

Pacing

When you are following a compass course you will keep track of how far you have travelled by counting your paces. First, you will need to know how long each of your normal steps is. Then divide the distance you need to travel by your pace length and that is how many steps you need to take to reach your destination. For example, if your normal pace is 2.5 feet and you want to travel 25 feet, you will need to take 10 steps.

You can find your pace at the beginning of the compass trail hike. Near the information kiosk about the Compass Trail there are 2 trail signs. One reads "To Canopy ←" and the other sign reads "Wildflower Loop ↔". Walk from one sign to the other (the distance is 50 feet). Walk at a normal pace and count your steps. Use the chart below to find the distance of each step.

Number of Steps	Your Pace
16 steps	3.1 feet per step
17 steps	3 feet per step
18 steps	2.8 feet per step
19 steps	2.6 feet per step
20 steps	2.5 feet per step
21 steps	2.4 feet per step
22 steps	2.3 feet per step
23 steps	2.2 feet per step
24 steps	2.1 feet per step
25 steps	2 feet per step
26 steps	1.9 feet per step

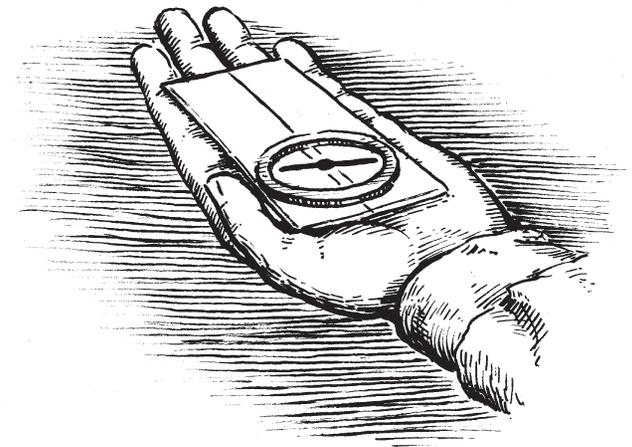
Targeting

In most cases you will not be able to see your destination point when you are travelling by compass. You will use a method called "Targeting."

Targeting is used to keep you on a straight path as you hike. When you have your compass oriented (heading set and needle aligned with the orienting arrow) look ahead at where the direction of travel arrow is pointed. Choose a target (a destination point) like a tree or rock or anything that you can see that the direction of travel arrow is pointing toward.

Now pace to that target. When you reach the target, re-orient your compass, choose a new target and continue pacing. This will produce a much straighter path than trying to walk and keep your compass oriented at the same time.

How to Use a Compass



This brochure is designed to give you the basic knowledge that you need in order to hike the Forest Ecology Compass Trail.

This brochure created and designed by Jarrett Moore as part of an Eagle Scout Leadership Service Project, March 2005.
Graphics by Dayton Cook, layout by Joel Moore.

This brochure provides basic instructions on how to find your way using a compass.

What is a Compass

About 2500 BC the basic idea of a compass was discovered in China. Someone discovered that a piece of a certain ore when floated on water would turn itself until one end pointed half way between where the sun rose and set.

Out of this discovery came the compass needle - a strip of magnetized steel balanced on a pivot, free to swing in any direction. When left to itself, the needle comes to rest with one end pointing North.

The compass is an indispensable tool to find your way. Using a compass will help you enjoy and learn more about the outdoors.

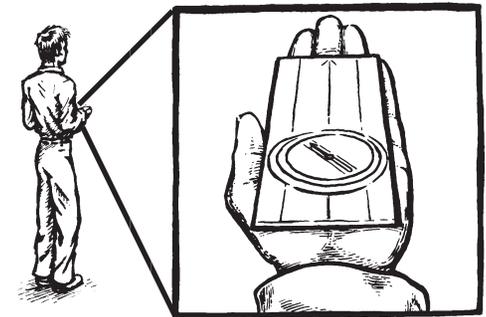
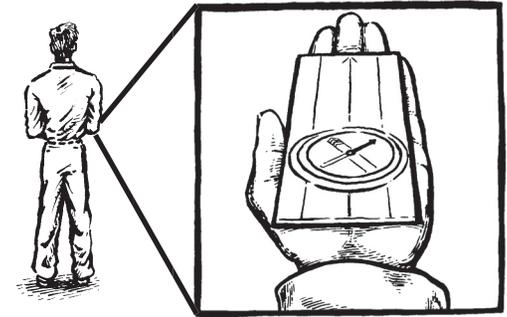
As you go through this tutorial, it is essential that you have a compass in your hand. Keep practicing finding bearings on a compass until you are comfortable using the skills you will learn in this pamphlet. Soon, you'll be able to travel safely in unfamiliar terrain.

Photo courtesy
Johnson Outdoors, Inc.

Headings and Bearings

The numbers that are on a compass represent degrees of a circle. The degrees are numbered from 0° to 360° , clockwise around the circle, with 0° and 360° being the same thing. 0° (and by default 360°) represents north; 90° represents east; 180° represents south; 270° represents west.

If your heading, the direction you are going, is toward the east, you are said to be on a heading of 90° . Likewise if your heading is toward the west, you are said to be on a heading of 270° . If you are in the forest and there is a tree directly east of you, the bearing of that tree is 90° . A bush is directly south of you, would be at a



bearing of 180° . It does not matter which way you are pointing, what we are measuring is the direction of a destination from where you are you as it would be shown on a chart.

To travel in a given direction, turn the compass housing (dial) so that the degrees of the bearing line up with the direction of travel arrow. Now rotate yourself so that, without moving the dial, the compass needle is aligned with the orienting arrow (North arrows match). Now travel in the direction you are facing (the direction that the "Direction of Travel" arrow is pointing) for the required distance.

To repeat - set the degree number over the index pointer, point the direction of travel arrow directly ahead of you, orient the compass by aligning the north end of the compass needle with the orienting arrow and proceed.

Parts of a Compass

Direction of travel arrow - Arrow on compass which indicates the direction in which you are to travel

Index Pointer - The line under the compass housing there you set your heading. It lies up with the direction of travel arrow.

Compass needle - Needle in compass which points toward north

Orienting arrow - Arrow in bottom of compass housing with which you line up the north needle.

Compass housing - Turnable dial which is labeled with degree lines.

