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**Map Holding and Folding**

- Develop familiarity with holding maps.
  - Hold map in one hand out in front of you.
- Orient the map north using major linear features and multiple point features in the terrain.
  - Fold the map parallel to (and about 2 inches from) your line of travel and hold it along that fold line.
- Figure out what direction to travel through orienting the map to the terrain (The process of).
  - Keep your thumb on the handrail you are on and refold map at each new handrail.
- Thumb along; keep thumb near where you are to keep in contact with the map.
  - Tuck extra map (when holding a large map) away between two finger of hand (show picture).

**Terrain and Feature Understanding**

- Develop familiarity with trails, prominent features (ex. boulder, lone tree, bridge, etc.).
  - Learn basic terrain features and be able to identify them (ex) boulder, knoll, lone tree, etc.
- Identify basic features in the terrain and then locate them on the map. *Basic features are the most common, easily understood features in your terrain, excluding contour features.
  - Identify lakes, rivers, streams, and marshes in the terrain.
- Identify terrain the differences between distinct and indistinct boundaries.
  - Understand the darker green an area is on the map the slower the vegetation / forest is to get through.
- Identify (in the terrain) features as linear and distinct.
  - Understand that the terrain less distinct / less obvious features as linear (vegetation boundaries / edges of fields, ridges, re-entrants, etc.).

**Finding Controls / Control Flow**

- Learn what we are looking for (ie) controls.
  - Understand that controls are always beside a feature in the terrain.
- Develop familiarity with equipment i.e. punching systems.
  - Know how the Start, Finish, and Controls are marked on the map.
- Know when you need to find the controls in order vs. in any order you choose.
  - Know when you need to find the controls in order vs. in any order you choose.
- Verify that you’re at the right control by matching the map control code to the punch code.
  - Verify that you’re at the right control by matching the map control code to the punch code.
- Understand that the control flag will be at the feature in the middle of the control circle.
  - Identify the feature (on the map) in the middle of the control circle (the control feature).
- Look for control features and not just the flag when approaching controls.
  - Know common international control description symbols.
- Learn symbols in other columns of control descriptions such as ‘which of multiple’ and ‘side of feature’ symbols.
  - Use the information from the control descriptions to decide which is the best direction to approach the control (eg. control on top or at foot of cliff).
- Learn less common international control descriptions as demanded by terrain.
  - Steps into and out of the control: 1. Know what the control feature(s) is and where relative to the feature the flag will be.
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<td>After you punch a control stop and orient the map to figure out which direction to leave</td>
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**Map Understanding and Interpretation**

- Develop familiarity with orienteering maps
- Know what all orienteering maps have: map name, north lines, course, scale, legend, pointing north, etc.
- Identify common and distinct point and linear features on the map and then locate them in the terrain
- Understand how the basic and common contour shapes and features are represented on the map:
- Identify the high points, low points, and large slopes (including direction), on the map using contours.
- Know how the Start, Finish, and Controls are marked on the map
- Understand that the darker green an area is on the map the slower the vegetation / forest is to get through
- Know some of the map symbols that identify distinct boundaries
- Spot simple individual contour features in the terrain and identify them on the map while orienteering.

- Know when you need to find the controls in order vs. in any order you choose
- Identify (on map) features as linear and distinct.
- Recognize on the map less distinct / less obvious features as linear (vegetation boundaries / edges of fields, ridges, re-entrants, etc.)
- Understand how individual contour features fit into the broader topography of the area mapped. See the landscape as a whole before zooming in.

- Learn what basic map colours mean (green is vegetation, yellow is fields, etc.)
- Know how lakes, rivers, streams and marshes are marked on the map
- Understand the effect that individual contour features and up or down slopes will have on your run or route choice.
- Learn what basic map symbols mean ex) black dot is boulder etc.
- Know what the contour interval is and how that will affect your orienteering
- Understand the differences between form-lines and contour lines

**Linear Features: Handrails, Catching Features, Collecting Features**

- Practice running along linear features e.g. trail or stream
- Identify features (both in terrain and on map) as linear and distinct.
- Identify on the map and in the terrain less distinct / less obvious features as linear.
- Identify linear (distinct) features as handrails, catching features, or collecting features (both in the terrain and on the map)
- Learn symbols that affect terrain runnability.
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<td><strong>Route Choice</strong></td>
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<td>Stop and choose which trail (if applicable) will lead to the next control (and then follow that trail)</td>
<td>Create route by identifying all of the linear features you will use and take into consideration how you will switch from one handrail to the next</td>
<td>Identify a leg as a simple route choice leg or not</td>
<td>Learn symbols that affect terrain runnability (stony ground, etc.).</td>
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<td>Identify multiple routes (series of handrails) and select which is shorter</td>
<td>Choose a route on a simple route choice leg by identifying the route choice options and picking which is best for you.</td>
<td>Use the information from the control descriptions to decide which is the best direction to approach the control.</td>
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<td></td>
<td>Begin using the acronym C.A.R. (Control, Attackpoint, Route) to remember these steps and keep you focused</td>
<td>Learn and consistently demonstrate basic route choice tactics and decision-making principles, e.g., at every control, have a plan for getting to the next controls, and commit to it</td>
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<tr>
<td></td>
<td>Navigating around a short course consistently using the route decision making process.</td>
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<td><strong>Relocation</strong></td>
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<td>Stop and retrace your steps to get back to your last known location before continuing.</td>
<td>Bail to a major feature and decide to regroup and continue or to quit the course.</td>
<td>Locate yourself in the terrain using the terrain around you and only bail to a major feature if that doesn't work. Decide to regroup and continue or quit the course.</td>
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<td><strong>Look Wide Run Straight</strong></td>
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<td>Mentally check off features along the handrail you're following</td>
<td>Look for distinct features to the left and right of your handrail and then locate them on your map</td>
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<td></td>
<td>Simplification</td>
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<td>Navigate from one distinct linear feature to the next cutting through the terrain.</td>
<td>Identify the high points, low points, and large slopes (including direction), on the map and in the terrain.</td>
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<td>Understand the concept of pace / concentration change along a route</td>
<td>Understand how individual contour features fit into the broader topography of the area mapped.</td>
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<td>Understand what an attackpoint is, what makes a good attackpoint, and how to use them</td>
<td>Move at a speed that allows you to stay in contact with the map.</td>
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<td>Identify an attackpoint on the map and successfully use it to arrive at a control</td>
<td>Look for reliable attackpoints between steps in your plan.</td>
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**Tactical**

- Practice specific tactics in order to make them routine, e.g., start the race slowly and carefully to get used to the map and scale, and to conserve energy for later in the race; take safer than normal routes early and late in the course i.e., when excited or tired.
- Move at a speed that allows you to stay in contact with the map.
- Practise focusing your concentration in the face of distraction and shifting focus by using self-talk, thought stopping, refocusing, and key-words.
- Understand when to plan ahead.
- Practise imagery, e.g., visualize successful execution of technical skills.

**Compass**

- Find and travel along cardinal directions using a compass.
- Learn the differences between rough compass and precision compass technique.
- Take a bearing on a map using compass.
- Use precision compass to travel accurately from attackpoints to controls.
- Use rough compass technique to maintain direction through the forest towards obvious catching features / handrails less than 300 meters distance.
- Use rough compass technique to aim off about 20 degrees to one side of your next attackpoint when taking a compass bearing to a catching feature.

**Map Reading Technique**

- Understand when to plan ahead.
- Understand when to look at the map more frequently.