



Orienteering Canada Technical Skills Development Chart

This is a draft document.

This skills development chart has been designed to show how skills are developed over time and to what level you should expect athletes in a given LTAD stage to perform in a given skill area. This chart is not intended to be used as a direct teaching tool. Orienteering Canada's Skills Progression Document goes into many of these skills in more detail and also shows the order in which they are best taught. The Skills Progression Document is a better tool to directly help you build your junior program and create lesson plans.

Note to instructors and coaches: the terminology in this document is standard 'orienteering lingo' and is not necessarily the best language to explain the given concepts to young athletes. It is best to use clear language that they will understand (i.e. checkpoint instead of control) to explain different concepts at different ages.

Pre-Introduction LTAD I - Active Start	Intro to Orienteering LTAD II - Fundamentals (7-9)	Basics and Beyond LTAD III - Learn to Train (10-12)	Intermediate LTAD IV - Train to Train 1 (13-14)	Intermediate / Advanced LTAD V - Train to Train 2 (15-16)
Map Holding and Folding				
Develop familiarity with holding maps.	Hold map in one hand out in front of you	Hold the map in out in front of you in one hand and oriented to you and the terrain	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)
	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		
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.	Know the prominent, basic terrain features (major point features and manmade features such as trails, fences, etc.), and learn some unusual terrain features	Understand and identify in the terrain the basic and common contour shapes and features	Identify the high points, low points, (tops of hills and bottom of depressions) and large slopes in the terrain.
	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 in the terrain the differences between distinct and indistinct boundaries	
		Understand that the darker green an area is on the map the slower the vegetation / forest is to get through	Recognize in the terrain less distinct / less obvious features as linear (vegetation boundaries / edges of fields, ridges, re-entrants, etc.)	
		Identify (in the terrain) features as linear and distinct.		
Finding Controls / Control Flow				
Learn what we are looking for ie) controls	Understand that controls are always beside a feature in the terrain	Understand that the control flag will be at the feature in the middle of the control circle	Understand the concept of control descriptions: They tell you what the control code is and describe the control feature	Learn symbols in other columns of control descriptions such as 'which of multiple' and 'side of feature' symbols
Develop familiarity with equipment i.e. punching systems	Know how the Start, Finish, and Controls are marked on the map	Identify the feature (on the map) in the middle of the control circle (the control feature)	Know common international control description 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)
	Know when you need to find the controls in order vs. in any order you choose	Look for control features and not just the flag when approaching controls		Learn less common international control descriptions as demanded by terrain.
	Verify that you're at the right control by matching the map control code to the punch code			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. 2. Orienteer to your attackpoint. 3. Precise compass bearing from attackpoint to control. 4. Confirm your control code. 5. Punch the control. 6. Stop and plan your next leg (or remind yourself of plan if you've already come up with one) and figure out what direction you are leaving the control. 7. Pick a feature or spot in the terrain and run towards it.
	After you punch a control stop and orient the map to figure out which direction to leave			
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
	Identify basic features (such as fences, paths, lone trees and common park features) in the terrain and then locate them on the map			Understand the differences between form-lines and contour lines
				Learn symbols that affect terrain runnability.
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)		
Route Choice				
	Stop and choose which trail (if applicable) will lead to the next control (and then follow that trail)	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	Identify a leg as a simple route choice leg or not	Learn symbols that affect terrain runnability (stony ground, etc.).
		Identify multiple routes (series of handrails) and select which is shorter	Choose a route on a simple route choice leg by identifying the route choice options and picking which is best for you.	Use the information from the control descriptions to decide which is the best direction to approach the control.
			Begin using the acronym C.A.R. (Control, Attackpoint, Route) to remember these steps and keep you focused	
			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	
			Navigate around a short course consistently using the route decision making process.	
Relocation				
		Stop and retrace your steps to get back to your last known location before continuing.	Bail to a major feature and decide to regroup and continue or to quit the course.	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.
Look Wide Run Straight				
		Mentally check off features along the handrail you're following	Look for distinct features to the left and right of your handrail and then locate them on your map	
Simplification				
			Navigate from one distinct linear feature to the next cutting through the terrain.	Identify the high points, low points, and large slopes (including direction), on the map and in the terrain.
			Understand the concept of pace / concentration change along a route	Understand how individual contour features fit into the broader topography of the area mapped.
			Understand what an attackpoint is, what makes a good attackpoint, and how to use them	Move at a speed that allows you to stay in contact with the map.
			Identify an attackpoint on the map and successfully use it to arrive at a control	Look for reliable attackpoints between steps in your plan.
				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.
Tactical				
			<i>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)</i>	<i>Move at a speed that allows you to stay in contact with the map.</i>
			<i>Practise focusing your concentration in the face of distraction and shifting focus by using self-talk, thought stopping, refocusing, and key-words</i>	<i>Understand when to plan ahead.</i>
			<i>Practise imagery, e.g., visualize successful execution of technical skills</i>	
Compass				
			Find and travel along cardinal directions using 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.