

Scout Skills Route Planning for Hikes



INFORMATION SHEET

Route planning is all about getting from 'A' to 'B', and taking into consideration all the different factors which may affect the journey. It is about knowing the limitations and planning the route accordingly. A good route plan consists of breaking down the journey into stages, calculating how long each stage will take to cover and, by adding all these together, finding the total travelling time.

In Scouting, taking part in expeditions and hikes in varying conditions and for differing lengths of time is very much part of the programme and, therefore, it is very important that Leaders and Scouts understand the importance of being properly prepared for journeying outdoors and the organisation that this will involve. You need to know what to expect and be properly equipped and trained to deal with it. (See Hiking, Mapping and Compass in this series).

Variables

These are the factors which affect route planning and, as the name suggests, they vary or change in different situations and are not static. This provides us with the necessity to plan a route each and every time we undertake a hike or expedition.

Access - Permission may need to be obtained to cross land. In Scotland, all the land is owned by someone and there may not be access or right of way. However, it may be possible that agreement for access has previously been negotiated. Contact the local Assistant Area Commissioner (Activities) or Scottish Headquarters. In England, footpaths on maps can mean public access or rights of ways are available.

Time of year - Consideration needs to be given to when you are undertaking the hike. Summer may mean longer daylight hours, but a greater risk of heat exhaustion, dehydration and sunburn exists. Snow, fog, cold, treacherous conditions underfoot, changeable weather and shorter daylight hours are obvious dangers during the winter. Checking seasonal hunting conditions, weather forecasts, and seeking local expertise is crucial.

Navigation - Understanding maps, map scales and symbols (and using them with a compass) is vital, as is an awareness of danger areas, such as marshes, cliffs, crags and tides. When planning a route, be aware that the shortest route is not always the best option. It may mean that plotting a route across higher ground would take less time, be less tiring and more sensible than travelling from one high point to another by a downhill and then uphill route. This will also apply to rivers or other natural barriers.

Alternative and escape routes - Once you have planned your route, plan and check out alternative routes that you may need to take in case of bad weather or if the going gets too much for some party members. In mountainous areas, it is essential to have two or three detailed escape routes should any situation or emergency arise.

Timescales - The amount of time required to plan a walk, hike or expedition will depend upon the nature of the trip. It can take up to six months or more to make all the plans: choose and accurately plan the route, increase the fitness of the group members, advise the appropriate individuals or bodies, check, buy or repair equipment to name but a few aspects. It's never too early to start planning!

Equipment - The type of equipment will vary according to the level of activity being planned. It needs to be suitable for the activity and up to

the required standard. You cannot just 'get by' when undertaking a 50 mile expedition across Dartmoor! So this may mean checking equipment already available or buying new items. Making out an equipment list is a good idea as it helps to ensure that nothing is forgotten.

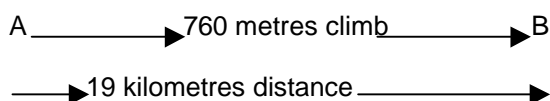
Naismith's Rule

When planning your route, you will need to know Naismith's Rule. This allows you to calculate how long it will take a fit person to walk a given distance and also to take into consideration the increase or decrease in height of land. Naismith's Rule says that: 'a fit person can walk, on flat ground, five km in an hour, plus half an hour for every 300 metres' (both up and down). However, this does not cover the individual's ability or the amount of gear carried, and in reality your pace will be the slowest member of the party. It may be safer to use 3 kilometres per hour until you know you can walk at a faster pace. It is better to have too much time on your hands rather than needing to take longer when the weather and daylight is deteriorating and everyone is feeling weary.

Naismith's Rule:

(Five kilometres per hour + half a hour per 300 metres)

Here is an example:



If A to B is 19 kilometres, and the increase in land height is 760 metres the estimated time that it would take a fit person, with no kit is; 19 kilometres = four hours, plus one hour 15 minutes for the increase in land height, approximately five and a quarter hours.

The paperwork

A Route plan is a blank form which records all the important details of a hike or expedition. It details the journey, broken down into stages; it gives the start and destination point of each stage, the distance apart, height gained, ground description and the time that you are due to arrive. You should not walk for more than six hours in any one day, and if you add on the time for rests and food stops to your given starting time, the time at which you are due to finish the

day's walking can be calculated. It also includes the details of the party and, once the plan is completed, and before the party departs on the journey, a copy of it is left at 'base' and with the 'Home Contact'. This is an important security measure for a walking or mountaineering group as it alerts those responsible should a group fail to turn up at their destination when expected. The original copy is taken with the party and the route plan should be cancelled or collected when the activity is completed.

An Emergency card is another important item which must be carried by parties undertaking a hike or expedition. It gives instructions as to what to do should an emergency situation arise. It is completed, and taken by the two people chosen to seek help. This aids any rescuer with exact information.

Further information and resources

Route plans and Emergency cards can be obtained from some local Scout Shops and the Information Centre, Gilwell Park.

Speak with experienced Leaders about undertaking expeditions and, in particular, planning routes. They may have some hints and tips about how to go about it.

There are many books and publications available on walking and mountaineering and many will have sections on route planning.

Obtain Hiking, Mapping and Compass in this series of publications.

TEACH YOURSELF

Preparation is the key to any route planning and, therefore, the more detailed the information that can be worked out beforehand, the more organised and accurate the final plan will be.

Time

When experienced, route planning may only take 20 minutes! However, while it is still a relatively new skill, it could take up to a couple of hours to ensure that all the factors have been taken into consideration.

Equipment

Ordnance Survey Maps.
Silva-type compass.
String or special rule.
Blank Route plan and Emergency card.
Copy of ***Policy, Organisation and Rules***.

Learning all about it

Having read the Information Sheet, you will be familiar with the factors that need to be considered before doing any route planning. For the purposes of this section, you may either have a specific hike or expedition in mind which you are actually going to undertake sometime, or you may need to pick a hypothetical example. Either will help you to work through the process of route planning, however, by actually undertaking the journey, you will be able to see for real how it all works out.

Map Reading - It is essential that you have good map reading skills. Obtain an up to date map of the appropriate scale (1 in 25,000, (1 km = 4cm) and become familiar with the symbols on the map. It is particularly important that you learn the symbols for danger or areas to avoid, for example, cliffs, crags, marshes.

If you do not already know how to set a map using a compass, ask someone who is experienced in map reading and the use of the compass (or see Compass in this series). This will help you to work out your location when you are out of doors, have got lost or are temporarily unsure of your position. Knowing how to interpret contour lines is also important as they represent the height, depth and steepness of the land on a map.

Rules - At an early stage, you should check all the information detailed in ***Policy, Organisation and Rules***, Rule 41.2 - Moors, Hills and Mountains.

Procedure - Use these steps to help you plan your route:

- Start by selecting your starting and finishing points.
- Using the appropriate map, break the journey into stages. Using a piece of string or special rule to measure the distance, and using Naismith's Rule, calculate the time each stage should take.
- Using the Route plan, complete the other details such as height gained and description of ground.
- Check the route for the other variable factors; access, time of year, dangers such as cliffs, marshes, crags and so on; alternative and escape routes.
- Complete the Route plan with all the relevant details.-

Other tasks

Draw up your own detailed checklist of what needs to be done and the factors to be considered when planning a route.

Discuss route planning with a Leader experienced in hiking and hill walking and use your Route plan document as a starting point. Contact the Assistant District or County/Area Commissioner (Activities) who can put you in touch with someone who might be able to help.

When you feel sufficiently prepared, and having had your Route plan checked by someone with the right experience, undertake the hike or expedition and note how accurate the written route plan was, what things went as planned and what did not so that you can improve upon it for next time.

Can I do it?

When you feel confident about route planning, check how you are doing and see which of the following you can do:

Explain the meaning of 'variables' in route planning.

Imagining that you are at a location on a map, be able to 'read' it by describing the natural features you would be able to see.

Use Naismith's Rule to work out stages on a Route plan.

Work out the details and complete Route plan for a fictitious journey.

Work out the details, complete a Route plan and undertake the journey.

Your notes on this session.

HOW TO TRAIN OTHERS

This section is designed to give you some practical ideas about how you can help other people to understand route planning. This might be Leaders or Scouts - either in an informal way on a Troop night or more formally on a skills workshop, training course or something similar.

Objectives

By the end of the session, the participants will be able to:

- I. Explain the meaning of the term 'route planning';
- II. List factors that may be considered under 'variables' when route planning;
- III. State Naismith's Rule and describe how it is used in route planning; (iv) Explain the need for a Route plan and Emergency card;
- IV. Prepare a Route plan for a one day hike.

Time

Approximately two hours will be required to understand the principles and write a Route plan.

Equipment

Per small group of participants: Ordnance Survey maps, Silva-type compass, string or special rule, blank Route plan and Emergency card.

Copy of **Policy, Organisation and Rules**, available from the Information Centre at Gilwell Park. Any equipment as necessary for the Training games.

(Optional). Navigation video (part 3 in a series) by Hillcraft. It is available on loan from the Information Centre at for £2.00 to cover post and packaging.

Training methods

This is a session that is about gaining knowledge and then putting it into practice. It is important to stress that the skill of route planning cannot be underestimated. People's lives may depend upon it. It is therefore important that the principles of route planning are clearly understood by participants.

Here is a suggested session outline. You may wish to amend it for your purposes:

- Plan an outline of a fictitious hike so that everyone is following the same route. You will need to have worked out the starting point and destination, the variables such as the time of year that it would be undertaken, experience of those in the party, and so on.
- The rules for Members of The Scout Association are clearly set out in **Policy, Organisation and Rules**, Moors, Hills and Mountains. Start the session by quoting the sentence in the first paragraph: 'Preparation, training and equipment must be adequate and if at all possible, local advice sought beforehand'. Reference and information on the other relevant rules that follow, should be given.
- Explain Naismith's Rule and then give a few examples of distances and times so that the participants can see how it works.
- There is a video available on Navigation (produced by Hillcraft and available on loan from the Information Centre at Gilwell Park at a cost of £2) which could be shown to participants, either at the beginning of a session to set the scene or at the end to conclude it.
- Ask the participants to come up with suggestions or 'brainstorm' what they think is meant by 'variables' and what these might be. These are, of course, the factors that may be different each time a hike or expedition is undertaken according to their situation. The answers should include; access, time of year, navigation, alternative and escape routes, equipment and timescales.
- Participants need to become skilled at map reading and using a compass if they are not already so. You may or may not wish to include this in the session but some understanding will be necessary to be fully able to plan a route.
- In pairs or threes, get each group to select a location on a map and, by imagining that they are actually there, get them to describe what is visible.
- In pairs, ask participants to plan the route by breaking it down into stages and calculating the distance and time, and to complete a route plan taking into consideration all the variables.
- With participants in pairs or small groups, state part(s) of the route for which they need to work out two escape routes.

- In small groups, ask participants to design their own 'Route Planning Checklist' which will help them and act as reminder when planning future routes.
- In small groups, participants are given a map, compass and blank Route plan sheet and are told that they need to plan a route from A to B (give start and finish locations). Their task is to work out their route, stage times and distances (using Naismith's Rule) and complete a Route plan. Two groups should then discuss their work to check the accuracy of the work.
- Try out one or more of the training games, or design your own games which will help participants to learn about or practise aspects of route planning.
- Finally, underline the fact that there is no substitute for doing the real thing and putting it into practice!

Can I explain the need for a route plan and Emergency card?

Can I prepare a route plan for a one day hike?

Training games

Word games - Devise a word game such as a wordsearch, crossword, hangman, or anagram, which includes examples of variables.

Design a quiz which tests participants' knowledge of route planning. 'True and false' questions can be asked as well as conventional ones.

With participants in pairs or teams, give them a copy of a partially completed route plan with different aspects missing for each stage. Ask them to fill in the spaces.

Write out a set of cards (one set per group) each with a different variable or factor on to consider when route planning. With participants in small groups, shuffle the cards face down and each participant in turn takes a card and then explains the relevance and importance of that variable.

Mapping and Compass - See these factsheets in this series for examples of training games to help participants understand these subjects.

Checking their progress

Ask participants if they can answer the following questions:

Can I explain the meaning of the term 'route planning'?

Can I list the factors that may be considered under 'variables' when route planning?

Can I state Naismith's Rule and describe how it is used in route planning?