

Mistake Proofing for Orienteering

Patterns Become Habits & Habits Become Patterns

Orienteering courses are designed to be 50% mental and 50% physical, and course setters design courses to allow those that are not thinking clearly and navigating carefully to fail. Remember, orienteering is “The Thinking Sport.” You must plan ahead, see potential mistakes and know what to do to keep them from tripping you up. It’s a mental game between you and the course setter, as well as a physical challenge. Run smart.

- 1) **Map study** – If there is an existing map of the area or if he is given the map prior to the Start, the smart orienteer will study the map, noting scale, contour interval, types of terrain, map symbols used and become familiar with the area around the Start/Finish. Likewise, if the control descriptions (clues) are given ahead, he will make sure he’s familiar with all the symbology and can visualize what each description would look like in the forest.
- 2) **Thumbing & folding the map** – No orienteer can keep his eyes on his map all the time, so it’s important to keep your thumb on your location on the map at all times. This not only prevents wasted time, but helps eliminate parallel and similar-terrain errors. Folding the map and keeping it oriented, along with thumbing, will enable the orienteer to maintain good contact with his location on the map.
- 3) **Navigational order** – Unless the course is a “Score” type course, you must follow the numerical order of controls. A course isn’t really a series of control sites, but rather a series of legs between control sites.
- 4) **Visual distance & size estimation** – Be prepared for the visibility that you will have on competition day. Be aware of the size of features and how visible they will be based on the season and thickness of the woods. Depending on the terrain and season, visibility can change drastically.
- 5) **Contour reading** – Contours are the most important, and most often ignored, features on a map. Contours show the shape and steepness of the terrain, and can make keeping track of your location very easy if you take the time to learn to read them.
- 6) **Control enlargement** – No control feature is sitting out there by itself, there’s always something around it or nearby it. Enlarge your perception of the control by making it physically bigger and thus easier to find. For example, see the control feature not as just a boulder, but a boulder on the side of a specific hill. Find the hill first and finding the boulder becomes easier.
- 7) **Picking attack points** – Attack points are features that are near your control feature but easier to find. Pick an attack point and navigate to it, then navigate from there to the control. Using Attack points is probably the most helpful orienteering technique and should be used for every control.

- 8) **Using the clues to determine approach** – Sometimes where the marker is on the control feature will determine your attack point. For example, if the control is on top of a cliff, you will want to approach the cliff from above. The specific location of the marker in relation to the control feature is on the control descriptions (clue sheet). If the course setter deems it important to give you flag location in relation to the feature, pay attention.
- 9) **Collecting & catching features** – Collecting features guide you into a control. Catching features stop you from going too far beyond a control. Using collecting and catching features is a wonderful error-prevention technique. You may want to pick your attack point based on the presence of collecting and catching features.
- 10) **Breaking legs into leg segments** – By breaking a leg from control to control into smaller segments, you are in effect making the leg simpler to navigate. Each segment can be navigated using the skills and techniques right for that segment, as well as at different speeds.
- 11) **Obvious & subtle handrails** – Handrails can be any features you can follow on your way to a control feature. Obvious handrails include trails, streams and edges of clearings. Subtle handrails are usually contour features such as ridges and edges of hillsides. Learn to see subtle ones.
- 12) **Aiming off** – If you are taking a compass bearing to find a point on a linear feature, you might miss it due to drifting off your bearing. Try setting your compass to deliberately miss it to the left. Then when you hit the linear feature, you know to turn right to arrive at your point. An example would be setting your compass to hit a trail North of the trail junction you want to find, knowing that you would only have to go a short distance South on the trail to find the junction.
- 13) **Planning routes** -- The smart navigator begins a leg by looking first at the control site and working backwards to where he is now. You want to plan your route in the following order:
 - a) Identify control on the map and read the control description.
 - b) Enlarge the control and identify surrounding terrain.
 - c) Look for attack points, collecting and catching features.
 - d) Identify handrails that could help guide you to the control vicinity.
 - e) Plan at least 2 routes from your current location to the control.
 - f) Break each route into leg segments and determine skills and techniques needed for each segment.
 - g) Choose the route choice that is within your navigation abilities with the least amount of error probability.
- 14) **Executing Routes** – Executing a Route Choice requires concentration combined with physical effort. Balancing them is important, your brain needs oxygen to think, but you won't do well if you don't move quickly. If you have properly planned your route choice, you should have no trouble executing it unless:
 - a) You over-estimated your map reading skills.
 - b) You under-estimated how much oxygen your brain needs.
 - c) You got distracted and wandered off course.
 - d) You didn't properly evaluate the visibility of the terrain.
 - e) You didn't trust your abilities and followed someone.

15) Recovery & Relocation – Contrary to most claims, the map and compass are most likely not to blame for poorly executed routes. But there's hope, you just need to determine your current location and plan your route again. If you don't know where you are:

- a) Stop! Don't make the situation worse.
- b) Remember your last known location and mentally list several features you've seen since and try to find them on the map.
- c) Determine features around you, try to find them on the map.
- d) Determine likely mistakes and where they might have led you.
- e) If you have a likely guess of location, verify it by testing that location on a short leg, identifying features you would find.
- f) No "creative landscaping", don't lie to yourself.
- g) If quick recovery fails, determine the nearest linear feature you can't miss on a rough compass bearing, run to it, then run along it, looking at features, until you can positively identify your location on the map.
- h) Be aware of time limits and how long it will take you to get to the Finish line. Do not allow yourself to be overtime, it violates safety procedures and may cause unnecessary Search and Rescue efforts to be initiated.

16) Competition Strategy

- a) Get plenty of sleep, eat breakfast, hydrate, relax.
- b) Set a goal for the event based on previous errors.
- c) Evaluate your physical and mental well being and adjust competition strategy to compensate for any weakness or injury.
- d) Be sure you have compass, watch, whistle, punch card or e-card.
- e) Dress appropriately. Tape as recommended by your coach.
- f) Take your time going to #1 (don't blow the first control).
- g) Whenever possible, plan your routes before you need to take them in order to minimize standing still.
- h) As you approach a marker, plan your exit, either in the direction of your next route, or to move away from the marker to plan. Do not give away the marker location.
- i) Check the control code and punch, as efficiently as possible.
- j) Quickly move off in the direction you have already determined.
- k) Don't let other competitors distract you.
- l) Keep hydrated, drink water at water stops or carry your own.
- m) Keep track of your time, don't panic, breathe evenly.

17) Post-competition procedures and Evaluation

- a) As you finish, re-hydrate, then pull out your map and a pen and highlighters. Draw your route as you actually ran.
- b) Draw (in another color), any alternative routes that might have worked better, plus any attack points you should have used and didn't. Mark where you feel you made an error.
- c) Put your name, date and elapsed time on the map.
- d) In your competition log, write a self-evaluation of your course. Note particularly any trends or tendencies for error. Suggest goals for future events and training.
- e) Take your map home where you can study it, re-run the course mentally, and think about better choices you could have made.
- f) Ask your coach to go over your run with you and make suggestions for training and future competition strategies and goals.

