

Basic Orienteering Instruction

I. Map Familiarization: Take 15 minutes or so to just look at the map and discuss colors and symbols:

A. Five Colors: Each color represents a different class of features:

- Blue: Water
- Green: Undergrowth (brush)
- Yellow: Clearing and fields (where there is sunlight)
- Black: Natural objects (boulders, cliffs)
Manmade features (trails, buildings)
- White: Open (normal) forest

B. Map Symbols: Use map legend and symbols to locate various features on the maps. Can also relate surrounding features to symbols shown on the map.

II. Map Handling Techniques:

A. Orient the Map: To keep all the features on the map matched to the terrain.

1. Using the terrain: Turn the map until what is in front of you in the terrain is also in front of you on the map.
2. Check using a compass: The north meridian lines on the map should align with the red end of the compass needle

B. Fold the Map: To keep only the area you need in sight. That's all you are concerned about at this time.

C. Thumbing: To always know exactly where you are without searching around

1. Place your thumb on the map near your location
2. As you move along, move your thumb to a new location on the map.

III. Navigation Techniques:

A. Questions to ask *before* you start moving:

1. Where am I right now? (Use map handling techniques)
2. Where am I going? (What is the control feature that I'm trying to find?)
3. What will lead me to that feature? **Route Choice**: What's the best route from here to there?
 - Should we follow a trail or follow a compass bearing? Which one is better, or shorter? Does the longer trail route get to a better attach point? Is the trail faster than through woods and brush? Does it avoid steep climbs?
 - Often it's a **Handrail**. That's a linear feature (such as a trail, fence, or stonewall) along a leg that leads you in the direction you want to go.

B. Questions to ask *while* you are moving:

1. How will I know I'm on course? Read the map as you go along: Checkpoints along the way keep you on target.

- a. Point out features as you go along and identify on the map
- b. Check map orientation as you go along
- c. Check thumb position on the map
- d. Ask what features they should see next.
- e. Compare terrain with map contours. Are you traveling uphill or downhill? Is it steep or level ground? Is there a rise on the left or right side?

2. How will I know that I'm almost there? (Find a clear feature just before your target.) Also called an **Attach Point**. That's an easily found feature, such as a trail junction, trail bend, or stream crossing, near a control that is used as a departure point to take a shorter more precise route to find a control.

3. How will I know if I've gone too far? It's a feature beyond the control that warns you when you have actual gone past the control. Also called a **Catching Feature**.

IV. Pace Counting: Used to measure distance. Determine your pace (using the pace course). Then scale distance from the map and use your pace to locate controls.

V. Compass Bearings: 3 step method:

- A. Place the edge of the compass on the map so it goes from where you are to where you want to go.
- B. Holding the compass on the map, and ignoring the needle, turn the compass bezel (compass housing) so that the lines in the housing line up with the north-south meridians on the map.
- C. Leaving the compass setting alone, turn yourself with the compass and map until the red end of the compass needle points to N on the dial. The direction of travel arrow on the compass now points in the direction you want to travel.

Additional reading:

BSA Orienteering Merit Badge Book

Baker, James E.: [Orienteering for the Young](http://www.us.orienteering.org/OYoung/index.html) on the web at:
<http://www.us.orienteering.org/OYoung/index.html>