and spatial reasoning in problem solving

Success Indicator:
Demonstrates how to correctly use a compass.

Have you used a compass to help you find your way while hiking or traveling? In this activity you'll practice using a compass in a fun and challenging way. Good luck finding your way!



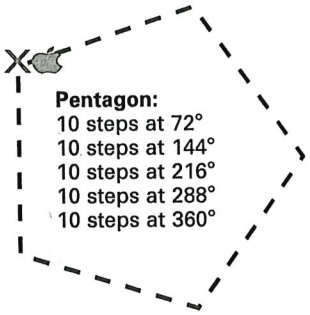
Checking the group's location on the map.

Get in Gear

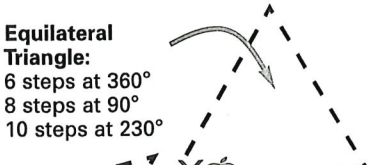
1 **Making Straight Lines –** With your compass and a buddy create a North-South (N-S) straight line. Get back-to-back with one of you turning the compass to a bearing of 180 degrees (S). This person then turns around and repositions the red needle with the Orienting Arrow. Both of you walk ten steps. You have a N-S line!

Now make an East-West (E-W) line. Begin with both of you facing N. One of you turns to a bearing of 90 degrees, the other to 270 degrees. When you each have walked ten steps, you will have formed an E-W line.

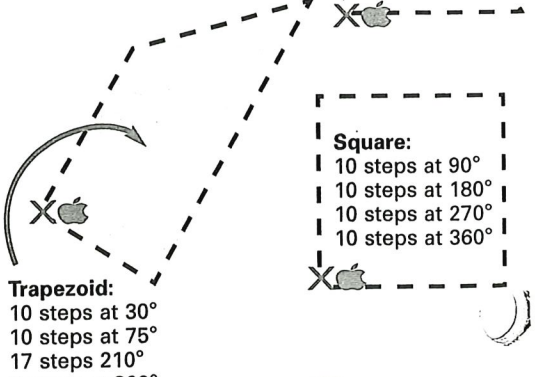
2 **Making Geometric Shapes** - Gather a few markers (rocks, tennis balls etc.) to use in creating the outlines of various geomantic shapes. Place one marker at your feet where you will start making a given shape. Choose a shape that you would like to create from the list shown. Take the first bearing and follow for 10 steps. Place another marker at this point and then take your next bearing. You should try to take steps of equal length. Continue on until you and your partner have created your shape.



Pentagon:
10 steps at 72°
10 steps at 144°
10 steps at 216°
10 steps at 288°
10 steps at 360°

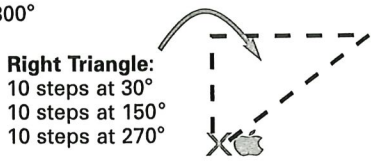


Equilateral Triangle:
6 steps at 360°
8 steps at 90°
10 steps at 230°



Square:
10 steps at 90°
10 steps at 180°
10 steps at 270°
10 steps at 360°

Trapezoid:
10 steps at 30°
10 steps at 75°
17 steps 210°
7 steps at 300°



Right Triangle:
10 steps at 30°
10 steps at 150°
10 steps at 270°

Our Unique Shape and how it was designed

"The great thing in this world is not so much where we are, but in what direction we are moving." Oliver Wendell Holmes

Talk it Over

Share the Experience

- How did you feel about using compasses before the activity? After the activity?
- How was this a fun way to learn about using a compass?
- What was the most challenging part of the activity?

Reflections

- Why is it important to learn to use a compass?
- What are some other uses for a compass?

Now What?

- How could you use your knowledge of compasses on a day hike or camping trip?

Glossary Words

- ***Base Plate***
- ***Bearing***
- ***Cardinal Directions***
- ***Compass***
- ***Direction of Travel Arrow***
- ***Intercardinal***
- ***Magnetic Needle***
- ***Orienteering***

Did you know?

- **Before the development of the compass, sailors used the stars at night to navigate the seas.**
- **In the Northern Hemisphere, moss grows on the north sides of trees.**

Acknowledgment: Written by Mike Klumpp, Terri Potter and Andrea Troxel.

Outdoor Tips: Using a Compass

Pointing North – Did you know the earth's core consists of a fluid outer core and a solid inner core? Because the outer core contains iron, when it flows it generates a magnetic field. This causes a compass needle, which is a piece of magnetized steel, to line up in the direction of the Earth's magnetic field which is Magnetic North.

Holding a Compass – The best way to hold a compass is to hold your elbows against your sides at your waist. Cross your hands in front of you, palms up, in a straight line with your belly button. Place your compass on top of your hands with the direction of travel arrow pointing away from you. When you orient the compass, turn your whole body—not just your hands or the compass

Taking a Bearing

To take a bearing, turn the compass housing until your desired direction is lined up with the Index Line (and also the direction of travel arrow). Holding the compass correctly, turn your body until the red end of the magnetic needle is aligned with your orienting arrow. You are now facing your desired direction.

Walking a Bearing

To walk a bearing, look straight ahead (the farther the better) and choose a landmark or a spot which is in the direction the direction of travel arrow is pointing. Walk to that landmark or spot without looking at the compass.

Reach the Peak

1. ***Make other shapes with the compass.***
2. ***Use compasses to create a "treasure hunt" to find a hidden object.***
3. ***Build your own compass! (See the Outdoor Adventures web page)***

A Bad Spell of Weather

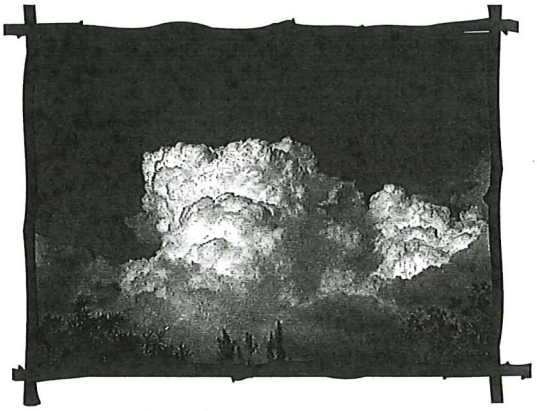
Outdoor Skill:
Identifying hazardous weather

Life Skill:
Critical thinking

Educational Standard:
MS.K–4.4 Earth and Space Science

Success Indicator:
Practices safety procedures for potentially dangerous weather conditions.

What did you do the last time you saw tall, puffy cumulus clouds growing and daylight dimming? What would you do if you were hiking? Whether out on the trail or in your backyard, you always need to know what to do and where to go in case of stormy weather.



Red sky in the morning, sailors take warning. Red sky at night, sailors' delight

Get in Gear

Pretend that you are hiking in the mountains. You hear thunder and see lightning off in the distance. It's starting to rain. Write why you would or would not seek shelter in each location shown in the drawings. Share your choices and reasons with your helper.

A stand of very dense trees all about the same height

_____

_____

_____

_____

A lone tree

_____

_____

_____

_____

A mountain top

_____

_____

_____

_____

A deep cave
(3X as deep as the opening)

_____

_____

_____

_____

Talk it Over

Share the Experience

- What was happening in each of the pictures?
- What did you learn about thunderstorms and lightning?

Reflections

- Why is it important to know how to deal with weather emergencies in the backcountry?
- What would you do if you encountered lightening while hiking?

Now What?

- How could you use your knowledge of what to do in an emergency weather situation on a day-hike or camping trip with your family?

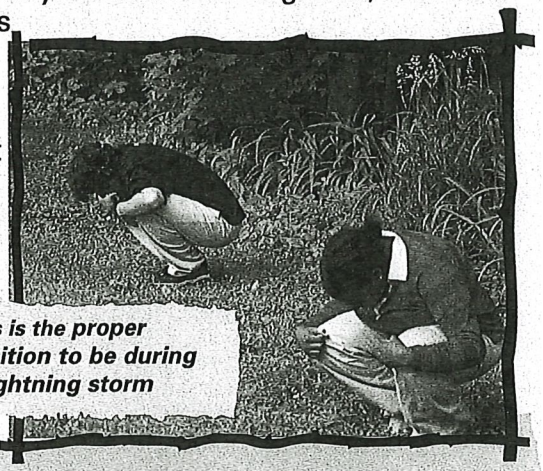
Outdoor Tips: Protecting Yourself from Lightning

Lightning Facts

- Lightning kills more people each year on average than hurricanes and tornadoes combined.
- The temperature of a typical lightning bolt is hotter than the surface of the Sun!
- Thunder can only be heard about 12 miles away.
- Annually there are more than 10,000 forest fires caused by lightning.
- A typical lightning bolt is only the size of a Quarter to Half-dollar around!

Taking Shelter

- In lightning storms, leave high places (mountain tops); avoid shallow caves and objects or materials that may conduct electricity (fences, water, steel objects); and stay away from tall objects (trees, poles) standing by themselves.
- It is important to know how to protect yourself if you are hiking during a thunderstorm. If you are hiking with others, spread out at least 30 feet apart. Count off so that each person in the group has a number so periodic checks can be made. Take off your backpacks, squat or kneel with your feet close together, and tuck your head. This is known as the lightning safety mode. When the immediate threat of lightning has passed, continue heading to the safest place possible.



This is the proper position to be during a lightning storm

Reach the Peak

1. Visit a local weather station and have a meteorologist talk with you about careers and responsibilities.

2. Organize and conduct a weather safety program for your school or 4-H Club.

3. Study and learn more about cloud formations.

4. Visit a local outfitter/gear store and learn about proper gear for all weather situations that might occur on a backcountry trek.

Glossary Words

- ***Cloud***
- ***Lightning***
- ***Rain***
- ***Sleet***
- ***Snow***
- ***Thunderstorm***

Acknowledgment: Activity written by Mike Klumpp, Sarah Kleinman and Michelle Parish.

- *The National Outdoor Leadership Schools Wilderness Guide*, Mark Harvey
- National Lightning Safety Institute
- National Weather Service - Boy Scouts of America

Chapter 4

Protective Places

Your Niche on the Trail

Outdoor Skill:
Selecting natural shelters

Life Skill:
Problem solving

Educational Standard:
NS.K–4.4 Earth and Space Science

Success Indicator:
Identifies outdoor safe shelters.

Weather conditions can change quickly in the outdoors. At times these changes make the outdoors unsafe for animals and humans. Finding shelter is critical if you are outdoors when conditions become unsafe. One way to stay safe requires thinking like animals that live in that environment. In this activity you'll consider where and how to find shelter from a storm.

Get in Gear

Read the following story about a storm and complete the missing part of finding a protective place to stay.

It is a late summer's night. *There is a coolness in the air...You hear the sounds of summer. You can feel changes coming in the weather...In the distance, the dark sky is broken by bright flashes of lightning...The light is far away...After a long wait, a rolling rumble is heard...The lightning gets closer... The rumbles are louder... Suddenly, the lightning flashes and lights up the whole sky...You need to find shelter, you need to find a safe place.*

The brilliant flashes of lightning pop and crackle all around you. The noise of thunder is crashing so that the earth seems to shake...There are no longer times of quiet between the rumbles of thunder and flashes of lightning...It becomes still...You notice scents in the air, things you can smell and feel... You begin to hear a new sound...You are not sure what it is...You had come out thinking the storm was gone...You need to find a place to stay dry...

Suddenly, the rain is pouring down with a loud, rich sound...It rains, and rains...and rains...And then stillness...The storm has passed.

- **Dry leaves stuffed in your clothing provide warmth if you can't find shelter**
- **Snow packed into shelter walls insulates from the cold and wind.**

Talk it Over

Share the Experience

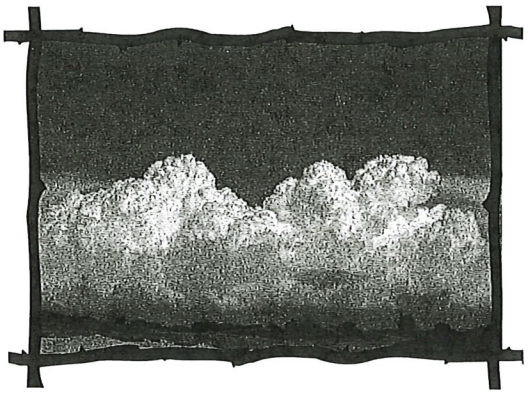
- What are some of the characteristics of a good shelter?
- What kind of shelter would you select and why?

Reflections

- Why is it important to always be aware of safe shelter when in the outdoors?

Now What?

- How does being aware of and selecting natural shelters help you plan an outdoor trip?
- How will you act differently in the future when you are outdoors?



Glossary Words

- ***Insulation***
- ***Exposure***
- ***Flooding***
- ***Hazard***
- ***Shelter***

Acknowledgment: Activity written by Nancy Franz.
Storm story reprinted with permission from: Project WILD K–12 Activity Guide by the Council for Environmental Education, Bethesda, MD, 1996, page 27.

Outdoor Tips: Finding Shelter

Reasons for Seeking Shelter

- Sun exposure – look for full shade and a breezy area
- Rain – keep warm and dry
- Lightening – stay away from tree roots and open areas
- Flooding – look for high ground
- Wind/tornado – keep warm and protected
- Snow – keep warm and dry
- Fire – stay out of smoke and near water or roads
- Earthquake – stay away from rocks and loose objects

What to Look for in a Natural Shelter

- Flat surface to prevent rolling and slipping
- Cover overhead
- Side protection
- Near water source
- High ground to avoid flooding
- Far enough away from trails to not impede trail use
- Avoid fragile and poisonous plants
- Leaves or snow to provide insulation (Dry leaves stuffed in your clothing provide warmth and snow packed into shelter wall insulate from the cold and wind.

1. After you discover safe shelters, share your discoveries with others.

2. Take a hike to look for safe shelters for animals and humans.

Whose Footprints Are These?

Outdoor Skill:
Studies plants and animals safely and respectfully

Life Skill:
Self responsibility

Educational Standard:
NS.K–4.3 Life Science

Success Indicator:
Observes plants and animals.

What aspects of nature do you see every time you are outside? In this activity you'll have an opportunity to see nature up close and personal as you consider what your responsibilities are to preserve what you see.

A camera can help record good discoveries.

Get in Gear

Take a trip to a local state park or forest with your hiking group, family and your helper. Take along a pencil and paper, a plant and animal identification book for your area, a camera (preferably Polaroid or digital), and a pair of binoculars. Take pictures of what you discover and use the books to identify what you find. When you return, share what you have found. Record your observations in the space below.

Find and identify:

One type of bird _____

One type of tree _____

Two other types of animals _____ _____

Two food sources for those animals _____ _____

Two types of footprints _____ _____

One food source that humans can eat too.

_____

My Observations:

Talk it Over

Share the Experience

- What did you observe?

Reflections

- What did you learn while exploring your environment? Why is this activity important?

_____

_____

_____

_____

Now What?

- Why is it important to know about the plants and animals around you?

_____

_____

_____

_____

Glossary Words **Naturalists notebook**

Who's Footprints Are Those?

_____

_____

_____

_____

Outdoor Tips Observing Plants and Animals

Whether you're on the trail for a few hours or a few days, being able to identify flowers, plants, and animals can make your trip a lot more fun! Be careful, plants attract animals you may not want to encounter close up. For example, finding a berry patch may mean you're close to a bear—bears love berries!

The best way to observe wildlife is to follow these rules: practice caution by keeping a respectful distance. Try to remain hidden from the animal, and stay downwind so they don't catch your scent. Use binoculars rather than moving closer. Learn about the animals native to the area you're hiking or camping in so you can be prepared for any encounters. For example, you should respond differently if you encountered a black bear than you would if you met a grizzly bear. Remember that food attracts animals. Keep food well contained and out of reach of our furry friends. Don't intentionally feed wild animals.

Feeding wildlife can cause health problems for the animals, change their natural behaviors and expose them to dangers such as roads and highways.

1. ***Work with your local Forest Ranger or Park District to develop signs or a trail map, identifying plants and other markers along the trail.***
2. ***Organize a trip to a wildlife refuge or bird sanctuary to further study certain types of animals.***
3. ***Teach a course to your group about how to act when approached by a bear or other large animal.***
4. ***Start a nature journal or sketch book where you can make notes about your observations and sketch what you see.***

Acknowledgment: Activity written by Sarah Kleinman.

Hiking Trails Glossary

A

Antihistamine – Medicine taken to improve the symptoms of allergies

B

Bandage – Anything that goes over the top of a wound to secure a dressing. Band-aids include both the bandage (the adhesive or sticky parts) as well as the dressing (the sterile gauze pad)

Base Plate – Rectangular plate on which the compass housing is mounted

Bearing – A direction of travel stated in compass degrees, relative to North

C

Carbohydrates – Starches and sugars that provide energy for the body, found in foods such as whole grains, pasta and potatoes

Cardinal – The principle directions, North (N), South (S), East (E) and West (W)

Cloud – A collection of small particles such as water droplets and/or ice crystals you can see in the sky. A cloud forms in the atmosphere when water vapor condenses

Compass – Instrument for determining directions with the help of a strip of magnetized steel swinging on a pivot

D

Dehydration – Large fluid loss from the body

Direction of Travel Arrow – Arrow printed on the base plate on the outside of the compass housing. When the compass is oriented properly, this arrow points in the direction you travel

Dressing – The material that directly covers a wound, usually gauze

E

Ethics – A code that guides our ideas of right and wrong actions

Etiquette – The right things to do in relation to proper trail behavior

Expiration – Date at which products may no longer work or be safe to use

Exposure – The harmful effects of cold or other extreme weather conditions

F

First Aid – Emergency treatment administered to injured or sick persons before professional medical care is available

H

Hazard – Something that is potentially very dangerous

I

Impact – A noticeable change that results from use

Injury – Physical damage to the body or part of the body

Insulation – Preventing heat loss

Intercardinal – The directions in between the cardinal compass points. For example, North-West (NW), North-East (NE), South-West (SW) and South-East (SE)

L

Leave No Trace (LNT) – Means that all signs of the traveler's visit have disappeared and the environment is left in pristine condition

Lightning – Sudden and visible discharge of electricity produced in response to the build-up of electrical potential between cloud and ground, between clouds, within a single cloud, or between a cloud and the surrounding air

M

Magnetic needle – A magnetic strip suspended on a pivot that is printed red on the end that points toward magnetic north (in the northern hemisphere)

Minerals – Inorganic elements such as calcium, iron, sodium and potassium, essential to a body's normal, healthy functions

Mole foam – A thin foam with an adhesive back, used in treating blisters

Moleskin – An adhesive bandage with a soft felt-like surface, used in treating hot spots

O

Orienteering – The skill of finding your way in the field with a map and compass combined

P

Philosophy – The ideals and values of an individual or a group

Pristine – Not altered by any human action

Proteins – Nutrients essential for all life, made from amino acids. Protein-rich foods include eggs, fish, beans and meats

R

Rain – Precipitation in the form of liquid water droplets greater than 0.5 mm. If widely scattered, the drop size may be smaller

Respect – Treating something the right way

S

Shelter – A place or thing that provides cover from weather

Steward – One who cares about and takes responsibility for a natural area

T

Thunderstorm – A small, local event that doesn't last long. Caused by cumulonimbus clouds, thunderstorms bring thunder, lightning, rain, gusty winds, and sometimes hail. Under the most severe conditions, a thunderstorm may cause tornadoes

Trespass – To go on to somebody else's land or property without their permission

V

Vitamins – Organic substances necessary for metabolism and digestion. Vitamins are found in many foods, and are also produced synthetically as a dietary supplement

Glossary Word Find

* *See if you can find the glossary words in the Glossary Word Find.*

L	M	D	L	N	H	E	E	D	L	J	E	J	G	X
A	A	C	E	Y	O	T	T	A	R	X	A	N	X	E
M	G	N	K	H	H	I	N	I	P	A	I	F	A	C
I	N	R	I	I	Y	I	T	I	Q	R	Z	N	W	A
N	E	G	C	D	D	D	R	A	E	U	T	A	E	R
O	T	S	N	R	R	A	R	E	L	I	E	T	H	T
A	I	R	A	I	T	A	T	A	H	U	A	T	M	O
C	C	C	E	I	N	N	C	I	T	L	S	O	T	N
I	N	R	O	S	E	T	S	R	P	I	L	N	D	E
D	E	N	A	I	P	T	H	E	E	E	O	U	I	V
S	E	V	R	I	A	A	S	G	S	T	O	N	C	A
F	D	O	L	M	N	A	S	K	I	L	N	Q	P	E
V	L	V	I	Y	B	G	I	S	C	L	U	I	R	L
M	E	N	T	H	U	N	D	E	R	S	T	O	R	M
G	E	S	E	T	A	R	D	Y	H	O	B	R	A	C