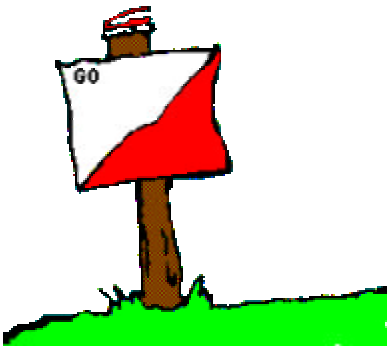
Orienteering - the Sport of a Lifetime



Orienteering is the sport of navigation with map and compass. It's easy to learn, but always challenging. The object is to run, walk, ski, or mountain bike to a series of points shown on the map, choosing routes–both on and off trail–that will help you find all the points and get back to the finish in the shortest amount of time. The points on the course are marked with orange and white flags and punches, so you can prove you've been there. Each "control" marker is located on a distinct feature, such as a stream junction or the top of a knoll.

Orienteering is often called the "thinking sport" because it involves map reading and decision-making in addition to a great workout. Any kind of map may be used for orienteering (even a street map), but the best ones are detailed five-color topographic maps developed especially for the sport. O' maps show boulders, cliffs, ditches, and fences, in addition to elevation, vegetation, and trails.

Orienteering is a sport for everyone, regardless of age or experience. The competitive athlete can experience the exhilaration of running through the woods at top speed, while the non-competitive orienteer can enjoy the forest at a more leisurely pace. Most events provide courses for all levels–from beginner to advanced–and the sport has been adapted for small children and people in wheelchairs.

If you love maps, exploring, and the great outdoors, try orienteering. You'll be hooked for life!

What to Expect

Rochester Orienteering Club (ROC) will provide the map for a small entry fee ($5 for non members). A compass may not be needed for a beginners' course. If you have one, bring it. Any compass in which you can see the needle will do for now. ROC will have a small number of compasses to borrow. If you want to buy a compass, a simple orienteering compass is available for $10 or less. The cheapest one is fine, but get one with a clear plastic baseplate meant for orienteering. A lanyard for the compass is helpful. A whistle (in case you get "misoriented" and need help) is recommended. ROC sells whistles or you can get nice ones at the Dollar Store.

Wear comfortable walking clothing that you don't mind getting a little dirty. If it's cold, wear several thin layers of clothing; you will get warm quickly and want to take a layer or two off. If it's warm, wear light pants but not shorts, since you may encounter brushy vegetation if you go off trail.

Bring some water and, if you want, something to eat afterwards. ROC usually has drinks and snacks for afterward, but depending on the turnout these sometimes run out early.

Beginners' instruction

A short orientation session is usually available. This session will give you a few quick pointers on reading a map and doing an orienteering course so you can do your first course. It is a good place to ask a lot of questions.

Registration

Registration is probably the first place you will see when you go to an orienteering event. Registration is open for a specified time, usually 12 noon to 1:30 for ROC events. You can arrive and register any time during that period. However, make a note of anything that may not be open for the whole event, such as beginners' instruction or the string course.

At registration you will fill out an entry form, including basic information like what course you are doing, as well as a basic liability waiver. You will then get a map of the area, a control card, and a control description sheet. A map case (a clear plastic bag) is usually available too, and can help keep your map, control card and control descriptions clean and organized.

Adults and teenagers may sign up to go out singly or in groups of two or three (more is usually unwieldy). Children should always be accompanied by an adult for safety. If possible, get a map for each person so everyone can join in navigating through the course. The control description sheet lists the features you will be looking for on the course; this will make more sense to you once you have copied the course onto your map (if the map is not pre-marked). After registering, you can usually start the course as soon as you are ready.

Finish

Be sure to check in at the finish, even if you do not complete the course, so that the organizers are not searching for you. Check out the results board; results are usually posted as they come in, even for beginners' courses. It is often fun to compare the routes you took with other people who did the course.

For the Young Orienteer

The "Little Troll" program is designed so a child of any age can start orienteering at a level just right for him/her and progress in a safe, easy manner until ready to solo. Parents may be assured that your child is learning to orienteer in a program especially designed with his/her needs in mind.

The program is in 4 levels. The first level is the only one requiring a separate map and course, usually a String course. The string course consists of a short circuit only a few hundred meters long, and even pre-school children can enjoy this activity. The child (and accompanying adult) follows a string for the entire length, visiting controls along the way. Upon completion of each different course, the child gets a sticker for his Little Troll card. After completing 5 courses (and receiving 5 stickers), the card is sent to USOF for a Little Troll patch. ($1 nominal handling fee)

Levels 2, 3 and 4 are done on the White course. They are, in ascending order of difficulty, Chipmunk, Rabbit, and Roadrunner. An adult accompanies the child on the White course and the amount of help the child receives from the adult is determined by the level the child is completing.

Chipmunk -- A lot of adult help. The child is learning to:

1. Be comfortable in the forest.
2. Read the basic symbols on the map.
3. Check control codes.
4. Become familiar with meet procedures.

5 different courses are completed to earn a Chipmunk patch.

Rabbit -- Some adult help. The child is learning to:

1. Know common map symbols and colors.
2. Orient the map by identifying surrounding terrain.
3. Keep thumb on the map near current location.
4. Begins to consider route choices.
5. Orienteer along a single path.
6. Be aware of basic safety rules.

7 different courses are completed to earn a Rabbit patch.

Roadrunner -- Unassisted, adult follows for safety. The child should:

1. Keep map oriented during the course.
2. Make your own route choice decisions.
3. Orienteer from path to path.
4. Know safety rules.

7 different courses are required to earn a Roadrunner patch.

Once a child has completed the Roadrunner level, he/she should be able to begin to orienteer on his own. Age is not critical, children can start at any age on any level and progress at any rate. It is perfectly okay to remain at any level for as long as the child need to learn the skills of that level. Cards and stickers will be available at club events. All youngsters are welcome to participate.

Challenges for all

Orienteering courses offer something for everyone.

WHITE the beginner course (usually 1.5-2 km). All controls are on distinct *linear features* (e.g. paths, tracks) with routes that lead the orienteer from control to control, There are no route choice problems on a White course. The White course is appropriate for pre-teens and young teenagers. Adults who do not have confidence in their map reading ability would also start on the White course.

YELLOW: the "advanced beginner" course, (2-3 km). Controls are on distinct *line features* (eg. paths) or raised *point features* (e.g. knolls) immediately adjacent to a line feature and are close together. Routes between controls follow line features with only a few junctions to negotiate between controls. More challenging than the White course, the Yellow course may be appropriate for a starting adult orienteer or older teenagers who have some confidence in their ability to read a map. Orienteers at the White and Yellow levels should be mastering the BEGINNING SKILLS of *orienting the map* and *basic map reading.*

ORANGE: the "intermediate" course will generally NOT stay on trails. Controls may be on prominent features that are reasonably close to an *attack point* or a *line feature*. *Catching* line features are found behind controls on long legs to make mistakes fairly painless. The quickest route choice may be through runnable forest, but an alternative using line features is available. The legs of an Orange Course may vary widely in length and should offer distinct route choices. Orienteers at the Orange level should be mastering the INTERMEDIATE SKILLS.

ADVANCED: All courses beyond the Orange course (BROWN, GREEN, RED and BLUE) should be considered "expert" courses. The course setter is free to place controls on any mapped feature, trying to make legs with difficult route choices. The penalties for navigation errors can be severe. These courses differ only in the degree of physical challenge provided and have course lengths ranging from 3 to 15 km.

To complete an Advanced course, you need nothing more than the Intermediate-level skills, executed accurately and reliably. Once you consistently and comfortably complete Orange Courses, you should consider moving up. However, do NOT try an Advanced course on your first attempt at Orienteering, PLEASE! We want you to have fun, not frustration!

As with all skills, it is far better at first to be accurate than fast. Take your time, avoid mistakes and develop confidence. However, the real skills of the sport of Orienteering come in when you try to be FAST. You'll notice your mental powers decrease as your physical exertion increases--in other words, if you run fast, you run stupid. The trick is to balance your physical and mental exertion. Sure, if you had all day, you could figure out every leg--but if you run hard, can you think well enough to complete the course?

Orienteering skills

(adapted from **Orienteering: "O"-1-2-3**
http://www.televar.com/~maryse/o123.htm)

BEGINNING SKILLS

ORIENTING THE MAP is the act of turning your map around so that it matches the land around you. When you look at your map, things to your left are on the left of the map, things to your right are on the right. Your map can only help you if it is lined up with the real world. An up-side-down map will lead you the wrong way! You can orient your map by matching your map to major features you see around you or by using a compass.

BASIC MAP READING. Orienteering maps follow International Standards and will use the same colors and symbols worldwide. The purpose of an O map is to show distinctly recognizable features and to indicate how quickly you can move across the ground.
MAGNETIC NORTH is always shown on Orienteering maps (generally as straight to the top of the map).
The SCALE of an Orienteering map will usually be larger than you see elsewhere. A larger scale means a smaller amount of land is made larger, which allows for more detail to be shown; the map is "blown up". A "generous" cartographer (map-maker) will provide a bar scale which shows the line length of some given distances. The edge of your compass often has a ruler.
The MAP LEGEND or KEY shows what the symbols mean. Again, these follow International Standards, with the following colors and their uses:

black: man-made plus rock. buildings, roads, trails, fences, plus boulders, cliffs...
brown: contours and landforms (Leave these for later.)
blue: water. lakes, ponds, streams, ditches, marshes.
green: vegetation of various densities, classified by the speed you can get through it (The darker the green, the harder it is to get through.)
white: runnable forest. Confusing at first, it was chosen to show features in open forest. (Think of white as extremely light green.)
yellow: open land. (Think of yellow as sunshine getting through.)

For Beginner Courses, concentrate on man-made features, especially trails. But keep comparing the map with what you see.

INTERMEDIATE SKILLS

This is the level where you learn the heart of land navigation. In addition to Beginner skills, you need to add some understanding of **contour features, attack points, distance judgement, bearings, aiming off, handrails, catching features** and **relocating.**

CONTOUR FEATURES: A **Contour Line** is a line of a given elevation, equal elevation along its entire length. The contour line next to it is either higher or lower, like stair steps. The vertical distance between adjacent contour lines is the *Contour Interval*. The contour lines on the map reveal the shape of the ground (topography). If the contour lines are close together, the ground is steep. The best way to learn to "see" the shape of the land from the wiggles of the contour lines is to go out with a map and compare them

Controls are often placed on contour features such as hilltop, *knoll* (small "bump"), depressions, dirtbank, *spur* (small ridgeline) and *re-entrant* (small valley). Some of these are shown on the map by the contour lines themselves, others have special symbols. **. All are brown on an O map.**

ATTACK POINTS: For each leg, the best approach is to choose a point close to the control where you can be 100% sure of your position on the ground and on the map. From this attack point you can use compass bearing and pace counting (plus whatever else the map shows you) to reach the control.

You should vary your speed. For each leg, look ahead to the next control and select an attack point. Get there as fast as you can. Now, slow down and navigate to the control itself.

DISTANCE JUDGEMENT: Sometimes you need to be able to tell how far you've traveled. For example, you might want to leave a trail 70 meters from a particular junction. To measure off that distance you need to know your pace length. This is generally done by counting your paces along a measured 100 meter course. Remember to make allowances for terrain and gradient.

BEARINGS: From your attack point, you'll need to know in which direction to travel. This direction is the bearing you will take. You can often tell by “eye” approximately which way to go by orienting your map and then seeing which way the control is on the map and project that off into the "real world". The farther you have to go, the less accurate this "eyeball" method is. Alternatively, you can set a bearing on a baseplate compass and follow this bearing using your compass as a reference. Once you set the bearing with your compass, look in that direction, pick on something a good distance away and go toward it. Refer to your compass for the direction and stay on your bearing. (Keep track of the distance you've gone so you don't over-shoot the control.)

AIMING OFF & CATCHING FEATURES: Sometimes it is to your advantage to aim to miss the control! First, you must realize that you're usually not going to aim perfectly at the control and go directly to it. Looking at your map you might see that past the control on say, the right side is a big obvious "catching" feature, while on the left side it is just more forest. Obviously, if you are going to miss, you want to miss on the right side. So aim as best as you can, and then purposely head a little to the right (in this example). Another great advantage is that now you don't need to look both ways for the control; you know it will show up on your left because you have aimed off to the right.

In general, when you look on your map from your attack point to the control, look beyond as well. What would you see if you ran past your control? This Catching Feature is how to tell if you've gone too far.

RELOCATING: At all levels, it is possible to become disoriented and lost. When you realize you are lost, you must relocate. This means giving up the search for your control and instead, finding some big obvious feature to again find yourself on the map. Then you can choose to abandon the course or have another attempt at your control. A *Safety Bearing* will get you to a major line feature such as a road or river from anywhere on the map. A *Relocating Feature* is an unmistakable feature, such as a large lake or hilltop, junction of roads, trails, streams, etc.

Thumbing the Map is a useful technique that will keep you from getting lost or confused.. Fold the map into a small, easily held piece and hold your thumb on the map near where you are. Keeping your thumb near where you are as you go along makes it easier to refer back to the map when you take your eyes off it. It also reduces the chances of your eyes “skipping” to another part of the map, say, to another trail junction. This is an easy error to make.

"Traffic Light Orienteering": Vary your speed. When you don't have to think about your route (for example, just following a trail) go as fast as you can--GREEN LIGHT. But when you have to think about your route choice (for example when you reach a trail junction), slow down!--YELLOW LIGHT "Inside the control circle", proceed with caution!--RED LIGHT

Advanced Orienteering

As with all skills, it is far better at first to be accurate than fast. Take your time, avoid mistakes and develop confidence. However, the real skills of the sport of Orienteering come in when you try to be FAST. You'll notice your mental powers decrease as your physical exertion increases--in other words, if you run fast, you run stupid. The trick is to balance your physical and mental exertion. Sure, if you had all day, you could figure out every leg--but if you run hard, can you think well enough to complete the course? Some tips:

Review THUMBING THE MAP. An advanced orienteer holds map and compass in one hand and keeps track of her/his position with tip of compass or thumb. S-he is moving too fast to be able to study the map--only glimpsing at it maybe every 10 seconds. Don't completely stop to read your map--keep moving! Don't try to read everything on your map at once, pick up bits at a time. When you're following a trail or walking up a steep hill, you can take more time to study your map more carefully and plan ahead.

PLAN AHEAD: The simplest example is on your approach to a control marker. Before you reach the control, you should look ahead to the next leg and at least have a general idea of which direction you will be leaving the control marker. Run up, punch, and get out of there! By standing at a control marker to look at your map, you serve as a beacon to other orienteers who may be searching for that particular marker!

PLAN AHEAD: Good orienteers not only know exactly what they are doing now, they know what they will do next. They use the easy bits of the leg they are running on to study route choices for the next leg.

HANDRAILS: Often, your route choice will be almost parallel to a line feature like a fence or stream. An Intermediate orienteer will go to the line feature and travel along it. The Advanced orienteer will look for it, but use it as a handrail by judging how far away from it to stay.

COLLECTING FEATURES: You chosen route may be "a bit left of this, and then a bit right of that, then on to that". These are collecting features - you mentally check them off as you pass, trying to stay the right distance away.

CONTOURS AS LINE FEATURES: If you are able to run around a slope without gaining nor losing elevation, contour lines can be as useful as any other line feature.

SIMPLIFICATION: You don't need to locate everything on the map that you go by! If there are for example, 10 small knolls and one pond on your chosen route, ignore the knolls and use the pond as a collecting feature. If there are lots of criss-crossing trails, ignore them all and use something else to keep track of where you're going. Most importantly, try to simplify as much of the leg as possible up to your attack point.

MAP DETAIL: You may need to navigate through or into very complex areas (for example, old quarry workings can be amazing). If it's complicated, and you must read the detail, go slowly enough to do it properly. Accuracy is best.

STRAIGHT LINES: The line joining the control circles is the shortest distance. The best orienteers stay as close as possible to it and feel you should only choose a longer route if there's a compelling reason. The better you get, the straighter your course.

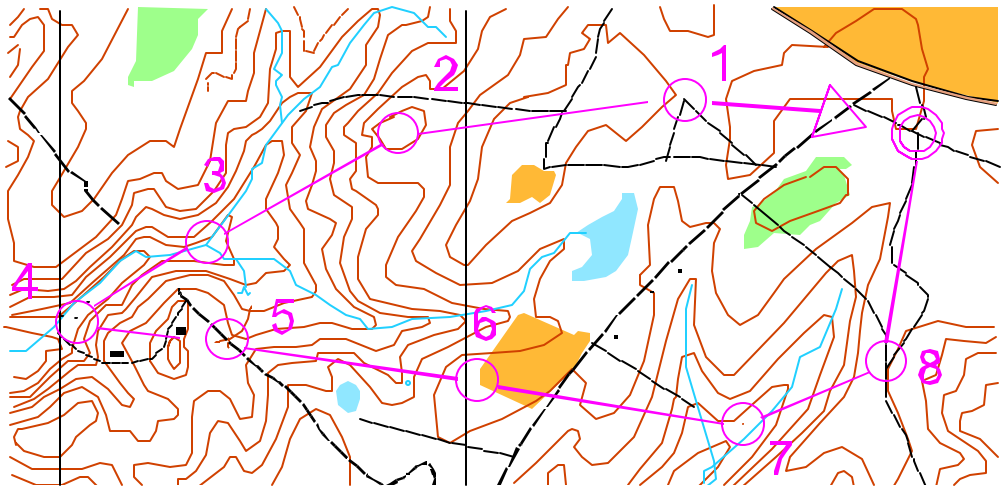
ROUTE CHOICE: Planners will be trying to test all aspects of land navigation technique. Study each leg as a separate problem and look for the most appropriate solution. Where there are choices, choose the one which suits YOU best.

ASSESS RISKS: If you could memorize the map at one glance and judge distances and bearings perfectly, you could run flat out all the way around. All you ever need is "just enough" - but what is that? And what if you miss a control? Assess risks and take chances. Racing means operating right on your limits - if you don't others will!

REVIEW & COMPARE "SPLITS": Soon after completing a course, mark on your map with a pencil the exact route you took. Turn your map over and make notes of your route choices and how they turned out. Using a watch with lap-splits, you can record your time on each leg. Find other orienteers who ran on your course and compare your split-times for each leg and your route choices. It's the best way to learn!

Try Orienteering

There is nothing to compare to actually orienteering in the woods, but a look at this excerpt from the United States Orienteering Federation website (www.us.orienteering.org) will give you an idea of what an orienteering course is like. The comments explain how one might complete the course. While all controls must be visited in sequence, the route you take is your own choice.



Point 1 (Bend in the trail): The triangle marks the starting point. You see you are on a large trail and should follow it until it forks, then turn right. Immediately the path forks again and you go right again to the sharp bend where the first orange and white marker hangs. You punch your score card and examine your map to choose your next route

Point 2 (Hill): You decide to follow the trail south to the junction and turn right, then onward to the next right turn, then a left turn. You notice the trail going slightly downhill then slightly up again. This must be the small hill. You look to the left and see the second control.

Point 3 (Stream junction): It would probably be best to go back to the trail and follow it to the stream then go southwest to the next stream junction

Point 4 (Large boulder, west side): If you continue to go downstream you will soon pass one boulder then another which is south of the stream bed and a third boulder in the stream. This is your place to turn east to the larger boulder, there it is!

Point 5 (Fork in the ditch): You go south a short distance to the trail and start uphill. The trail bends north and you pass two buildings, then turn right at the trail junction and come to the ditch.

Point 6 (Clearing, west corner): It is a long way around on the trails to the clearing so you decide to try your compass. You set your compass toward the corner of the clearing. Then after studying the map you see that if you wandered slightly to the north nothing is there to stop you, so you decide to go a little bit south on your compass bearing. The large trails will catch you from going too far. You follow your compass into the woods and pass a pond, boulder cluster and a well. A quick check of the map shows you are right on. Soon you see a bright spot in the woods. It must be the clearing, that was easy.

Point 7 (Knoll): You go east through the clearing to the trail, go northeast to the small trail and turn right. The small trail leads you to the stream, you continue downstream to the junction and follow the other fork upstream and soon see your knoll.

Point 8 (Trail junction): You follow the stream up to the end and continue in the same direction to the trail then turn right to the junction. You have found the last control and follow streamers to the finish line (the double circle).

At the finish you find refreshments, smiles and laughter. Everybody is comparing their routes and telling of their own adventure. There were others completing the course faster than you, but you found them all, you feel like a winner.