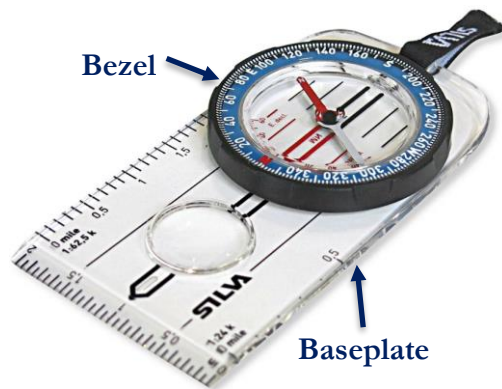


Woodland Hazards

Navigating Through Your Woods

A fun afternoon in the woods can quickly turn to panic if you get lost or feel that you're lost. Even experienced foresters can get turned around in the woods. People often get lost because they are not paying attention to their surroundings and they are unfamiliar with the area. Simply put, the key to successfully navigating through the woods is to **stay alert and observe your surroundings**.

Everyone should own a simple magnetic compass. The most useful have a clear baseplate and a turning bezel. A compass and a GPS can help you find your way back but only if you orient yourself prior to heading into the woods. If you don't know your starting location, a compass isn't much good. Completing "Backyard Family Activity #4: Using a Compass" (page 64) will help you get comfortable using this important tool. Additionally, if you have a handheld GPS, learn how to use it before heading into the woods. Keep in mind, most smartphones have internal GPS systems. For most people exploring the Maine woods, the most important GPS functions are marking a waypoint and navigating to a waypoint. You can learn about these functions and more by reading your users' manual or by watching online videos. Because electronic devices sometimes fail, you should never rely solely on a GPS or smartphone to navigate through the woods.



Completing "Backyard Family Activity #4: Using a Compass" on page 64 will help you get comfortable using this important tool.

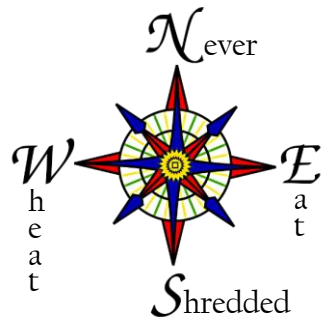
Before you head outside, try to find a map of your property. A good map of your property can be very useful in navigating through your woods—especially when used with a compass and a GPS. You might have a survey map, which is very accurate, or a copy of the town tax map. Using these existing maps and the deed description of your property, you should be able to identify your ownership and its boundary lines on Google Earth. Google Earth is easily found with an internet search and can provide you with valuable information about your woods. In fact, you can draw your boundary lines on the satellite imagery in Google Earth and print a basic map that you can take with you in the woods. This basic map can be used to identify natural and man-made features on or near your land. It should be fairly easy to identify roads, ponds, streams, fields, and structures. You can even label these features on your paper map to help you navigate through your woods when you are working on projects or enjoying the outdoors.

As mentioned earlier, staying alert to your surroundings is important to avoid getting lost. Even if you are using a map and compass, you should still take the time to make mental notes about your surroundings. Pay close attention to the trees, logs, hills, rocks, ridges, and man-made items that you pass. Look to your left and right and turn frequently to look behind you. The large tree that you passed may look totally different from the other side. Are you going uphill? Then you need to go downhill to get back to your house or vehicle. If you change direction, associate it with the terrain and features around you. Continually ask yourself, “if I had to return to where I started, where would I go?” Everything you observe will eventually become part of the puzzle you must assemble to stay oriented.

One natural object that can help you stay oriented is the sun. In our area, the sun rises in the east, moves to the south, and sets in the west. At noon, the sun is to the south. Therefore, if you know the time of day and the sun is visible, you’ll have a rough idea of what direction you’re heading. Learning to associate times of day with the sun’s position, in relation to landmarks, can be very helpful in determining where you are.

A good mnemonic device to remember the order of the cardinal directions is “**Never Eat Shredded Wheat.**” Using this device, clockwise from north is east, then south, and finally west. If you’re facing north, east will be on your right and west on your left. Facing south, west is on your right and east is on your left.

Keep in mind, no one can walk in a perfectly straight line. In general, we all tend to walk in



a large circle that is often determined by handedness. If you're right-handed, you'll tend to veer to the right over time. You can offset this tendency by making a conscious effort to pass on the left side of objects that are directly in front of you.

It's always a good idea to take precautions in case you do get lost. These days getting lost generally means that you might come back hungry and cold after someone finds you. Taking the following actions can help you get home safely:

- ❁ Always let someone know where you're going and what time you think you'll be back. Then stick to your plan.
- ❁ Be prepared for the worst. Bring warm clothing, water, a tarp or large garbage bag, a small flashlight, a whistle, waterproof matches, snacks, a knife, and a watch. The weather can change rapidly, and you might have to spend time under adverse conditions. Fortunately, assembling a basic survival kit is a good rainy day activity for children of all ages.
- ❁ Observe your surroundings and be able to identify landmarks from different viewpoints.
- ❁ Drink lots of water. You can survive several days without food but not without water.
- ❁ Don't eat anything from the woods unless you're sure it's edible.
- ❁ Don't panic if you think you're lost. Sit down, take a few deep breaths, and think rationally. You may find that you can mentally retrace your route through the woods.
- ❁ If you decide that you really are lost, stay put! People who are panicking move quickly and usually go out of the area where search and rescue teams are looking for them. They also don't hear people calling out for them because they're making noise themselves.
- ❁ Find a safe place to shelter yourself from the elements before dark. Pile up dried leaves to insulate yourself from the ground and put up your tarp for overhead protection.
- ❁ If you're in a group, stay together! Don't allow anyone to go out and search for the way back because this may result in the need for individual searches. Being with others will also help you maintain a positive outlook.

Learning to use a map and compass to navigate through the woods is the best approach to avoid getting lost. The effective use of these tools can also increase your efficiency and reduce your travel time. For a great introduction to compass use, complete the two Backyard Family Activities at the end of

this chapter. In addition, the short videos listed below may be useful as you learn more about orienteering and navigation:

- ❁ “How to Use a Compass” is a helpful video produced by REI Co-op and found at <https://www.youtube.com/watch?v=0cF0ovA3FtY>.
- ❁ “Orienting a Map and Compass” is another helpful video produced by the Boy Scouts and can be found at: <https://www.youtube.com/watch?v=a2aGiU1u4c>.

Hazard Trees

Hazard trees are trees with structural defects that make them likely to fall and injure people or damage property. In addition, trees that appear healthy but have large dead branches can also be very dangerous. Large dead branches have the potential to cause tremendous damage if they break off and hit a target. Although structurally weak trees and large dead branches are often hazards that need to be removed, sometimes they can be safely retained in the woods to provide wildlife habitat.

Identifying Hazard Trees

Answering the following questions will help you determine whether a tree is a hazard:

- ❁ Will the tree hit people, cars, buildings, powerlines, or anything else of value if it falls? Check the area around dead or unhealthy trees for potential targets.
- ❁ Has the tree lost a lot of branches, bark, or needles lately? If so, its health may be in decline.
- ❁ Does the tree have deep, open cracks in the trunk or branches? Cracks eventually lead to breaks.
- ❁ Does the tree have lightning damage? Lightning strikes can kill the roots that anchor a tree to the ground.
- ❁ Do decay conks grow from the main stem? Does it have black cankers or hollow spots? Entire living branches can unexpectedly break free and fall from a rotting trunk.



Decay conks. Photo: Aaron Bergdahl

❁ Is the tree leaning to one side or does it have considerably more branches on one side? The uneven distribution of weight can increase the risk of the tree falling.

❁ Do structurally weak sprouts grow from the tree? These often form when improper pruning methods, such as **topping**, are used.

Although trees often become hazards naturally, people can injure and weaken trees in many ways. For instance, improper pruning practices can negatively impact tree health and resistance to breakage.

As mentioned previously, the practice of topping large trees can increase the risk of structural failure. If you are planning to prune a large tree, consider contacting a licensed **arborist** and reading the USDA’s booklet “How to Prune Trees” prior to starting work (see <https://www.fs.usda.gov/treearch/pubs/12602>).

Trees can also be easily injured during the construction of buildings, driveways, woods roads, or trails. Harm from such activities can weaken trees and predispose them to insects or diseases that may kill them. Covering the roots of existing trees with large amounts of fill and driving heavy equipment over roots can cause serious damage. Trees with weakened root systems can unexpectedly fall (or blow down) with high winds.

When choosing a new tree to plant, make sure that the species is well-suited to the planting location. Proper planning will keep you from planting a tree that is likely to become a hazard in the future. For advice selecting the proper tree species and planting location, visit the Project Canopy website at https://www.maine.gov/dacf/mfs/policy_management/project_canopy/resources/right_tree_right_place.html.



Topped tree. Photo: Greg Miller

Managing Hazard Trees

Immediately evaluate dead or damaged trees in areas where they can fall on anything of value. Trees that make an area unsafe should be removed as soon as possible. Removing hazard trees can be dangerous and it is advised to have the



Arborist. Photo: MFS

work performed by a licensed arborist. These professionals are specially trained and insured. A list of licensed arborists can be found at <https://www.maine.gov/dacf/php/arborist/ArboristList.shtml>.

How we deal with a hazard tree depends largely on location. In other words, we typically deal with hazard trees in the woods differently than hazard trees near our home or camp. Hazard trees in the woods don't generally require immediate attention like

hazard trees in your yard. The best way to stay safe is to be aware of your surroundings at all times. As you walk through the woods, scan the area around you for dead trees, large dead branches, and tree tops hung up in surrounding trees. If a dead tree is present near a frequently used trail, cut it down as soon as possible. If it isn't near any trails, leave it to provide wildlife habitat. The following point cannot be stressed enough: **if you are not trained or experienced in tree felling, hire a professional to do the work.**



"Widowmaker." Photo: Dan Jacobs

The Woods During Hunting Season

Staying safe during hunting season is easier than you may think and takes just a few extra steps before going into the woods to work or recreate. If you properly posted “No Trespassing” signs along your boundary line, you most likely won’t have hunters in your woods. If your property is part of a larger wooded area, however, people may be hunting nearby.

Hunting Seasons

Hunting seasons are set based on the species of game animal. Because the greatest number of game species are hunted in the fall, this is the most likely time of year for you to encounter hunters on or near your property. Keep in mind that white-tailed deer is one of the most popular game species in North America and you should take additional safety precautions during this season. The Maine Department of Inland Fisheries and Wildlife’s “Summary of Hunting Laws” that lists hunting regulations and seasons can be found at <http://www.eregulations.com/maine/hunting/>.

When Hunters are Most Active

The peak times for animal activity and hunting are sunrise and sunset. Avoid being in hunting areas during those times, because you’ll be less visible in the dim light. If you must be out at those times, use a headlamp or flashlight and wear reflective material.

Wear the Right Colors

Wearing blaze orange, also known as hunter orange, is one of the best ways to ensure your safety in the woods during hunting season. Maine law requires anyone hunting during any firearm season to wear blaze orange clothing. For the complete rules on blaze orange clothing, go to <https://www.maine.gov/ifw/hunting-trapping/hunting-laws/hunting-equipment.html#hunterorange>.

Although these requirements are for hunters, landowners should follow them when working in the woods during hunting season. If you don’t



White-tailed deer. Photo: Dan Jacobs

have such clothing, most sporting goods stores sell inexpensive blaze orange vests and hats. Whatever articles you decide to wear should be visible from all sides. Also, remember to avoid wearing white during deer season. Hunters can mistake a flash of white clothing for a deer's tail.

Make Noise

Although being out in the woods is often about peace and quiet, hunting season is no time to walk silently through the forest. Talking with your companions, whistling, and singing aloud are great ways to make yourself known to hunters. If you hear shooting close by, yell to alert hunters to your presence and location.

Pet Safety During Hunting Season

Keeping your pet safe during hunting season is also very important. Blaze orange vests, collars, and bandanas are available for dogs and will fit other pets of similar sizes. Attaching a small bell to your pet's collar can also help distinguish it from other woodland animals.



Pet safety. Photo: Rondi Doiron

Hazardous Plants and Insects

The Maine woods can be a very safe place if you know how to identify a few natural hazards. Such hazards include poison ivy, poison sumac, ticks, mosquitoes, and browntail moth caterpillars.

Poisonous Plants

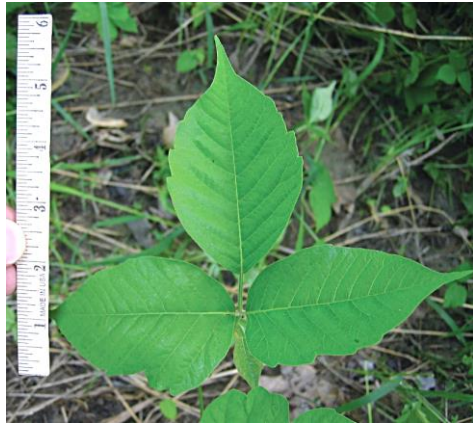
Two of the most commonly encountered plants in Maine, that are known to cause severe skin irritation, are poison ivy and poison sumac. Irritation typically results when skin comes in contact with the roots, stems, leaves, flowers, or fruit of either plant. In addition, the smoke from burning these plants, and any clothes that come in contact with these plants, can also be hazardous. Washing with a poison ivy cleaning product is the best way to remove the poisonous oils from skin, clothes, and tools.

Poison Ivy

Poison ivy is widespread throughout the state. It grows as an aerially-rooted climbing vine on trees; a trailing vine; or an erect shrub along stonewalls, fencerows, roadsides, and waterbodies.

The leaves are dark green, very shiny, and arranged in groups of three. You might try to remember the old saying “leaves of three, let it be.” In the fall, poison ivy is often fiery red.

Other plant parts that can help you identify poison ivy include the fruit and the roots. The fruit is a creamy white, ribbed, globular, BB-sized berry; and the roots are often covered in reddish hairs.



Poison ivy. Photo: MFS

Poison Sumac

Poison sumac grows as a small tree in low, wet swamps. It is most common in the southern half of Maine.

The leaves of poison sumac are 7 to 14 inches long and are composed of 7 to 13 smaller leaves.



Poison sumac. Photo: MFS

These smaller leaves are called leaflets. Unlike the twigs of staghorn sumac, the twigs of poison sumac do not have hairs.

The fruit is a globe-shaped, slightly compressed, thin-fleshed, white berry about 1/5 inch in diameter. It is produced in clusters that ripen in September and persist on the tree into the winter.









Hazardous Pests

Ticks, mosquitoes, and browntail moth caterpillars are among Maine’s most common and harmful insect pests. These three pests can cause short-lived discomfort as well as serious illness. Therefore, minimizing your contact with these insects is critical to your health and safety in the woods.

Ticks

About 15 different species of ticks live in Maine. One of them, the deer tick, can transmit the bacterium that causes Lyme disease. This disease frequently starts with a rash and flu-like symptoms. Left untreated, it may cause neurological problems. Keep in mind, ticks are common in Maine and several species are known to spread serious diseases.

Therefore, you should consider taking the following precautions to avoid tick bites when visiting the woods in your backyard:

-  Tuck your pant legs into your socks or wear gaiters treated with permethrin.
-  Tuck your shirt into your pants.
-  Wear light-colored long-sleeved clothing to more easily see ticks.
-  Use a repellent that is approved by the EPA for use on skin—such as DEET, picaridin, IR3535, or oil of lemon eucalyptus.
-  Apply permethrin to clothing and be sure to follow the directions on the label.
-  Consult with your veterinarian about tick repellents for pets.
-  Inspect yourself, your companions, and your pets for ticks periodically while in the woods and when you get back home. Ticks often attach to body folds, behind the ears, and in the hair.
-  Shower and wash your clothes immediately after returning from the woods. Drying clothes on high heat for 15 minutes effectively kills ticks.

The prompt removal of ticks is very important. With tweezers, grasp the tick as close to the skin as possible and pull gently but firmly until it lets go. With a tick removal spoon, line the notch up with the tick's mouthparts and



Deer Tick (Black-Legged Tick)



nymph



adult male



adult female

(actual size)



nymph
(1/32"–1/16")



adult
(1/8")



engorged adult
(up to 1/2")



Dog Tick



adult male



adult female

(examples are not actual size, dog tick nymphs are rarely found on humans or their pets)



Source: Maine Center for Disease Control

apply downward pressure. Then slide the spoon forward to remove the tick. Place the tick in rubbing alcohol to kill it and apply antiseptic to the bite. You should talk with your healthcare provider if you develop a bull's-eye rash or flu-like symptoms after a tick bite. To submit a tick for identification or testing, visit <https://extension.umaine.edu/ticks/>.

Mosquitoes

Approximately 40 different species of mosquitoes live in Maine. Of these, only about half are biting pests. In the past, mosquito-borne illnesses didn't threaten Maine, but that's no longer true. Recently, the increased incidence of Eastern Equine Encephalitis (EEE) and West Nile Virus has caused concern in the northeast. To help prevent bites and the transmission of disease, use an EPA-approved repellent such as DEET, picaridin, IR3535, or oil of lemon eucalyptus. You can also apply permethrin to your clothing, but make sure to follow the directions on the product label. For additional protection from mosquitos, consider wearing long pants and long-sleeved shirts when you are in the woods.

For more information on ticks and mosquitoes, visit the MMCRI Lyme & Vector-borne Disease Lab at https://mmcri.org/?page_id=1090 or see the Maine CDC's Tick and Mosquito FAQs at <https://www.maine.gov/dhhs/mecdc/infectious-disease/epi/vector-borne/tick-messaging.shtml>.

Browntail Moth Caterpillar

The browntail moth caterpillar has tiny poisonous hairs that cause a skin rash similar to poison ivy on sensitive individuals. People may develop dermatitis from direct contact with the caterpillar or indirectly from contact with airborne hairs. The hairs become airborne by being dislodged from the caterpillars or by being cast off when the caterpillars



Browntail moth. Photo: MFS

molt. Most people affected by the hairs develop a localized rash that will last from a few hours up to several days. For some sensitive individuals the rash can be severe and last for several weeks. Respiratory distress from inhaling the hairs has also been reported and can be very serious.

The following precautions may help people living in or visiting browntail moth-infested areas:

- ❁ Avoid places heavily infested by caterpillars.
- ❁ Take a cool shower and change clothes after any activity that might involve contact with browntail moth hairs.
- ❁ Dry laundry inside during June and July to avoid having the hairs become impregnated in clothing.
- ❁ Wear a respirator, goggles, and coveralls when performing activities that may stir up caterpillar hairs. These activities include mowing, raking, weed trimming, and removing pupal webbing from eaves and boats.
- ❁ Use caution cleaning debris left by caterpillars because the toxin is extremely stable and remains a hazard for a number of years. Summer residents should bear this in mind when opening and cleaning cottages that have been closed all winter. Wet mopping prior to vacuuming or dusting is advised.
- ❁ Talk with your healthcare provider if you develop a severe reaction to the browntail moth.
- ❁ Be aware that the likelihood of contacting browntail moth hairs increases during dry windy conditions.

Contact 211 Maine to get answers to frequently asked questions on browntail moth biology, pesticide options, health concerns, management, and public policy. You may reach this service by dialing 211 (or 866-811-5695), texting your zip code to 898-111, or emailing info@211maine.org.

Do You Know?

#3. Which large mammal eats ants, raspberries, and beech nuts before sleeping through the winter?

Answer on page 120

Backyard Family Activity #4: Using a Compass



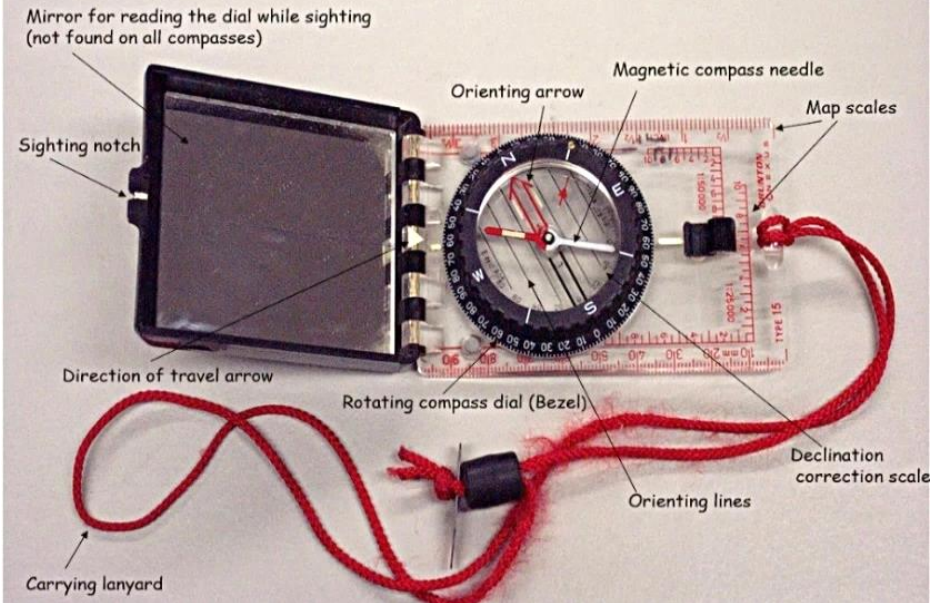
While a GPS app on your phone can be a very useful tool, you should also learn to use a compass in case your battery fails or phone malfunctions. Plus, navigating with a compass is just plain fun!

For this activity, you will need a basic compass with an adjustable bezel, a notepad, and a pencil. Silva, Brunton and Suunto are all recognized brands that can be easily be found online. An azimuth compass is recommended for this activity because it is the easiest and most intuitive to operate. The dial (or bezel) on an azimuth compass is divided into 360 degrees and north is both 0° and 360°.

Items Needed

- Basic compass with an adjustable bezel
- Notepad
- Pencil

Typical Parts of a Compass



Getting Ready

Examine your compass and be able to identify the following parts:

1. The magnetic needle is jiggly and moves around inside the dial (or bezel). The end that points North is usually red, and the end that points South is usually white. The degrees, which range from 0 to 360 on an azimuth compass, are located on the bezel.
2. The direction of travel arrow may be long and skinny or may be just a triangle. This arrow is printed on the baseplate and is the only one on the compass that doesn't move. It may be obvious or difficult to find. Make sure you can find yours.
3. The orienting arrow is the larger arrow on the rotating bezel. It often appears in the form of an outline.

The Activity

In this activity, you will learn to use a compass to navigate in a predetermined direction, stay on course towards a destination, and return to your starting point. This activity is designed to be completed with an azimuth compass.

Timeframe

30 minutes or less.

Steps

1. Choose some place you will recognize when you come back, such as a bush or mark on the ground. Hold the compass flat in the palm of your hand with the direction of travel arrow pointing directly away from your body. You will always use the compass in this position. Don't rotate the compass while you are using it!
2. Hold your arm out straight and point the direction of travel arrow to some recognizable landmark in the distance—maybe a large pine tree. You don't want something located in your backyard, that's too close. Turn your body, not your compass! Make sure your palm (and compass) stay level.
3. With the direction of travel arrow pointed at the landmark (pine tree), rotate the bezel until the orienting arrow is aligned with the red end of the magnetic needle. You can remember which end you need to align with the saying "put the red in the shed."

4. Read the azimuth off the bezel where it coincides with the direction of travel arrow and write it on your notepad.
5. Now walk to your landmark (the large pine) and step around it. Hold your compass out in front of you and turn your whole body (not the compass or your arm) until the magnetic needle lines up with the orienting arrow again. Look ahead along the direction of travel arrow and find another landmark that falls on this line. You must keep the magnetic needle centered within the orienting arrow while sighting on the next landmark. This is how you travel in a straight line using a compass.
6. To return to your starting point, stand in front of the large pine and turn your bezel 180° from the direction you were traveling. You may need to use your notebook to do some simple math. If your initial azimuth (x) is less than 180° , the math will be $(x + 180)$. You will add 180 to your initial azimuth. In contrast, you must subtract 180 from your initial azimuth (x) when x is greater than 180° . In this case, the math is $(x - 180)$. As you can see, your answer must always fall between 0° and 360° .

Suppose you get turned around while you are hiking or hunting in the woods. Even knowing the basics of how to use a compass will help you choose a basic direction of travel and stick to it. If you recognize a distant landmark, point your direction of travel arrow at it, put “red in the shed,” and sight on a closer landmark on the same azimuth. Walk to the closer landmark, step around it, and put the “red in the shed” again to find another landmark. Repeating these steps you will leapfrog to your destination.

Backyard Family Activity #5: The Three-Legged Compass Walk

The three-legged compass walk will help you get even more comfortable with your compass. It works best in a large field or parking lot. In addition, it’s important to walk with your normal stride to form a triangle with equal sides.



Item Needed

- Basic azimuth compass with an adjustable bezel

As in “Backyard Family Activity #4: Using a Compass,” you will need a basic azimuth compass with an adjustable bezel.

Getting Ready

Review the “Getting Ready” section for “Backyard Family Activity #4: Using a Compass” (page 64) before starting this activity.

The Activity

In this activity, you will learn to travel through an area using a triangle-shaped route. The route will take you back to your starting point.

Timeframe

30 minutes or less.

Steps

1. Choose a starting point. Turn the bezel of your compass so that 40° is lined up with your direction of travel arrow. Then turn your body with the compass extended in front of you until the red end of the magnetic needle is in the orienting arrow (“red in the shed”). Pick a certain number of steps to walk (25, 50 or 100), and walk across the field or parking lot keeping the needle inside the arrow. You won’t be looking at a landmark but at your compass the whole time.
2. Add 120° to your original 40° to get 160° . Turn your bezel so that 160° is lined up with the direction of travel arrow. Turn slowly and put the magnetic needle inside the orienting arrow. Then walk in that direction the same number of steps you walked the first time.
3. Add another 120° to your 160° to get 280° and follow the same procedure as in Step 2. Once you have traveled the same distance as before, you will be back at your starting point.

You just traveled a route that formed an equilateral triangle. You can make this activity more challenging by placing a quarter between your feet when you start. Then try to end your walk in the exact spot that you began. Try the activity several times to become more comfortable with your compass. Once you’ve mastered this activity, consider trying a four-legged walk (square-shaped route) by turning the compass bezel 90° at each corner.