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ORIENTEERING

ORIENTEERING PROGRAM

Students learn basic orienteering techniques, including how to interpret a map and take a bearing with a compass, and are then challenged to navigate their way along an outdoor orienteering course. Although this program can be done year round it is suggested for warmer weather. For grades 3 and up.

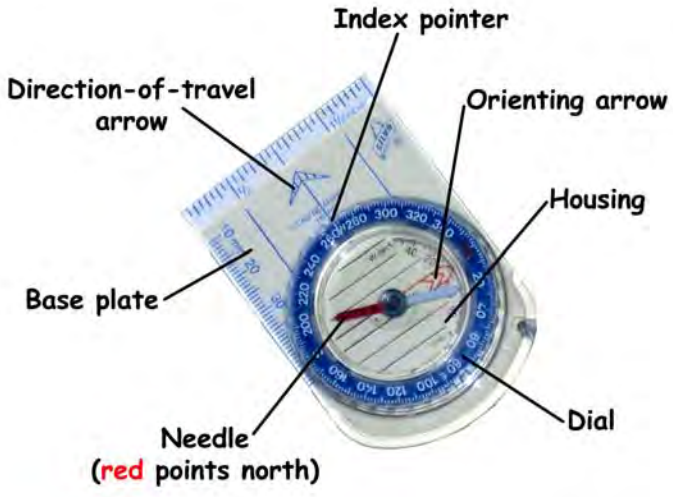
THE BASICS

Orienteering is a competitive form of land navigation. In orienteering you use a map and compass to find your way across unfamiliar terrain.

A **compass** is a navigational instrument for finding directions. It consists of a magnetized needle free to align itself accurately with Earth's magnetic field. A compass provides a known reference direction which is of great assistance in navigation. The cardinal points are north, south, east and west. A compass is divided into 360 directions known as bearings. The needle on a compass always points north, thus giving you a reference point to work from to determine other directs or bearings.

A **map** is a graphic representation of a portion of a given space, as seen from above. It often uses colors, symbols, and labels to represent features found in that space. Maps are normally drawn to a specific scale. Many maps also include a reference point of north on them for orientation. The science and art of map-making is cartography.

BASIC PARTS OF A COMPASS



TAKING A BEARING

USING A COMPASS TO ESTABLISH A DIRECTION OR BEARING:

First, determining a **north bearing**.

- Hold the compass in front of you, with the *direction of travel* arrow pointing straight ahead. Keep the compass as level as possible.

- Turn the *dial* until the "N" lines up with the *index pointer (see left)*.
- Keeping the compass directly in front of you, turn your body so that the red magnetic *needle* is centered inside of the *orienting arrow*. Once this is done you will be facing north.

- To face south, repeat above except turn dial to "S" on the index pointer.
- To face 220 degrees (southwest) repeat as above except turn the dial to 220 on the index pointer
- Repeat to find any of the bearings on your compass.

On the web: Misouri Dept. of Conservation - http://mdc.mo.gov/discover-nature/how/map-and-compass-skills

HOW TO ORIENTATE A MAP TO NORTH USING A COMPASS:

Although a map tells us a lot of information, it is a compass that "sets" the map so that it is correctly oriented. When correctly oriented, a map helps you to determine the correct directions things are from each other. Every map should have a north facing arrow on it for reference. The map may also have orientating lines that point north on it. To use a map more precisely, you'll want to be able to set the map flat so that the north arrow on it actually faces north. This will orient the map north.

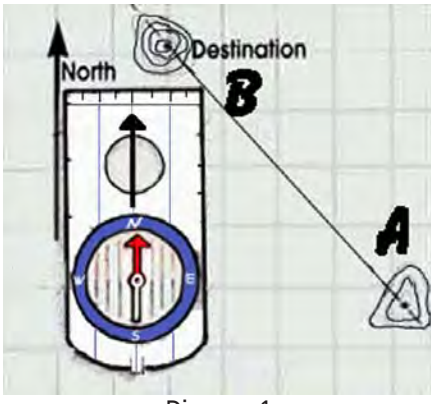


Diagram 1

Start by laying the map flat. Now set your compass to north (N on the index pointer) and lay it down on the map so that the north arrows on the map and compass line up (see diagram 1). Turn both the map and compass together to accomplish this and use the same technique as above by placing the *red needle* on the compass inside the *orienting arrow*. Once you do this the map will be oriented north.

Once the map is orientated to north, it is now possible to determine the precise direction to each of the objects found on the map. **To find directions to various objects on the map, remember that your map should not move once it is set to north.** As an example, to find the direction from Site A to Destination B, place your compass on the map with the back edge at Start A and the *direction-of-travel arrow* facing the Destination point B (see diagram 2). Now turn the *dial* until the *red needle* is centered with the *orienting arrow.* The direction in degrees will be read at the *index pointer* on the compass.

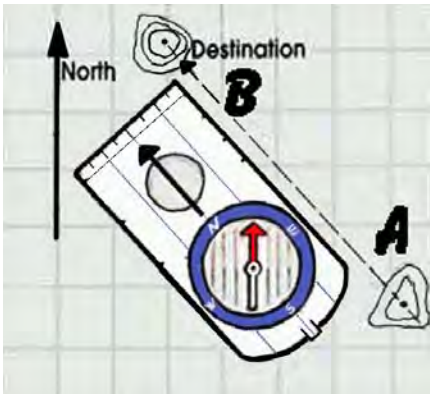


Diagram 2