Map-based Activities

Good Practice Guide

Version 1
2019

Map-based activities

Map-based activities are a group of land-based activities where participants use a map to navigate their way to a series of specific points. Maps are usually in a paper or printed format, but with the rapid adoption and advances in handheld technology, the use of electronic maps is increasing. Participants mostly travel by foot, but sometimes mountain bikes are used and less common are the use of watercraft, such as kayaks or canoes. The focus of this GPG is map-based activities completed on foot and it does not provide information specifically for activities involving mountain bikes, watercraft or any other modes of travel. However, organisers of these activities will find parts of this GPG applicable.
While orienteering and rogaines are the most commonly organised map-based activities, others include geocaching, adventure races and treasure hunts.
Map-based activities occur in a wide range of environments including; urban and rural parks, school campuses, areas of exotic forest and native bush, and farmland.
This GPG is intended to offer guidance to youth organisations, schools, outdoor centres and residential camps offering their participants an experience of map-based activities as part of a wider programme, as opposed to those organising or training for competitive events.

This guidance has been developed for map-based activities that are being organised and supervised by someone such as an instructor, youth leader or teacher.

This GPG is specific to **map-based activities** and is designed to be used in conjunction with the **General Guidance for Organised Outdoor Activities** and the **Map-based Activities Planning Template**.

Potential value of activity

MAP-BASED ACTIVITIES CAN PROVIDE:

- A chance to explore new areas.
- An opportunity to get to know and connect with local areas (developing a sense of place).
- Excitement, fun, mystery and adventure.
- An opportunity to learn and practice new skills such as reading maps.
- Social interaction and being part of a team working on a shared challenge.
- Development of self-management and group management skills.
- Links to the school curriculum e.g. mathematics, geography, biology.
- Environmental experiences (getting outside, off track, in a variety of environments).
- Freedom from media, cellphones and other digital devices or finding new ways to engage with and use technology.

"It's impossible to map out a route to your destination if you don't know where you're starting from." Suze Orman

Planning considerations

See the **General Guidance for Organised Outdoor Activities**

Participants

Guidance on: How to ensure the activities match the participants' abilities and needs.

In addition to the generic participant considerations (see **General Guidance for Organised Outdoor Activities**) organisers of map-based activities should consider:

- Matching the venue and planned activity to the age, maturity and physical fitness of the participants.
- Sequencing and adapting the activity to match the participants' skill level.
- Participants' ability to understand and follow instructions.

Supervision

Guidance on: The level and style of supervision typically required for this activity.

CONSIDER THE FOLLOWING WHEN DETERMINING THE APPROPRIATE SUPERVISION STRUCTURE FOR MAP-BASED ACTIVITIES:

- There is no one ratio of skilled and experienced leaders to participants for map-based activities. Supervision needs vary according to age and ability of the participants (including fitness, medical conditions or disability), the activity involved, the location, environmental conditions and terrain.
- Map-based activities differ from many other outdoor activities in that direct supervision* by an adult is the exception rather than the norm, and participants are usually given a high level of independence. For map-based activities over an extended time frame, or in more difficult terrain, such as adventure races, a higher level of supervision by an adult in a shadowing role, would be appropriate.
- Dividing participants into small groups of 2–3 works best and is much easier to manage that larger groups or individuals.
- The pre activity briefing needs to include a teaching component. Because of the supervision structure used for map-based activities, the teaching component gives the participants the skills to safety participate in the activity without direct adult supervision.
- Ideally use a contained area i.e. an urban park or school campus, with clearly defined boundaries such as roads or fences, that participants should not cross. For less contained areas such as rural parks, or areas of forest or bush, define the boundaries as best as possible, mark any out of bounds areas on the maps and consider placing adult helpers at these areas.

  * Refer to the **General Guidance for Organised Outdoor Activities** for a definition of direct and indirect supervision.

Pre activity – teaching component

The basics to cover with participants pre activity:

- What is a map?
- Colours and symbols used.
- Orientation and North. Get participants practicing orientating their maps 4–5 times. Do this by getting them to face different directions and then re-orientate the map each time they turn.
- Scale. Keep it simple, i.e. how far away is that? For example, if you go a kilometre you will get to the edge of the map.
- Show where they are on the map and make the start an obvious feature.
- Refer to the Orienteering NZ Kiwi-O Manual for some fun activities with maps that can be done in the classroom, prior to the activity.

Pre activity – safety briefing

Safety information to cover with participants pre activity:

- Emphasize they must stay together in their groups.
- Define the area boundaries and identify any out of bounds areas.
- Explain the control makers, control circles and control descriptions. Use simple descriptions not complicated orienteering terms.
- Identify things that can hurt them and how to best avoid these, i.e. farm animals, road crossings, tree climbing, electric fences, ongaonga.
- Keep it simple and concise. Too much information reduces participants ability to retain and understand.
- Time limit, any signals used to indicate time is up, i.e. a horn or siren and how to get back to the start/ finish area.
- Consider a watch or mobile phone per group in larger areas where a time signal won't be as effective.
- What to do if lost or an individual becomes separated from your group.

Some ideas for a basic session outline and progression:

- Teach the basics, what is a map, colours, symbols etc. Limit to this to 10–15 minutes otherwise you can risk overloading participants.
- Consider dividing the session into several blocks of activity and getting participants to come back to the start/ finish area instead of just one big block of activity. This helps them focus more, gives you a check-in part way through the activity and makes them less prone to wandering the wrong way.
- An explanation of *how to play the game*, i.e. find as many controls as you can, clip or mark scorecard, time limit etc.
- Safety briefing for participants. Also have a briefing for any adults helping as assistants or being placed on boundaries.
- Identify the start area.
- A mass start rogaine style event is preferable to a point to point type course with starting intervals, as this introduces an unnecessary level of complexity.
- Use simple scoring based on the number of controls found, or for older or more skilled groups, introduce different scoring for more difficult controls.

Thoughts on introducing a compass:

A compass would not normally be introduced unless some special circumstances required it:

- Preparing or training participants for adventure racing, rogaines or Duke of Edinburgh expeditions where topographic maps (as opposed to more detailed orienteering maps) are going to be used.
- Preparing or training participants for orienteering events in terrain where obvious handrails or linear features (such as roads, rivers, tracks) cannot be used to orientate the map.
- When using orienteering maps, a compass would normally only be used to orientate the map as a back up to being able to do this using natural features.
- Teaching bearings would only be appropriate when using topographical maps that lack the detail included on orienteering type maps. Teaching bearings would include more advanced techniques such as allowing for declination (the difference between grid north and magnetic north, sometimes also referred to as variation or the G-M angle).

Leader competence

The experience and knowledge required by those running the activity, both for normal operation and for managing emergencies.

Skills and knowledge

The simplest way to evaluate competence is to look at the qualifications they hold. Asking questions of potential leaders and having them provide examples of training or experience as part of their answer allows to you to assess their experience and knowledge. It is also appropriate to ask for references to confirm the information they provide.

SPECIFIC LEADER COMPETENCIES RELEVANT TO THE MAP-BASED ACTIVITIES COVERED IN THIS GPG INCLUDE:

- Map reading skills and knowledge, i.e. orientating a map, colours and symbols used.
- Familiar with and be able to use a variety of map types: topo maps, orienteering and rogaine maps, Google maps, urban street maps, MTB park maps.
- Orange level orienteering event experience.
- Ability to teach the basics: orientating a map, use of handrails, thumbing the map.
- Familiar with and prior knowledge of the area being used. A prior visit or reconnaissance is recommended.

IF USING ASSISTANTS SUCH AS PARENT HELPERS, SOME CONSIDERATIONS WOULD BE:

- Using to watch and monitor boundaries, such as roads, out of bounds areas etc.
- Ideally don't include adult/ parent helpers in groups of children as they can *help* too much. If adult/ parent helpers are keen to participate, then encourage them to do so in their own groups. This is great role modelling and means they are available to help out on the course if required.

Relevant Qualifications

There are no qualifications currently available in New Zealand for coaching or teaching map-based sports such as orienteering or rogaining. The following qualifications do have a navigation and map reading component, but these qualifications involve the use of topographical maps (NZ Topo 50) only:

- New Zealand Certificate in Outdoor Leadership (Instruction) (Level 5) with strand(s) in Bush.
- NZOIA Bush Walking Leader and NZOIA Bush 1.

A First Aid certificate is also relevant for this activity type.

"Experience can make all the difference in a tricky situation"

Resources and equipment

Consider what equipment and resources are required to ensure the activity can be run safely. The participants may be required to bring, or it may be provided to them.

Participant

What each participant would need to bring to the activity.

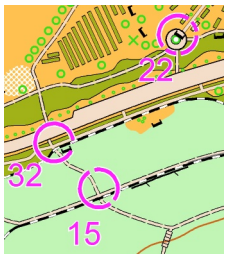
- Footwear and clothing appropriate for the activity, terrain and time of year, i.e. sturdy footwear, sunhat, sunscreen, warm hat and jacket.
- Any personal medication that could be needed during the activity, i.e. EpiPen, asthma inhaler.

Group

Equipment that will be provided for the participants.

Maps

- Maps don't need to be fancy or complicated and what type of map you use will often be determined by what is available.
- Permanent courses in public parks will usually have an orienteering map that has been drawn by a mapper from a local orienteering club.
- Maps of school grounds and Google maps are suitable to use. The Orienteering NZ Kiwi-O Manual has some ideas about how to create DIY maps simply and easily.
- Ideally one map per participant so everyone gets one use.
- Control sites should be marked on the map with a control circle and the control maker should be in the centre of the circle. Don't use an X as it covers up the detail of where the marker is!
- Each control should also have a simple description of where it is located, i.e. corner of building, picnic table, tree. There is no need to use complicated orienteering symbols or language.



Controls

- Control markers are what the participants are looking for in the field. It's a good idea to have one (or a picture of one) to show participants at the start.
- Each control should also have a simple description of where it is located, i.e. corner of building, picnic table, tree. There is no need to use complicated orienteering symbols or Control Cards.

- A simple recording sheet per team, which lists the controls and participants mark to show they have been there.

Leader

Equipment that should be carried by the leader or that the leader should have easy access to.

- Access to a First Aid Kit.
- Time up signal such as a horn, bell, or siren.
- Communications device to get assistance with minimal delay.
- Safety plan including emergency contact numbers (see Map-based Activities Planning Template).
- Site map and information.

Leave No Trace (LNT)/Environmental Protection

Consider how you can plan your activity to minimize long term damage to the environment.

There are seven key LNT principles which are:

1. Plan Ahead and Prepare
2. Travel and Camp on Durable Ground
3. Dispose of Waste Properly
4. Leave What You Find
5. Minimise the Effects of Fire
6. Respect Wildlife and Farm Animals
7. Be Considerate of Others

For further information about LNT see:
Leave No Trace Lesson Plans, Activities and Videos on the Leave No Trace NZ website:
https://leavenotrace.org.nz/

Further support

Places to gain more information from, e.g. specialist websites, industry bodies or clubs.

International Orienteering Federation (IOF) - World Orienteering Day - Let's GO Orienteering
https://www.orienteering.org.nz/wp-content/uploads/2018/04/Leaflet-GO-Orienteering_web_final.pdf

Orienteering New Zealand – Kiwi O – Orienteering for Schools
https://www.orienteering.org.nz/wp-content/uploads/2014/07/Kiwi-O-Manual-2014-v2.pdf

The Little Book of Orienteering Techniques by Jean Cory-Wright
To order a copy send an email to **jean.corywright@gmail.com**

South African Orienteering Federation – O in a Box (Schools resource)
https://www.orienteering.co.za/development/school-resources/o-in-a-box-1/
https://www.orienteering.co.za/development/school-resources/o-in-a-box-2/

Cool, Awesome and Educational, part 1
https://issuu.com/byorienteering/docs/silva_book_ages_6-15_english
Cool, Awesome and Educational, part 2
https://issuu.com/byorienteering/docs/silva_book_ages13-15_english_web
Orienteering in simple English
https://issuu.com/byorienteering/docs/orienteering_in_simple_english_emit emit

For contact details for an orienteering club in your area:
https://www.orienteering.org.nz/nz-orienteering-clubs/

Map-based Activities Planning Template

Overarching Risk Management Guidance