

Orienteering at Verdun



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Note to Instructors: While this manual attempts to explain all the basic skills required to administer and participate in an orienteering course, these are just the basics. Feel free to elaborate on the information provided here. If you have easier ways of accomplishing certain tasks, by all means use them.

The orienteering courses and this manual were created as part of Ryan Powers's Eagle Scout Leadership Service Project in the fall of 2002 and the spring of 2003.

RUNNING AN ORIENTEERING EVENT

General Setup/Administration

- Before the event, hang the control markers and punches on the posts
 - Be sure to match each punch with its correct post. The punches are labeled.
- Set up the start/end table at a location of your choosing.
 - The pace course is next to the multipurpose building, this might be a good place. Another good place is the pavilion.
 - This is where the participants should return to have their scores tallied.
- You will need a score card for each pair of participants
 - The buddy system should be in effect
- Use the Orienteering Manual to teach the participants how to use a map and compass.
 - The length of this should be adjusted depending on the groups skill level
 - Some groups may not need any review
- Pass out maps and scorecards, and plastic bags if its raining
 - Be sure to explain where the score card should be punched through
- Explain the rules and safety precautions listed on the scorecard
- Give participants a safety bearing (a bearing in which to walk in case they get lost)
- Allow time for questions from the group

Score Orienteering

- Start the course
 - Start everyone at the same time.
- Give each pair 40 minutes to locate as many control points as possible.
 - The time limit should be such that it is impossible to find all the markers before running out of time. If 40 minutes is too long, shorten the event as needed.
- For every minute late subtract 10 points from their total score. Do not award points for returning early
- Tally the scores
 - Use the time taken to complete the course as a tie breaker
- Announce winners

Cross Country Orienteering

- Be sure the participants understand they may choose their route, but not the order in which they visit each control point
- Start the course
 - Start each pair on a five to ten minute interval (this avoids “follow the leader”)
- This is a timed event, the team that visits all the markers with the best time wins. Rank participants based the time it took each pair to complete the course
- Announce winners

General Cleanup

- Collect markers and punches
- Return all materials to VAB
 - Be sure you collect all 10 compasses
- Maps and score cards may be kept by participants

Orienteering at Verdun

Today you will be learning or reviewing how to use a map and compass to find your way in the woods. After this short lesson, you will be putting these skills to use in an actual orienteering event called “Score Orienteering”.

What is orienteering?

Orienteering is a fun outdoor competition in which you use a detailed map, a compass, and your wits to navigate unfamiliar terrain in search of **control markers**. The primary tool is the map; the compass is a navigation aid, primarily used to orient the map.

Today you will be participating in an orienteering event. Verdun Adventure Bound has two different types of orienteering courses on its property.

The first is a **score orienteering** course. In score orienteering, you and a partner must locate controls that are marked on your map. Each control is worth a specific number of points. Point values are shown on your score card. The more difficult controls have a higher point value. This is a timed event and points are deducted for tardiness; no points are awarded for finishing early. **CONTROLS MAY BE VISITED IN ANY ORDER**. Controls are marked with orange and white flags. The pair with the highest score wins.



Orienteering Marker and Punch

The second event is called a **cross country** orienteering. In this event you navigate to 10 control markers. **CONTROLS MUST BE VISITED IN THE ORDER THAT THEY APPEAR ON YOUR SCORE CARD**. You and your partner will be given a map showing the location of all controls. The pair returning to the starting point, in the shortest amount of time, wins.

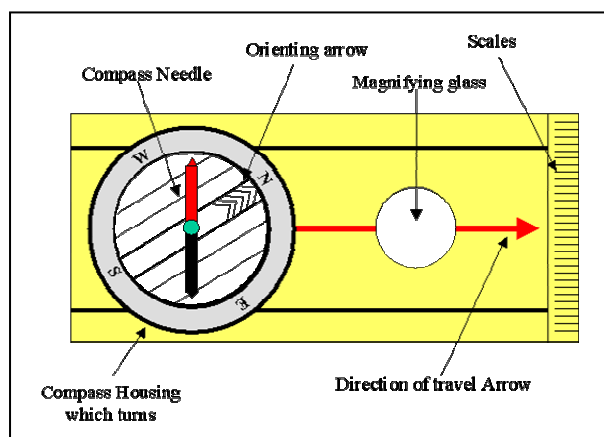
In both events, there is an orienteering punch hanging on each control marker; this is used to punch your score card, proving that you have located the marker.

Parts of a Orienteering Compass

An orienteering compass consists of a base plate, a compass housing, and a magnetic needle.

The compasses you will be using have several different parts:

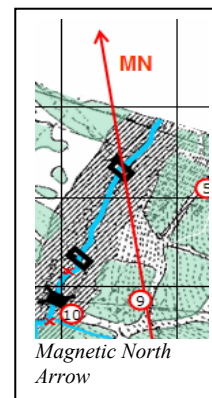
1. **Base Plate** – clear plastic plate that holds the **compass housing** and includes a **direction of travel arrow** and a **ruler** for measuring distance.
2. **Compass Housing** – this holds the **needle** and **orienting arrow**. The outer edge of the housing (the **azimuth circle**) is divided in to 360 degrees to measure direction. The azimuth circle correctly indicates direction **ONLY** when the **orienting arrow** and **needle** are aligned. The compass housing freely rotates.
3. **Compass needle** – magnetic needle that points in the direction of magnetic north
4. **Scale (or Ruler)** – used to measure distance on the map
5. **Direction of Travel Arrow** – line on the **base plate** that can be pointed to a desired direction of travel. It is the reference mark used to set and read bearings.
6. **Orienteering Arrow** – an arrow on the bottom of the **compass housing**. It is aligned with the North/South marks on the **azimuth circle**.



Orienting a Map

The first thing a participant must do is orient the map. A map is said to be oriented when magnetic North arrow on the map points to actual magnetic.

1. Turn the **compass housing** until the **orienting arrow** is aligned with the **direction of travel** arrow.
2. Place your compass on the map and align the **orienting arrow** with the bold red magnetic north arrow
3. Without moving the compass, turn the map until the north end of the needle aligns with the north end of the orienting arrow. Now the map is correctly oriented. Direction on the map corresponds to direction in the real world.



What is a bearing?

A bearing is a direction to an object. Taking a bearing is the process of using the compass to measure the direction (in degrees) to the object.

1. Point the **direction of travel** arrow at the object
2. Rotate the compass housing until the north end of the orienting arrow lines up with the north end of the compass needle – this is called **boxing the compass**
3. The bearing to the object is read off the azimuth circle where the direction of travel arrow meets the azimuth circle.

What direction should I travel?

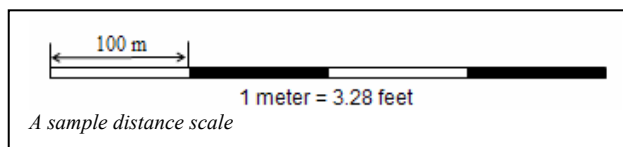
It is easy to determine the direction you should travel using only a pencil, your map, and your compass.

1. Draw a straight line on the map between your present location and your destination
2. Orient the map as above
3. Without moving the map, align the direction of travel arrow on the compass with the line on the map—your intended course.
4. Box the compass, that is, rotate the compass housing until the orienting arrow is aligned with the needle
5. Read the number on the azimuth circle where the direction of travel arrow intersects the compass housing. This is the direction of your intended course.

Determining Distance on a map

There is a distance scale on your map. This scale allows you to associate distances on the map with distances in the real world. There is a small ruler on your compass; use this ruler to determine the distance in inches (or centimeters) between two points on the map. Use the map scale to convert this to actual distance on the ground. This is done by placing the compass ruler on the map scale. Determine the number of meters to the inch. Multiple this number by the number of inches between the two points on the map. This is the number of meters between the two points.

EXAMPLE: You have determined there are 100 meters per every inch on your map. You want to know the distance between marker 10 and marker 11. Using the ruler on your compass you determined there were



1.5 inches between them on the map. If you multiply 1.5 inches by 100, you know there are 150 meters between marker 10 and 11.

How many paces is that?

Once you have figured out how many meters you need to walk to get to a certain point, you need to figure out how many steps it will take. To do this, you must **find the length of your pace. A pace is two steps.**

At Verdun, next to the multipurpose building, there are two posts. The posts are 300 ft apart. This is called a **pace course**. Jog the distance between the 2 posts to determine your pace. Do this twice, once up hill and once down hill. Each time, count the number of paces. One pace is two steps. Start off on your left foot. Each time your right foot hits the ground, you have taken one pace. Divide the number of paces for each way into 300. This gives you the feet per pace going up hill and going down hill. A typical pace is 4 to 5 feet. (A meter is approximately 3.28 feet; 5 feet is about 1.5 meters.)

Image Credits:

1. Compass Diagram: <http://www.chasetrek.org.uk/tutorial/compass.html>
2. Orienteering Marker and Punch: <http://aeorienteering.com/>