

CHILDWALL SPORTS AND SCIENCE ACADEMY EXPEDITION GUIDE



NAME _____

GROUP _____

MY ASSESSOR IS _____

MY TRAINER IS _____

WE MEET EVERY _____

THESE ARE THE NAMES OF THE PEOPLE IN MY GROUP

1. _____

2. _____

3. _____

4. _____

5. _____

6. _____

Dates to remind me are:

Training day _____

Practice walk _____

Qualifying walk _____

INTRODUCTION

Your expedition, above all, should be great fun and full of excitement and challenge.

The many pupils at Childwall Sports & Science Academy, who have enjoyed their venture into the Welsh Hills, have done so because they were well prepared, well equipped and able to work well together.

This guide is here to help you get the most out of your expedition and shows you the skills you need to find your way around the hills and country-side safely and comfortably.

You will not learn these skills by just reading this guide. Skills are learnt by doing, and your trainer will make sure that you do a lot of 'doing' because he/she has to be sure that when it comes to the actual expedition you know what you are doing. After all, you are going to walk 15 Miles (24KM) with a full rucksack, navigate your way around the countryside and camp out overnight. Therefore it is very important that you attend all training sessions otherwise you may not be able to go.

The most important skill you can learn and which will keep you safe is NAVIGATION – this is the skill of using a map and compass to find your way around. When you have learned this you will have a skill which will be useful for the rest of your life...so make sure you work hard at it until you have got it embedded.

Learning doesn't just stop in school, learning carries on during the expedition itself, particularly in the area of working together as a group. Sharing the work; making decisions; supporting each other; are things that most of us have to learn and work at. Your expedition will provide many opportunities for you to find that out.

Have fun and enjoy the challenge!

EQUIPMENT

You may be surprised that 'vital' everyday items such as make-up, hot water bottles, pillows, magazines, iPods and mirrors are missing from the list. Those backpackers who take such things always live to regret it. These items are often heavy or get damaged through rain.

Your rucksack fully loaded, should not be more than $\frac{1}{4}$ of your body weight, or 13KG whichever is least. A happy backpacker is someone who can keep the weight below this.

Here is a list of the equipment which a good backpacker will take on an overnight expedition:

Kit list for the expedition (Tick off when packed)

<p>Need to provide for yourself:</p> <ul style="list-style-type: none">• Walking boots (broken in)• Roll mat• Waterproof tops and bottoms• Thick socks (not football socks) Walking socks are ideal• T- shirt• Sweater• Trousers (not jeans as these stay very wet!)• Underwear• Sun hat / woolly hat & gloves• Spare clothing (<u>in a sealed plastic bag</u>)• Sleeping bag (<u>in a sealed plastic bag</u>)• Enough food for length of trip (nothing heavy like tins etc. Dried food is ideal)• Emergency food rations e.g. cereal bars/nuts for snacking, high energy chocolate bars (in a sealed bag). Not to be eaten unless in a real emergency.• Washing kit including toilet roll (but not a full roll)• Knife, fork, spoon, plate/bowl, mug• Watch• Whistle• Coins for telephone/small sum of money• Matches (in a waterproof container)• Strong plastic bag to line rucksack/spare plastic bags
<p>Equipment to be provided by your group:</p> <ul style="list-style-type: none">• First aid kit (plasters, triangle bandage, crepe bandage, pain killers, blister packs, medical tape)• Sun cream• Washing up liquid, tea towel & scourer• Plastic bags for rubbish• Notepad and pencil• Playing cards/camera (optional)
<p>Provided by the school:</p> <ul style="list-style-type: none">• Tent (for 3-4 people)• Rucksack• Maps/map case• Compass• Stove & pans/fuel

**REMEMBER – WHAT YOU BRING WITH YOU MUST BE CARRIED WITH YOU FOR THE ENTIRE EXPEDITION
- ONLY BRING THE BARE ESSENTIALS!!!**

NOTES ON IMPORTANT ITEMS

BOOTS **Good walking boots are essential.** These should be a good 'walking' boot, not a fashion style boot. They must also cover the ankle to give support. The laces must be tied, to give further support. Boots come in all styles but should be looked after during the walk and after the expedition. They will last longer. When you buy your boots try them on with a pair of walking socks so you will ensure that you have the correct size, also ensure that you can get a finger behind the heel, this will allow movement in the boot when walking down hills.

TROUSERS NOT JEANS! NOT JEANS!!!!!! If it is windy and wet they are useless and DANGEROUS. Tracksuit pants or cotton zip offs are best.

SWEATERS Two items are better than one thick jumper as you can control your body temperature much better.

WATERPROOFS Too many walkers use feeble waterproofs, they need to be bought from a walking shop who will give advice. They should not be a training top, but a 'fit for purpose' top and bottoms. You do not need to buy the latest 'North Face' top and spend hundreds of pounds on expensive equipment. You need to get a top and a pair of bottoms. These can be purchased from all walking shops. The waterproofs in the small bags are WATERPROOF, LIGHT and above all, CHEAP.

RUCKSACKS Do not bring your granddad's rucksack. If you decide to buy your own rucksack ensure it is large enough to carry all the equipment you will need to complete the expedition (65L) is ideal. This rucksack should be comfortable when full, so get the shop to fill it with expedition equipment and try it on for comfort, and make sure it has adjustable straps and back slide, so when you grow you can change the position of the shoulder straps. Also ensure that it has a hip belt, this will take the majority of the weight so must be tight around the hips. Thin people make sure that it fits and is tight enough.

RUCKSACK LINERS The rucksack NEEDS a strong waterproof liner. Rain can penetrate the rucksack so sleeping bags and spare clothes etc, need to be kept dry. To be doubly sure wrap these in a poly bag. Bin bags are a cheap way of protecting your sleeping bag and spare clothes. The rucksack can be lined with a RUBBLE SACK (club together and buy a roll from any hard-wear store.) They come in packs of 10 and are very cheap. This will ensure that when you need dry clothes or want to sleep comfortably you can. Be sure to look after these and don't just rip open at the end of the days walking, you may need them tomorrow.

SPARE CLOTHING If you get wet on the walk, once your tent is up, you need get into dry clothes for the night. You will need 1 set of a complete change of clothes.

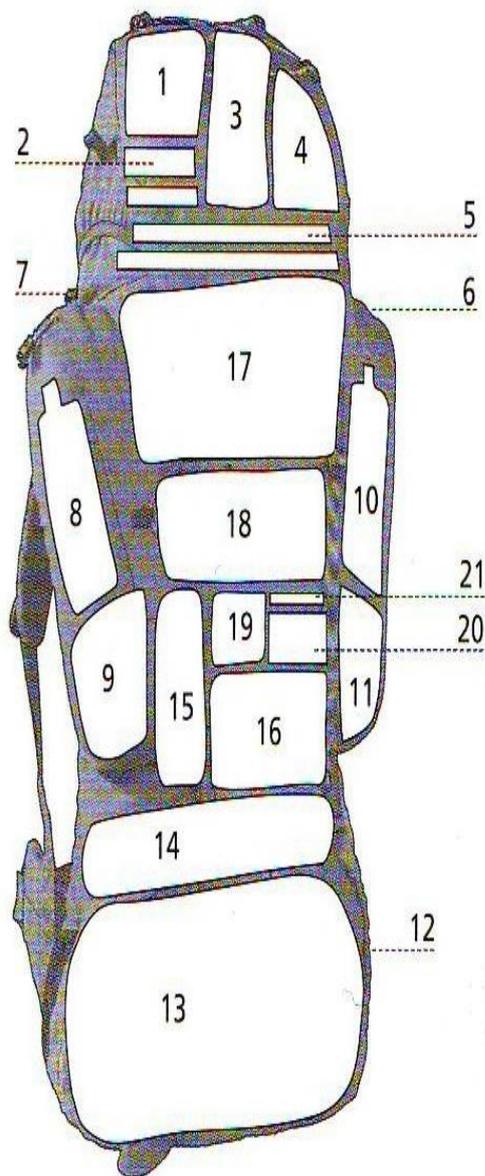
HOW TO PACK A RUCKSACK

Your Task:

Number the text to match the diagram showing where it would be best to pack each item.

- Bits and pieces bag: suncream, camera film, lipsalve, sunglasses
- Guidebook and phrasebook
- First aid kit
- Energy bars, dried fruit
- Maps, personal documentation, money, passport etc.
- Tent poles (under side compression straps)
- Trekking poles (under side compression straps)
- Water bottle
- Energy powder for water, additional high energy snack food
- Stove fuel
- Stoves spares, matches
- Camera bag on hip belt
- Sleeping bag and liner in bottom compartment
- Self-inflating mattress
- Spare base layer clothing and socks
- Stove, pan, lid, utensils, food
- Share of tent, waterproofs, gaiters (near top for easy deployment in wet weather)
- Spare mid layers, hat, gloves
- Wash kit
- Sandals
- Notebook, reading book

backpacking rucksack 55-75 litres



Your Task:

Provide reasons for taking each of the items listed below.

Need to provide for yourself: <ol style="list-style-type: none">1. Walking boots (broken in)2. Roll mat3. Waterproof tops and bottoms4. Thick socks (not football socks) Walking socks are ideal5. Tee shirt6. Sweater7. Trousers (not jeans as these stay very wet!)8. Underwear9. Sun hat / woolly hat & gloves10. Spare clothing (in a sealed bag)11. Sleeping bag (in a sealed plastic bag)12. Enough food for length of trip (nothing heavy like tins etc. Dried food is ideal)13. Emergency food rations e.g. cereal bars/nuts for snacking, chocolate high energy bars (in a sealed bag)14. Washing kit including toilet roll (but not a full roll)15. Knife, fork, spoon, plate/bowl, mug16. Watch17. Whistle18. Coins for telephone/small sum of money19. Matches (in a waterproof container)20. Strong plastic bag to line rucksack/Spare plastic bags	<ol style="list-style-type: none">1.2.3.4.5.6.7.8.9.10.11.12.13.14.15.16.17.18.19.20.
Equipment to be provided by your group: <ol style="list-style-type: none">1. First aid kit (plasters, triangle bandage, crape bandage, pain killers, blister packs, medical tape)2. Sun cream3. Washing up liquid, tea towel & scourer4. Plastic bags for rubbish5. Notepad and pencil6. Playing cards/camera (optional)	<ol style="list-style-type: none">1.2.3.4.5.6.
Provided by the school: <ol style="list-style-type: none">1. Tent (for 3-4 people)2. Rucksack3. Maps/map case4. Compass5. Stove & pans/fuel	<ol style="list-style-type: none">1.2.3.4.5.

CAMP CRAFT

Good organisation and sharing of jobs, helps to make the pitching and striking camp an efficient, fun exercise. Good camp craft avoids making it a time when people get ratty with each other and frustrated.

It is extremely important to be well organised if the weather is bad and you are wet and getting cold.

You need to get the tent up, get into dry clothes and have a hot drink and meal inside you as quickly as possible.

This needs team work, with jobs allocated and equipment being produced at the right time by the right person.

Work as a tent team and get things done. Try two people putting the tent up and the other person start to get the stove lit and hot drinks provided.

If the weather is dry, get the tent equipment off your group; get the stove out, with food/drinks and cups and bowls etc. While two people are putting the tent up, one person can get the food going. This will save time and you will be fed quicker.

You will be very tired and feel like just sitting down and relaxing. This should be done once your tent is up and you have food inside you.



GOLDEN RULES FOR PITCHING A TENT

1. FIND THE WIND DIRECTION. You don't want to open your tent in the morning and be greeted with a face full of rain.
2. PUT DOOR AWAY FROM THE WIND.
3. CLOSE ALL ZIPS BEFORE YOU START PUTTING THE TENT UP. This will mean that when you close the tent at night the zips will go all the way down.
4. AVOID ANY DIPS IN THE GROUND. They collect water and are not nice to sleep on.
5. AVOID ANY ROCKS OR THISTLES. They may put holes in the tent and again not nice to sleep on.
6. DO NOT STAND ON THE TENT OR ANY PART OF IT. This may damage the tent.
7. PUT ALL TENT, POLE, PEG BAGS SAFELY AWAY in a pocket as the wind may blow them away.
8. POLES SHOULD BE UNDER THE SEAMS OF THE FLY SHEET. This will stop any leakage.
9. THE FLY SHEET SHOULD BE TIGHT AND NO 'BAGGY' PARTS. This will ensure a good night sleep as the rain will just run off.
10. PUT PEGS AT 45 DEGREES. This means that the weight of the ground is on top of the peg and will stay put in windy conditions.
11. KEEP ALL ZIPS CLOSED. Keeps midges away from sleeping compartment.
12. ALL TENT BAGS TO BE PUT IN THE TENT POCKET.
13. NEVER EAT IN YOUR TENT. This will encourage insects into your tent.
14. NEVER WEAR BOOTS IN THE TENT. You will have trodden in sheep/cow poo, and you don't want that in your sleeping area...keeps boots in the porch area of the tent.
15. PLACE RUCKSACKS IN THE PORCH PART OF YOUR TENT, but leave a way out for toilet trips in the night.
16. **NEVER NEVER NEVER EVER** COOK IN, OR NEAR YOUR TENT. Your tent is made of waterproof nylon and if it catches fire you will have less than 10 seconds to get out before it melts and sticks to your skin. Leave 3 metres between tents and cooking stoves

CAMPCRAFT - HOW TO KEEP YOUR FRIENDS

You will be sleeping three to a tent and want to remain friends with the people you share with. You must stay clean. Wash hands, face, underarms etc. Brush your teeth and use deodorant, try sharing the spray deodorant, or a travel size one. DO NOT bring a brand new one that will last a whole month. It makes you feel so much better being clean and you will keep your friends.

Protect your water supplies from pollution if camping wild. If you make it to camp you will have a water source from a tap, a drain to put dirty washing up water in and a toilet.

Washing up water should go into a hole in soft ground that you have made with a trowel well away from any water sources.

Dig a loo hole with a trowel 8 inches deep by cutting the turf, replace the turf so that there is no trace that you have been there.

This should be done at least 30M away from any water source such as streams, other people and footpaths.

Do not leave anything behind after departing from your campsite or while you are walking.

**LEAVE NOTHING BUT FOOTPRINTS AND TAKE
NOTHING BUT PHOTOS.**



THE FACTS OF LIFE - FOOD

The rise and fall of Mad Macho Mick.

Mad Macho Mick, the hard individual of Childwall Silver group 6 (CS6), woke up to the sound of the wind and the gentle patter of rain against the tent.

“Oy Mick. Do you want some of this Tesco’s Hot breakfast cereal?” The gruff voice of Shane, one of CS6’s members, partially penetrated Mick’s consciousness and wiped and wiped out any idea that he was still at home, snug under his duvet, waiting for his mum to bring up his egg, bacon, toast, jam, and tea.

“Nah” he mumbled.

“Don’t be stupid Mick,” replied Shane, a worried note in his voice, “We’ve got a tough walk today,”

“Don’t call me stupid Shane. You’re the stupid one, stuffing yourself with that muck. I’d sack my mum if she dished that up. I’ll be all right. I’ve got loads of energy.”



Mick was a bit peeved with Shane and the rest. He always thought that they were wimpish, always doing things by the book. He became quite determined to show them who was the toughest in the group. So, when they had packed up and cleared the site he forced the pace.



A slight grin played about his lips when, after an hour’s slog, Shane called out in a slightly winging tone.

“Give over Mick. Slow down. We’re creased!”

Ignoring them, he kept up the pace. Even the windblown rain, which plagued them later in the morning, did not slow him down. He was a bit wet and cold when they reached the bottom of their hard climb and was a bit surprised to find that, in spite of their winging, Shane and the rest were still up with him.

“You wimps aren’t stuffing yourselves again are you?” He said disgustingly, seeing that the others were cheerfully munching on a Mars bar.

He did not feel too bad really, he knew he would warm up a bit as soon as they had climbed a few hundred feet. Ten minutes later he felt a bit sick and started shivering slightly. He noticed that the others were up to him and were breathing down his neck. Shane started talking, but Mick wasn’t really aware what was being said.

“I’ve got to keep going. I’ve got to keep going. They’re going to beat me.” Mick kept repeating this to himself under his breath. He began to feel woozy and thought he heard someone speaking.

“He’s not looking too good is he”

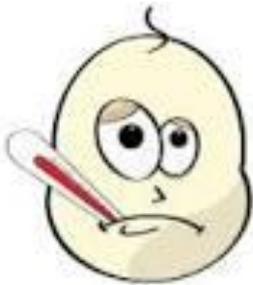
He mumbled “Don’t keep on Mum. I’ll be alright in a minute. What’s on telly?”

Mad Macho Mick, the hard man of CS6 woke to the sound of the wind and the gentle patter of rain on his tent. He was in his sleeping bag and was aware of someone else in it as well. It was Titch, the smallest member of CS6.



“Ere! Whats going on. Where am I? Where’s Shane? Get out of my sleeping bag”

“Hold on Mick. You’ll be alright. You fainted. Shane’s gone with one of the others to get help. It’ll be here soon. Kev, get a hot drink and some Mars Bars in here. He’s awake now



Mad Macho Mick, the hard man of CS6, gratefully accepted a full bowl of Tesco’s Hot Breakfast Cereal, at breakfast the next morning. He added on the sugar, wolfed it down and licked the bowl clean.

When you are walking in the hills you need a lot of energy. You have to make sure that you keep your energy reserves up or you’ll end up like Mad Macho Mick and you could make things bad for your group.

HOW TO WORK OUT HOW MUCH FOOD YOU SHOULD TAKE.

Mr Average, walking with a full pack in the hills, is reckoned to need about 2500- 3000 (15000 KJ Kilojoules) Calories per day. This will be different for individuals and when you get used to back packing you will get used to your own food requirements and you can adjust up or down.

Apart from planning your main meals – breakfast, lunch and evening meal – you need to have some snacks available in between to keep up your energy. Things like Lucozade tablets, Barley sugar, peanuts, Mars Bars or dried fruit are ideal. You must also of course, have your emergency rations, kept in a sealed bag for your assessor to check.

In the Table on the following page, are some energy values of a range of foods and then a possible menu guide giving 15000KJ. The foods are nearly all dried foods so that you do not waste energy carrying water. Remember at base camp to have a good breakfast before leaving.

To save time and fuel try and choose group meals, so that when the tent is being put up the other person can be cooking. This also means that you can have a social time, chat about the days walk and discuss any problems that have arisen.

FOOD ENERGY VALUES.

FOOD	AMOUNT SERVING	ENERGY (KJ)	FOOD	AMOUNT SERVING	ENERGY (KJ)
muesli	100G	1300	Vesta chow mein	1 PACK	1311
Readybrek	100G	1000	Beanfeast	1 PACK	700
Jordans with raisins	100G	1400	Cup-a-soup	1 SACHET	270
Dried milk	¼ PINT	1400	Drinking chocolate	1 SACHET	465
Solor bars	PER BAR	409	Fruit mousse	1	400
Cheese spread	TUBE 150G	1600	Instant custard	1	350
Cheese triangles	EACH TRIANGLE	150	Dried apricots	60G	780
Apple	1	220	Chocolate	100G	1000
Mars bar	68G	1243	Sardines (tinned)	100G	900
Starburst	104G PER PACKET	1630	Jam	100G	1000
Nuts & raisins	200G	3400	Margarine	100G	3000
Ryvita	EACH SLICE	132	Eggs	1	380
Sugar cube	1 CUBE	70	Dates	100G	1500
Shortie biscuits	1X300G PACKET	6200	cheese	100G	1600

Foods you should **not** take are items such as tinned food as they are very heavy. Pot noodles and super noodles are light in weight, but have very little goodness. Pasta with a source is preferential to pot noodles.

A FULL DAY'S EXPEDITION MENU

<u>Breakfast</u>	½ pint milk (5 pints type made up)	700
	2 X chocolate sachets for a mug	1000
	Museli	1300
	2 X solar bars	800
<u>LUNCH</u>	Apple	220
	Mars Bar	1250
	4 Ryvita biscuits	540
	4 Cheese triangles	600
<u>EVENING MEAL</u>	Beanfeast (2 servings)	1400
	Instant potato (2 servings)	700
	2 X Cup-a-soups for a mug	540
	Instant custard (2 servings)	700
	Dried apricots (60g)	780
<u>SNACKS</u>	Mars Bars	1250
	50g peanuts and raisins	800
	1/3 packet of sweets	500
<u>EVENING DRINKS</u>	2 X hot chocolate sachets	1000
	½ pint of milk (5 pint type)	700
	Total	<u>14780 KJ</u>
<u>EMERGENCY RATIONS</u>	4X Mars bars	5000
	Packet of nuts & Raisins (200g)	3400
	Packet of sweets (100g)	1630
	Total	<u>10030 KJ</u>

This is only to give you a rough idea. You may not fancy some of the food on the list. There are plenty of alternatives. Just look around. The main thing to remember is that:

YOU NEED YOUR KILO JOULES.

A VERY USEFUL TIP

Get your food packed up in complete meals for the group, mark them i.e. Day 1 evening meal. This saves a lot of time. Share the packed meals around for load carrying purposes. Take off all unnecessary packaging and write the name of the food on the inner packaging with a permanent felt tip. Say NO to extra weight.

Group meals are much better than cooking individual meals. This can take up to 2 hours as the pans will have to be cleaned each time and then the food cooked. This is not good especially if you are last.

Your Task:

With your group plan your own Expedition Menu for both the practical and qualifying expedition using this template. You will need one of these for each day.

Remember, you will need to bring food for none walking/travel days too.

Day 1 Bronze, Silver and Gold

Meal	Food	Calories (KJoules)
Breakfast		
Lunch		
Evening Meal		
Snacks		
Energy Drinks		
Emergency Rations		

Day 2 Bronze, Silver and Gold

Meal	Food	Calories (KJoules)
Breakfast		
Lunch		
Evening Meal		
Snacks		
Energy Drinks		
Emergency Rations		

Your Task:

Day 3 Silver and Gold

Meal	Food	Calories (KJoules)
Breakfast		
Lunch		
Evening Meal		
Snacks		
Energy Drinks		
Emergency Rations		

Your Task:

Day 4 Gold only

Meal	Food	Calories (KJoules)
Breakfast		
Lunch		
Evening Meal		
Snacks		
Energy Drinks		
Emergency Rations		

Setting up your Trangia

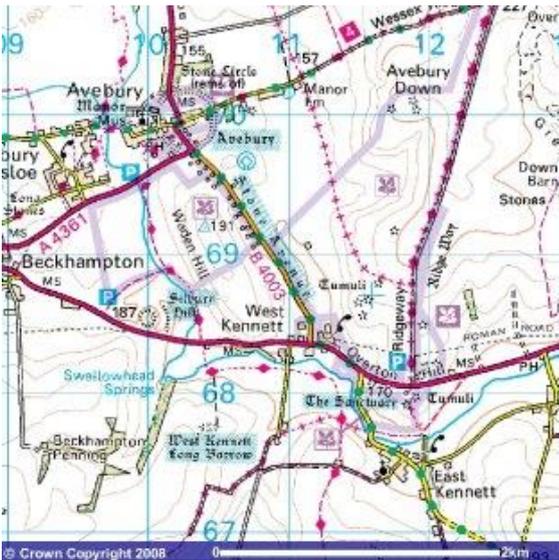
	<p>Your trangia should consist of 1 stove one bottle of fuel and a spare burner</p>
	<p>Unpack your trangia making sure you keep all the straps safe</p>
	<p>Place your base unit on the ground with the small side holes facing the wind, this will allow air to get to it and cook faster. Your cooker should be placed on a flat piece of ground and away from any tents.</p>
	<p>Fill your burner to ½ full using the red fuel bottle</p>
	<p>Light your fuel carefully, ensuring you do not drop the match in the fuel or throw it away. Put in a bin bag</p>
	<p>Enjoy a lovely hot meal that you and your team can enjoy</p>

NAVIGATION SKILLS

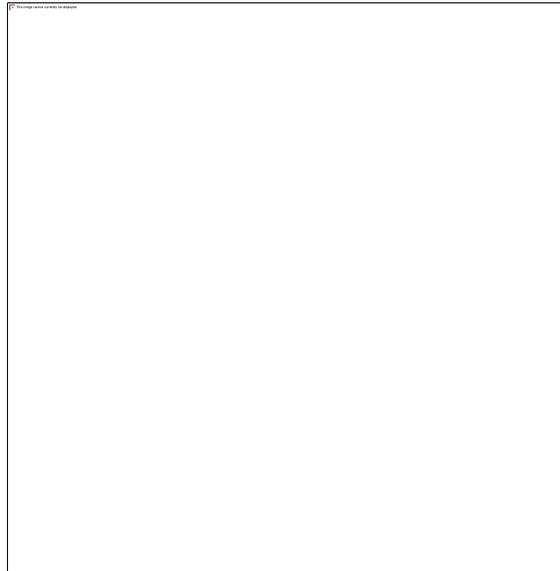
To find your way around the countryside with just a map and a compass is very satisfying. It makes you look closely at the countryside and adds to the enjoyment of the walk.

Starting with maps: Maps are packed with information, most information of which is very useful to the walker. Maps are drawn at different SCALES. The two types of maps mostly used by walkers are 1:50,000 and 1:25,000. On a 1:50,000 Map 2 CM on the map is the same as 1KM on the ground (for every CM on the map you need to times it by 50,000.)

On a 1:25,000, 4CM are equal to 1KM (1 cm on the map is equal to 25,000 on the ground.)



1:50,000 map



1:25,000 map

Your Task:

Which map has more detail and why?

Grid references

To help pin point your position on a map it is necessary that you understand how to take a 4 figure and a 6 figure grid reference. Maps are made up of a series of grids; these grids are blue thin lines that go up and across the map. Each grid or square is 1000M across; you will need to know exactly where you are at all times.

Imagine you are looking at a map and speaking on the phone to somebody who is looking at the same map as you. You have to tell them where you are. It is much simpler and more accurate to give a set of numbers rather than stating you are by a wall or a building. On a map there could be hundreds of walls and many buildings.

Remember the golden rule of grid reference - go along the corridor before going up the stairs!

08	A	C2	K	L1	E1	U1	M1	V2	S2	Q	
07	D	R1	N2	G2	Q1	W	Q2	X	M2	A1	
06	E	T	B1	F	G	U2	T2	R2	F2	B2	
05	B	F1	W2	O	Z1	R	K1	D2	O2	O1	
04	Z	C	S1	L	A2	P2	P1	U	C1	X1	
03	N1	V1	J	I	H	S	L2	G1	Y1	H2	
02	M	H1	N	V	E2	D1	Y	T1	J1	P	
01											
	23	22	24	25	26	27	28	29	30	31	32

Your task:

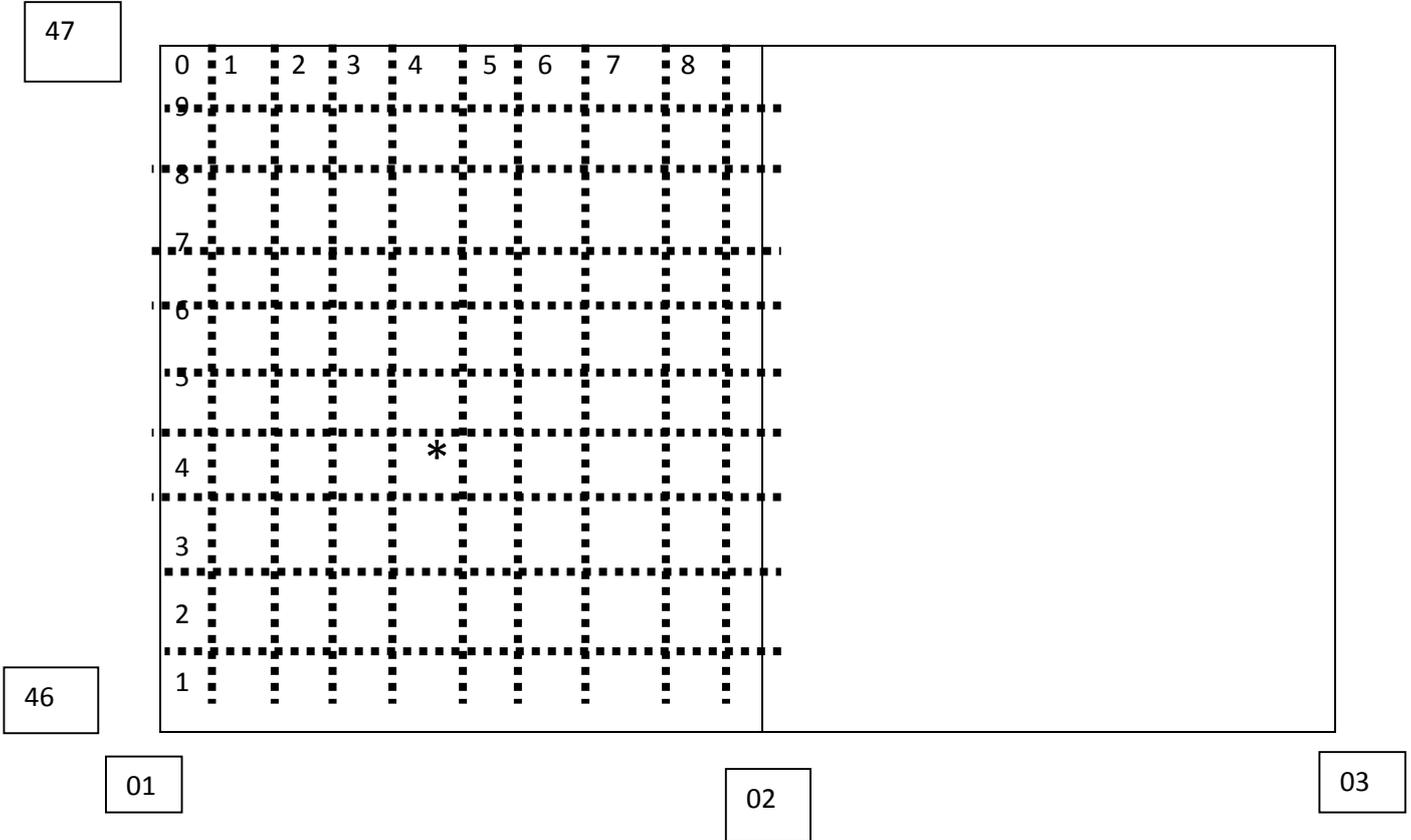
Pick 10 letters/numbers and for each one, state the 10 4-figure grid references.

e.g., M = 23,01. Follow the line from the left and the line below and you go along the corridor and then up the stairs.

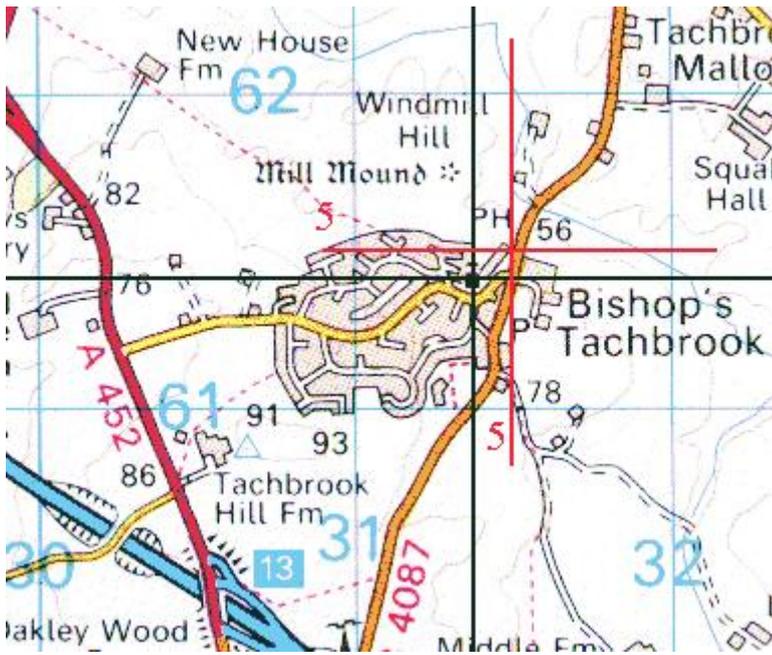
Your task is to complete the grid below:

letter	4 figure grid reference	letter	4 figure grid reference

Sometimes you need to be more specific when giving a position as each square is equal to 1000M. Just imagine that you are in a forest and you need to let someone know where you are, you will have to give a 6 figure grid reference. When giving the 6 figure grid reference you have to split the square into 10 equal chunks across and up giving 100 possible points within your square.



When you give a 6 figure grid reference you give the first 2 numbers from the big square then give the smaller number after that so the star is in grid 01, 46 but now becomes 014, 464. This is a very accurate way of telling someone where you are.



Your task:

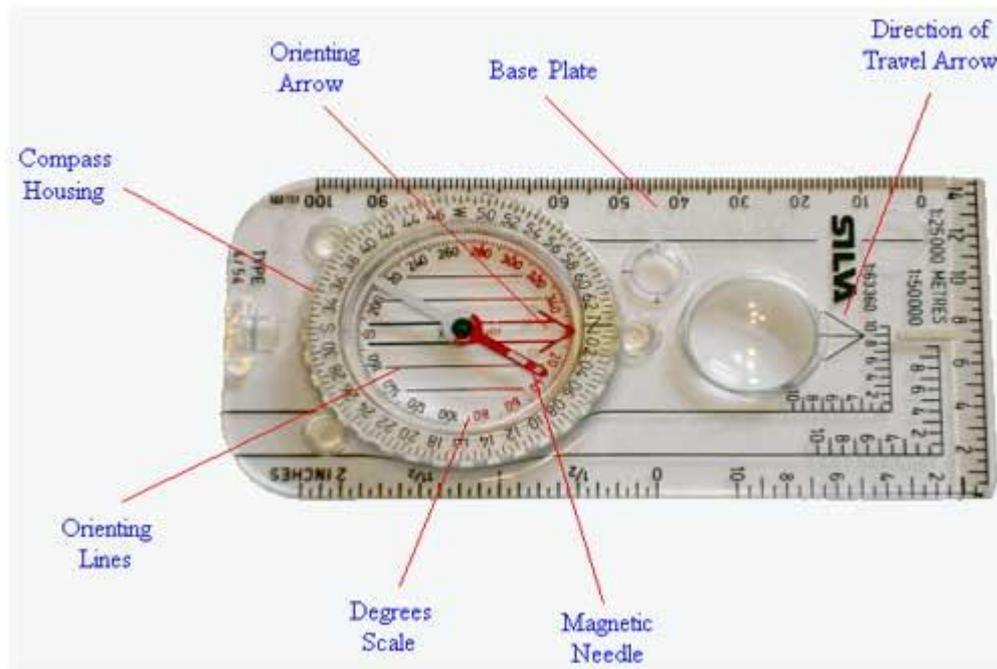
Give a 6 figure grid reference for the cross and the points below.

feature	Grid ref	feature	Grid ref
New house fm		motorway cuttings	
Trig point		motorway embankment	
Y track junction below bishops Tachbrook		Where the major road meets the minor road	
Mill mound		New house fm	
church		93 spot height	

Your task:

Look at a map key and draw the following pictures -

Footpath		Field boundary	
Bridleway		Minor road	
Coniferous trees		Marsh	
Non coniferous trees		Scrub	
Picnic site		Boulders	
Camping site		Outcrop	
Telephone		Golf course	
Place of worship with a tower, spire and neither		viewpoint	



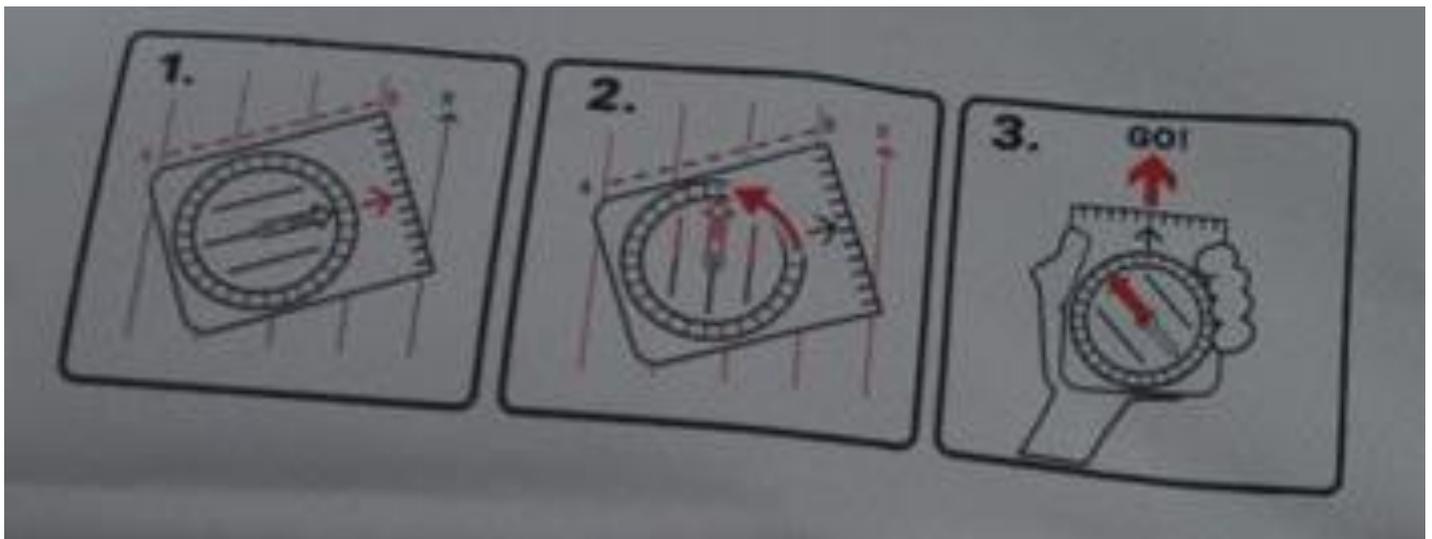
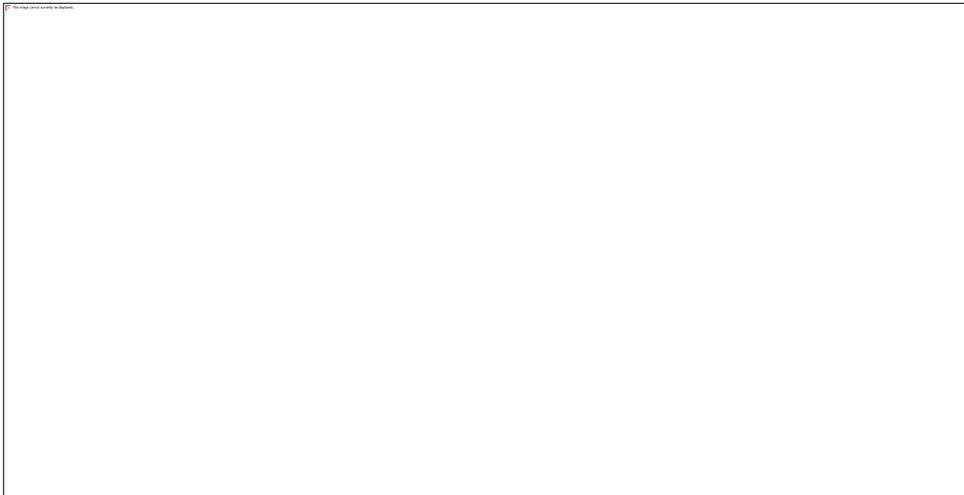
Your compass should be looked after as it is an essential part of your navigational tools. It should be attached to the outside of your bag and be used at every change of direction. Your compass has lots of information on it which include a measuring devise to help when deciding how long you should be walking for until you turn direction. A magnifying glass to enable you to see information on a map when the detail is close, e.g. near buildings.

On a compass there is a part that moves around, this is called the compass housing or bezel. This enables you to follow a compass bearing that is set and not have to keep checking.

Orientating the Map

Orientating or **Setting** the map is a method of aligning the vertical grid lines on the map to north as indicated by the compass. This way, the landmarks which appear on the map will match what you are seeing around you. This makes things less confusing and helps to minimise silly mistakes.

1. Rotate the compass dial so that the orienting arrow is aligned with the direction of travel arrow.
2. Place the compass on the map and line up one edge with a vertical grid line.
3. Holding the compass on the map, rotate both map and compass as a whole so that the north end of the magnetic needle is aligned with the orienting arrow.
4. The map is now facing north (ignoring variation) and is said to be orientated.

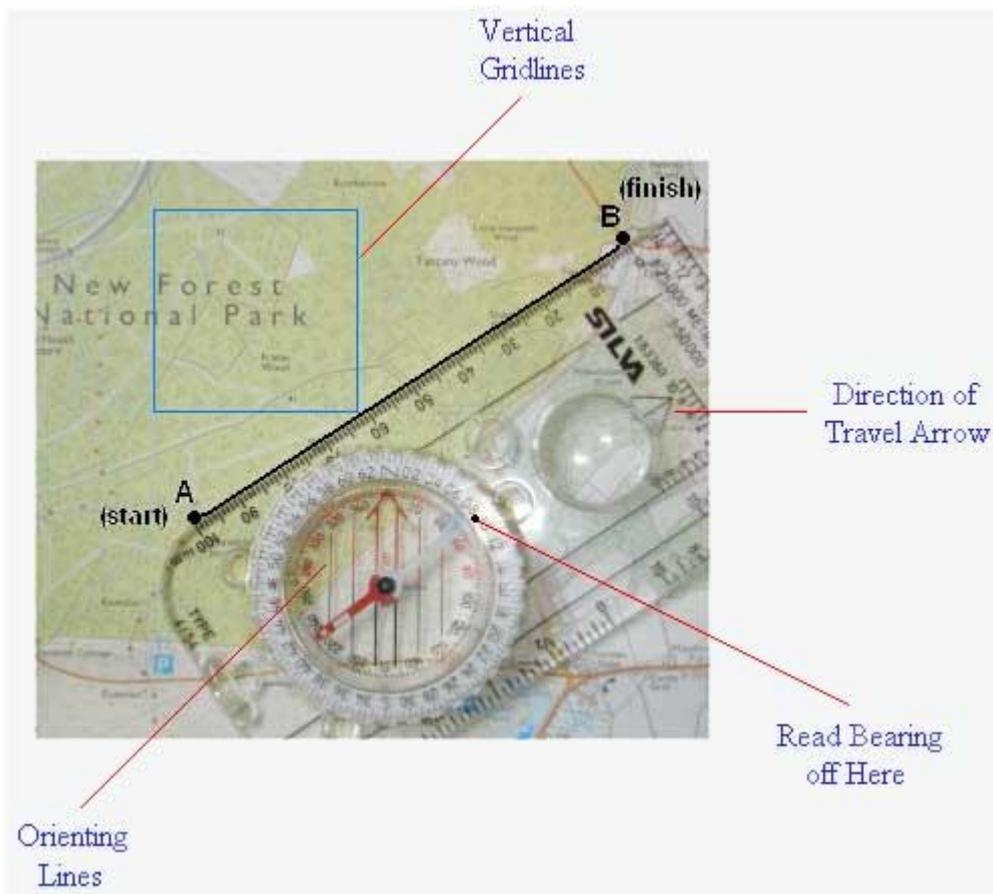


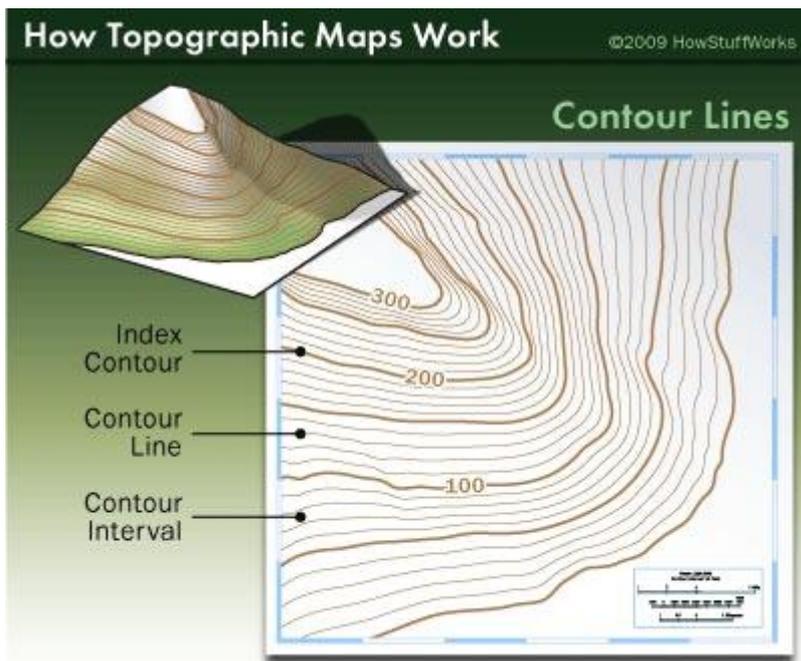
Taking a Bearing

Bearings are used to accurately indicate a direction, obtained by measuring the angle between 2 points. Bearings are useful when navigating in poor visibility or over featureless landscapes. All bearings are read clockwise from north.

Taking a bearing between 2 points:

1. Orientate the map if preferred.
2. Place the compass on the map with its edge lined up against the place you are at and the place you wish to go to. Ensure the direction of travel arrow points towards your destination.
3. Turn the compass dial until the orienting lines line up with the vertical grid lines on the map.
4. Read off the bearing from the degrees scale.
5. Adjust for variation.
6. Holding the compass in front of you, turn until the north end of the magnetic needle is aligned with the orienting arrow.
7. The direction of travel arrow now points in the direction you need to walk.





The Contour lines on a map let the reader know what the hill looks like. The map makers cannot make 3D maps that fold and are easily used, so they came up with using contour lines. These lines are usually 10m vertically apart from each other, this means that the closer together the lines are the steeper the hill. That means if the lines are far apart the hill is less steep.

There are three ways to walk on a hill:

- Up hill.
- Down hill.
- Along the contours.

You should be able to look at a map and know which way you are supposed to be going.

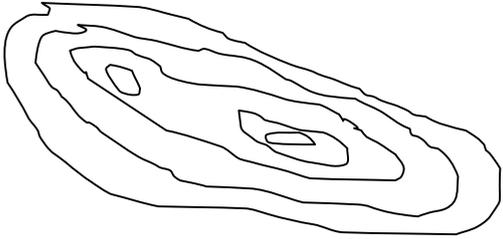
There are some, if you should be walking up hill the contours are written going up as in the diagram above and that there should be a top of the hill.

If you are going downhill there could be a river or a road at the bottom. Also the written contour lines will have their numbers upside down.

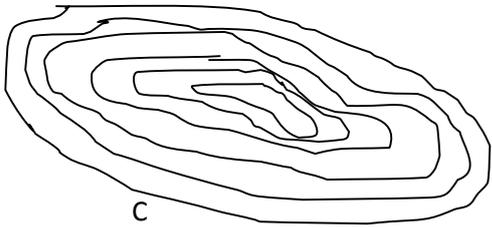
If you are walking along the contours you are not gaining height or losing height, you are usually walking around the side of a hill.

Draw what you think these hills would look like in real life.

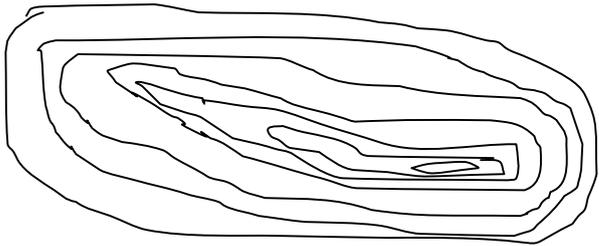
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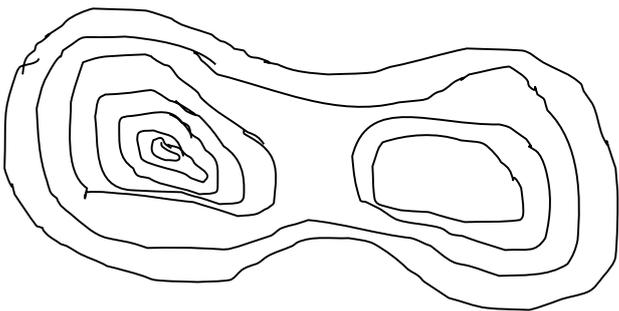
B



C



D



PLANNING YOUR ROUTE

At Bronze your expedition covers 24KM over 2 days and 1 night. Or 6 hours planned walking.
 At Silver the expedition covers 48KM over 3 days and 2 nights. Or 7 hours planned walking.
 At Gold the expedition covers 80KM over 4 days and 3 nights. Or 8 hours planned walking.

This time does not include getting lost or resting.

Just going into the hills and hoping for the best won't work. You must plan your route for a distance and time each day so you can enjoy and get the best out from your group and expedition.

The route card, (which you will see on the next page), is a good way of concentrating your mind on the route and familiarising yourself with it.

Every group member should play a part in planning the route.

RULES FOR ROUTE PLANNING

NAISMITH'S RULE. This is a guide and will vary from person to person and depend on the type of ground you are travelling over. We recommend the following as a useful guide to start with.

HORIZONTAL DISTANCE TRAVELLED	1 HOUR FOR EVERY 3KM
VERTICAL DISTANCE TRAVELLED UP	1 MIN FOR EVERY CONTOUR (10M)

The table below might help you with your planning.

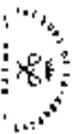
Horizontal distance	time in minutes
100M	2 mins
200M	4mins
300M	6 mins
400M	8mins
500M ½KM	10 mins
1000M 1KM	20Mins
2000m 2KM	40 mins
3000M 3KM	60 mins 1 hour.

Work out the following

M	M up	M down	Answer In mins	Steep up, flat steep down,
3500	250	0		
900	0	30		
1600	400	100		
4550	600	0		



ROUTE CARD (use one per day)			AIM OF EXPEDITION: DOFE EXPEDITION DAY 1							NAME OF GROUP OR UNIT	
Day of the week	Date	Day of venture 1st, 2nd etc.	General direction or bearing	Distance in km	Height climbed in m	Time allowed for journeying	Time allowed for exploring, rests or meals	Total time for leg	Estimated Time of Arrival E.T.A.	NAMES OF TEAM MEMBERS: 1. _____ 2. _____ 3. _____ 4. _____ 5. _____ 6. _____ 7. _____	
WED	4/7/11	ONE								CHILDWALL SPORTS COLLEGE ADDRESS FIVEWAYS QUEENS DRIVE LIVERPOOL L156XZ TEL NO. 0151 722 1561	
										Setting out time 09:00	
										Brief details of route to be followed or planned activity. (Enter full details of activity on reverse)	
										Escape/Notes	
1	TO 656201	NE	2.5	170	55 MIN	5	60 MIN	10:00		FROM CAMP TO THROUGH WOODS TO JUNC	
2	TO 638224	N	3	330	1 HR 30 MIN	10	1 HR 40 MIN	11:40		UP BRANCH TO CAIRN	
3	TO 630257	W	4	0	1 HR	30	1 HR 30 MIN	1:10		DOWN SHOULDER TO SADDLE AND ON TO RD	
4	TO 611253	W+SW	2.5	0	45 MIN	5	50 MIN	2:00		ALONG RD TO PATH JUNC	
5	TO 602230	SW	3.5	0	1 HR	10	1 HR 10 MIN	3:10		ALONG PATH TO RD JUNC	
6	TO 580233	W	3	0	1 HR	10	1 HR 10 MIN	4:20		ALONG RD TO CAMPSITE	



ROUTE CARD (use one per day) AIM OF EXPEDITION: DATE EXPEDITION DAY 1 / DAY 2 NAME OF GROUP OR UNIT

CHILDWALL SPORTS COLLEGE
ADDRESS
FIVEWAYS QUEENS DRIVE
LIVERPOOL L15 6XZ

TEL NO. 0151 722 1561

Day of the week	Date	Day of venture 1 st , 2 nd etc.	NAMES OF TEAM MEMBERS:							Setting out time 09:00	Brief details of route to be followed or planned activity. (Enter full details of activity on reverse)	Escape/Notes
			1.	2.	3.	4.	5.	6.	7.			
Day of the week	Date	Day of venture 1 st , 2 nd etc.	General direction or bearing	Distance in km	Height climbed in m	Time allowed for journeying	Time allowed for exploring, rests or meals	Total time for leg	Estimated Time of Arrival E.T.A.			
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)		
1	TO											
2	TO											
3	TO											
4	TO											
5	TO											
6	TO											
7	TO											
8	TO											

ROUTE PLANNING AND ON WHILST ON YOUR WALK

SOME IMPORTANT TIPS

1. Always start bright and early after a good breakfast. This gives plenty of time to sort out any problems if they arise during the walk.
2. Have one person at a time responsible for route finding, but everyone should know where you are at any time.
3. If the group goes wrong do not put unnecessary pressure on the navigator and others by mickey taking, arguing, walking off in a huff etc...
4. You are a group! Act like one! Keep calm, think and work out where you went wrong, help each other.
5. Discuss it sensibly until the WHOLE group comes to a decision which you are ALL happy with and then do it. It is no good complaining that you're lost when you had no part in choosing the direction.
6. Maintain a steady pace. Nothing is worse than stopping and starting every 2 minutes.
7. Find a pace which suites everyone and keep to it, staying happily together.
8. If you need to stop to put on, take off waterproofs/jumpers etc.., do it as a group. If it takes 3 minutes to do this and you all do it separately, it will add 21 minutes every time it rains or clears up.
9. Do not put your waterproofs on unless it is raining, your sweat will collect inside the trousers/top and get you very wet and smelly.
10. Drink lots of water before you set off as this will keep you hydrated and not have to stop in the first 10 minutes to take a drink.
11. Take little sips and often throughout the day, don't just glug all the water, or worse pour it over your head. You have to carry all the water you will need.
12. If it is hot and sunny put on sun cream every time you stop for water. Put it on exposed skin especially the shoulders, calves and back of the neck. There is nothing worse than carrying a rucksack on burnt skin.
13. Do not use IPods/MP3 etc.. as you may miss shouts from others saying you are going the wrong way or you may miss features such as the sound of roads/rivers, which are very useful when navigating.
14. Close all gates and take your rubbish home.
15. Enjoy your walk; look around; make notes of interesting things you see for your log. Keep referring to the map and try to make sense of the terrain.

NOTE DROP CARD

GROUP.....

DATE.....

TIME (arrived)

TIME (leaving)

COMMENT

.....

.....

CONCERNS

.....

.....

General direction of next leg

.....

These should be left in an obvious place held down with a rock or tied to a post.

The note should be left at a spot in the direction that you are heading.

The country code

● Be safe – plan ahead and follow any signs



Even when going out locally, it's best to get the latest information about where and when you can go (for example, your rights to go onto some areas of open land may be restricted while work is carried out, for safety reasons or during breeding seasons). Follow advice and local signs, and be prepared for the unexpected.

- Refer to up-to-date maps or guidebooks.
- You're responsible for your own safety and for others in your care, so be prepared for changes in weather and other events.
- Check weather forecasts before you leave, and don't be afraid to turn back.
- Part of the appeal of the countryside is that you can get away from it all. You may not see anyone for hours and there are many places without clear mobile-phone signals.
- Get to know the signs and symbols used in the countryside to show paths and open countryside

● Leave gates and property as you find them



Please respect the working life of the countryside as our actions can affect people's livelihoods, our heritage, and the safety and welfare of animals and ourselves.

- Follow paths across land that has crops growing on it, wherever possible.
- A farmer will normally leave a gate closed to keep livestock in, but may sometimes leave it open so they can reach food and water. Leave gates as you find them or follow instructions on signs (if walking in a group, make sure the last person knows how to leave the gates). Leave tied open gates alone.
- Use gates and stiles wherever possible – climbing over walls, hedges and fences can damage them and increase the risk of farm animals escaping.
- Leave machinery and livestock alone – don't interfere with animals even if you think they're in distress. Try to alert the farmer instead.



- **Protect plants and animals, and take your litter home**

We have a responsibility to protect our countryside now and for future generations, so make sure you don't harm animals, birds, plants or trees.

- Litter and leftover food doesn't just spoil the beauty of the countryside, it can be dangerous to wildlife and farm animals and can spread disease – so take your litter home with you (dropping litter and dumping rubbish are criminal offences).
- Discover the beauty of the natural environment and take special care not to damage, destroy or remove features such as rocks, plants and trees. They provide homes and food for wildlife, and add to everybody's enjoyment of the countryside.
- Wild animals and farm animals can behave unpredictably if you get too close, especially if they're with their young – so give them plenty of space.
- Fires can be as devastating to wildlife and habitats as they are to people and property – so be careful not to drop a match or smouldering cigarette at any time of the year. Sometimes, controlled fires are used to manage vegetation, particularly on heaths and moors between October and early April, so please check that a fire is not supervised before calling 999.

FIRST AID

Very few back packers on expedition suffer serious injury. Small problems like headaches, midge bites, sunburn etc. often occur. You will need to be able to do the right things for a variety of injuries even though you may never come across them. If you don't bother to learn this First Aid because you think it's very unlikely to happen to your group, as sure as eggs are eggs and legs are legs, someone will break one and you will be kicking yourself so hard that you didn't learn what to do, you'll break another one!!

Below are some of the injuries which sometimes happen on expeditions, how to recognise them and how to give First Aid. But remember the injured person is a human being who may be rather frightened at what was happened, so be careful what you say cannot be overheard if it is likely to frighten them more. Be careful and encouraging just like they are in "casualty".



CASUALTY CODE

Group CS6 are at it again. They are on the second day of their walk, and after a good breakfast, Mad Macho Mick is full of beans and at it again. They approach a gate and Mick, anxious to impress the rest, and decided to vault it instead of opening it. The 13KG bag on his back is completely forgotten as he launches himself at the gate and realises his spring is not going to take him much more than a foot from the top. On the way up he cracks his knee on one of the bars. On the way back down, on the same side of the gate, he realises that again he has been a divvy. His knee is agonising and he cannot walk on it.

They are up in the hills. What do they do?

Nice one Mick!!

You have to know what to do, without hesitation, deviation or repetition. You have to know so that your group remains safe. Fortunately, very few accidents occur in the hills, but all good expedition groups know how to deal with emergencies.

SO LEARN IT.



WHAT TO DO IN AN EMERGENCY

1. Do any first aid that is necessary.
2. Put up the tent if weather is bad to keep the casualty dry and warm, or use bivvy bag if putting up the tent is not possible.
3. Choose 2 people to go for help - the fittest member and the best map reader should go.
4. Make sure that those going for help have emergency rations and that the remaining group have food and cooking equipment.
5. Everybody makes a note of the time and your position, using 6 figure grid reference. Write down the following information **PINT**

P – Position 6 fig

I-Nature of Injury

N- Number in group

T- Time of incident

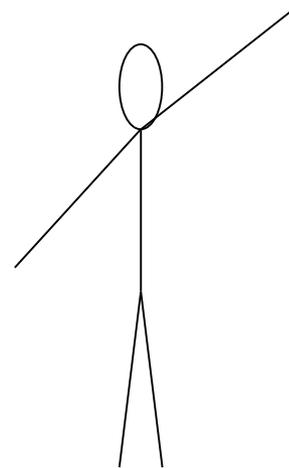
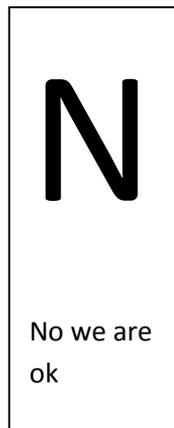
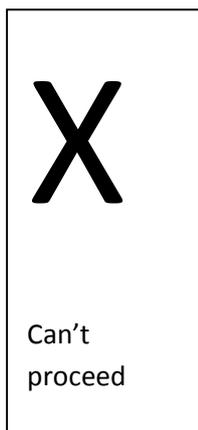
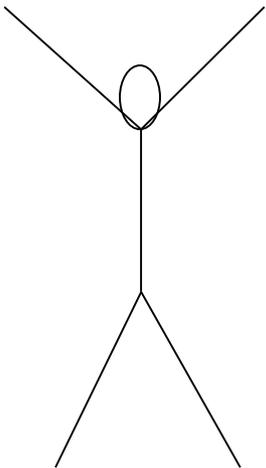
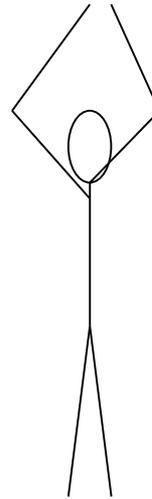
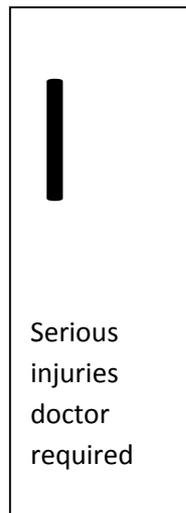
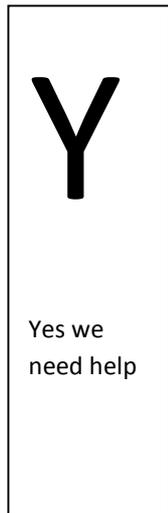
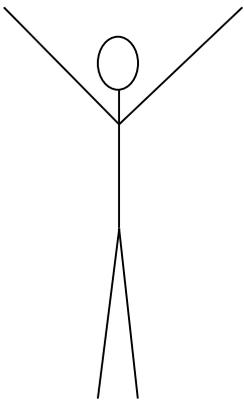
- 6 The pair of help-seekers go to the nearest phone or likely house/mobile. Ring the DofE number or the emergency services (999) ask for the mountain rescue and give them the PINT information.
- 7 For those remaining with the injured person, keep the casualty warm and make yourself visible using a bivvy bag spread out. Sound the international Distress Signal or flash with a torch 6 blasts. Wait a minute and repeat. Keep an eye out for help and an ear out for 3 blasts.

CASUALTY CODE

Occasionally helicopters are used to help groups in distress, and you may be aware sometimes of a helicopter searching near you. It is useful for you to be able to communicate with helicopter properly so that it does not waste time.

Here are the signals which can be made by laying out bright clothing or by a person making the shape by standing up or laying on the ground.

Make yourself into following shapes:



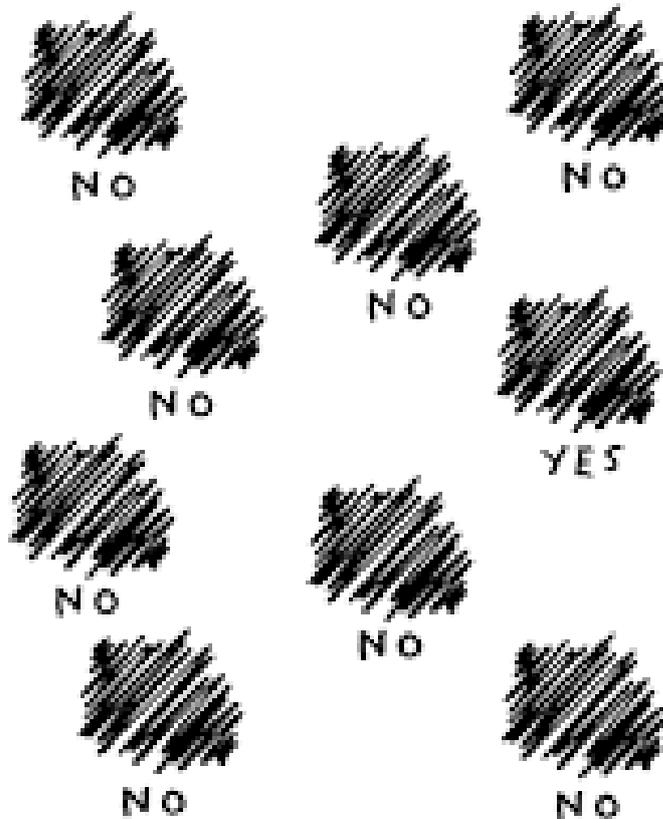
These should only be used in absolute dire injuries!!!

OUT FOR THE NIGHT

Very rarely a group has to stay out all night. You are equipped to do that, so it should be no problem. Get your tent up in a sheltered position. Get on with cooking and have a good meal and stay warm and dry (boil stream water if you can and use this to cook with). If you cannot put your tent up, get all your clothes on & get inside your sleeping bag, then inside your bivvy bag. Huddle up in your sleeping bags and wrap the tent outer around you. Put your feet inside your rucksacks and keep your legs drawn up and eat some emergency rations (this is why you have them) if you cannot cook. Cheer each other up! Tell each other jokes!

YOU WILL BE SAFE DON'T WORRY YOU WILL BE FOUND IN THE MORNING.

HOW TO RECOGNISE YOUR TENT IN THE DARK



HYPOTHERMIA

CAUSE: Inadequate protection against cold environment particularly if tired, wet, at altitude, prolonged immersion in cold water.

SYMPTOMS: Very cold, pale, cold to touch, shivering, lack of co-ordination and slurred speech, irrational, pulse respiration low.

TREATMENT: Place insulation material around causality, but NOT over face, place in shelter or move to warm dry room/tent. If adequate dry clothing available, remove wet clothes and replace with dry. If no dry clothing is available, leave wet clothes on and cover with waterproof material and additional insulation if available. Give hot sweet drinks. Examine for frostbite, treat if necessary. Remove to hospital.

Rub or massage limbs or encourage causality to take little exercise, place hands in direct contact with his/her body. If medical help is not readily available, apply gentle heat to causality to prevent further drop in temperature. If causality is unconscious, place in recovery position. Commence resuscitation if breathing stops.

HEAT EXHAUSTION-HYPERTHERMIA

CAUSE: Performing physical exercise in hot, moist climate when unaccustomed to atmosphere, especially if fluid and salt are lost due to sweating and replaced.

SYMPTOMS: May feel tired but restless, headaches, dizzy and sick, cramp in lower limbs (caused by salt deficiency). Pale, skin cold and clammy, breathing fast and shallow, pulse rapid and weak. Temperature normal or below, may faint.

TREATMENT: Lay down in a cool environment (shade or tent), replace lost fluid, seek medical aid.

HEAT STROKE

CAUSE: Exposure to extreme heat or high humidity with no air current.

SYMPTOMS: Headache, dizziness, feels hot, restless, high temperature, flushed but dry skin, breathing noisy, pulse full and bounding, may quickly become unconscious.

TREATMENT: Put in a cool environment (shade or tent), remove clothes, if conscious support in half sitting position if unconscious place in recovery position. Cool by fanning or wrapping in cold wet clothes. Seek medical aid.

OBJECTS IN EYE, NOSE AND EAR

EYE (i.e. Grit, eyelash, glass): Do not rub, but pull down lower lid, remove object with corner of clean toilet paper or cotton soaked in water. If under upper lid, look down, pull upper lid downwards and outwards over lower lid or blink eye in clean water.

EAR: Insects – float out by flooding ear with warm water. Other foreign bodies – do not attempt to remove seek medical advice. As you may poke object further down the ear canal.

NOSE: Do not try to remove foreign body, tell casualty to breathe through mouth, take to doctor or hospital

CRAMP

CAUSE: Poor muscular co-ordination or chilling during exercise. Body loses excessive amounts of salt and body fluids.

SYMPTOMS: Pain, tightness or spasm in muscle, casualty unable to relax contracted muscle

TREATMENT: Stretch muscles and warm by gentle massage

BLISTERS

TREATMENT: Wash, dry carefully, cover with a plaster. To help prevent blisters forming, walk boots in. This means wearing them around the house with the correct socks and tied up properly as often as possible. Go for short walks before you go on the expedition. Treat the blister as soon as redness appears, can use blister pads, very good.

STINGS

Remove sting with tweezers and put meths on the sting to get rid of any poison. If sting is in the mouth seek medical advice, until then keep cold water in mouth and spit out when temperature is raised.

TICKS

Remove tick with tweezers, grab body and twist anti-clockwise. Ensure that the head comes out completely. If the site becomes very sore and red rings appear around the wound seek medical help.

BURNS AND SCALDS

TREATMENT: Dip affected area in cold water, or under running cold water for at least 10 mins (use a cold stream) do not remove burned clothing. Put on a dry dressing no ointment. Remove any objects especially rings, which may be tight and restrict blood flow.

GRAZES

Clean with running water if possible or clean with a sterilization wipe. Apply dressing and plaster, or pad and bandage as necessary.

CUTS

Wash under running water if possible, clean with sterilization wipe, use only once, wipe away from wound. Apply dressing and plaster or pad as necessary. Do not remove soaked pad, place a fresh one on top of soaked pad.

CONTROL OF BLEEDING

Slight bleeding or small wound – apply direct pressure with fingers to bleeding point, over dressing if possible. Keep pressure on for 5-15 mins, or until bleeding stops by pressing sides of wound together and cover with bandage.

SEVERE BLEEDING

Apply direct pressure as above if possible. Lay casualty down, raise and support injured part. Clean wound, cover with sterile dressing. Pad and bandage should well overlap the wound. Apply further dressings on top of the original if necessary and never remove one that is in place. Immobilise injured part. If direct pressure cannot be applied, control bleeding by direct pressure to brachial or femoral pressure points this should not be applied for more than 10 mins.

Medical assistance should be sought immediately.

Brachial pressure point – pass fingers under upper arm, compress artery against bone.

Femoral pressure point – bend casualty's knee, grasp thigh with both hands, press directly and firmly with fist against brim of pelvis,



MUSCLE STRAIN

SYMPTOMS: Sharp pain at the site of injury, muscle may swell with severe cramp

TREATMENT: Use the **RICE** procedure:

- R** Rest the injured part
- I** Apply ice or a cold compress
- C** Compress the injury
- E** Elevate the injured part

Obtain medical attention if necessary.

SPRAIN

SYMPTOMS: Swelling about joint and later bruising, unable to use joint without increasing pain

TREATMENT: Rest and support in comfortable position, expose joint, apply pressure by surrounding with a good layer of bandage. Also use RICE procedure.

If possible share weight of rucksack with team and slowly walk to help point

SHOCK

SYMPTOMS: Casualty extremely pale, skin cold and clammy with a lot of swelling, may feel faint or giddy, feel sick, may vomit, feel thirsty, be very anxious, pulse increases in a rate, becoming weak, breathing shallow and rapid. NOT all symptoms may be present.

TREATMENT: Lay casualty down and deal with the cause of shock (possible bleed). Keep head low with legs raised by placing on top of a rucksack. Loosen clothing, reassure them, if thirsty moisten lips with water. Protect when necessary with sleeping bag and tent if needed

Do not give anything to eat or drink

Do not over heat

Do not move more than is necessary

MOUTH TO MOUTH RESUSCITATION

To be completed at tutorials.

FRACTURES AND BREAKS

SYMPTOMS: Pain, made worse by movement of injured part. Swelling, unable to move injured part normally, deformity, unnatural movement. Not all symptoms may be present. Look for as many as possible without moving any part unnecessarily. Compare injured and uninjured limbs whenever possible.

IMMEDIATE TREATMENT: Steady and support injured part to prevent further damage, maintain this control until fracture has been made unmoveable.

UPPER AND LOWER LEG

TREATMENT: Steady and support injured limb. Bring uninjured leg to injured leg, put padding between legs where they touch. Tie feet and ankles together with figure of eight bandage, then firmly bandage above and below the injured side (diagram on separate sheet)]

UPPER ARM

TREATMENT: If elbow not involved, place arm across chest, finger tips midway between shoulders and elbow, soft pads between chest and arm. Support with triangular sling (see diagram on separate sheet)

LOWER ARM- WRIST

TREATMENT: Protect by placing in fold of soft padding, support in sling. With both upper arm and lower arm or wrist, additional support can be given by tying to chest with a broad bandage (a triangle bandage folded to make an 8-10cm length) over sling.

ANKLE

TREATMENT: Treat as fractured leg. Bandaging around the feet, knees and then above the ankle joint. Take care when tying the figure eight around feet. Diagram on separate sheet.

DISLOCATION

SYMPTOMS: Severe pain at or near the joint, appearance not normal, casualty cannot move joint, swelling and bruising usually present.

TREATMENT: Support and secure in most comfortable position using clothes, and bandages or slings. Obtain medical aid at once. Do not attempt to replace bones to normal position.

IF IN ANY DOUBTFUL CASES WITH REGARDS TO INJURIES TO MUSCLES OR JOINTS, TREAT AS A FRACTURE!

SUPPORTING AN INJURED ARM

This is the standard sling for an injured arm



A



B

(St John's sling)



if a hand is injured, this sling will make it more comfortable

C



for fractures of the humerus only

D



E





How to immobilise a wounded leg

1 If you think the person may have a fractured leg, or if they can't be moved, dial 999 immediately.

2 Then, open up the triangular bandages and pass them under the natural hollows of the knees and ankles



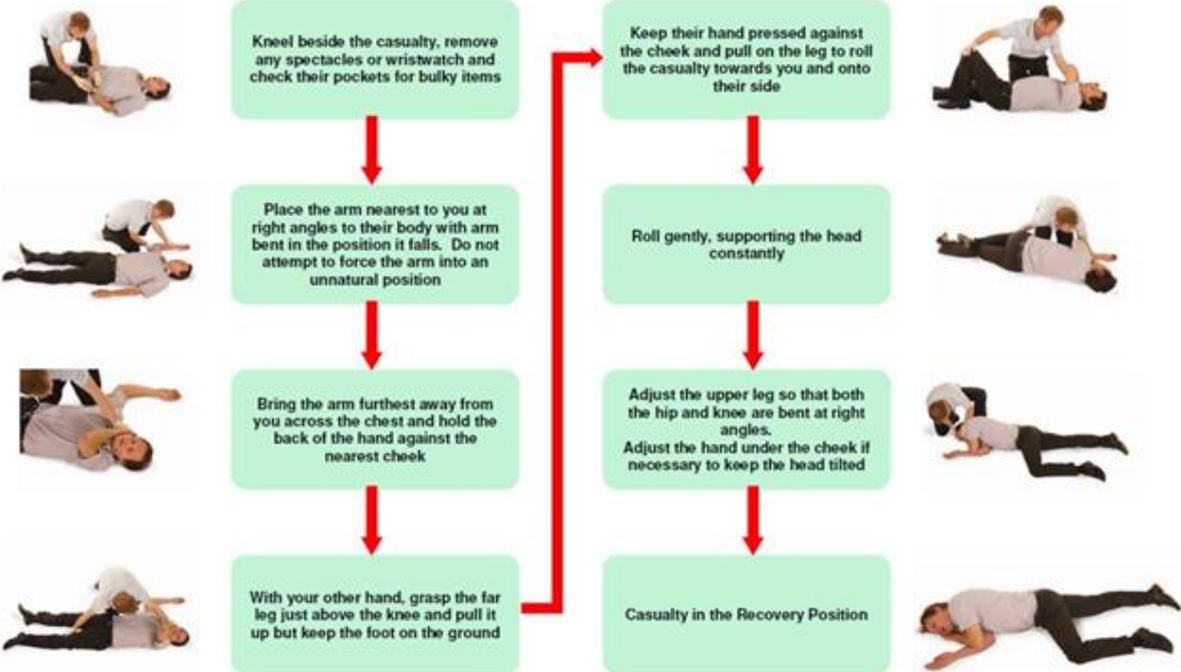
3 Carefully strap the legs together, being sure not to tie the bandages over the injury site or the knees. The idea is to keep the injured leg immobilised, by securing it to the uninjured one.



4 Remove shoes and socks and check the blood flow to the feet.

5 Keep the person warm with the emergency blanket, or they'll soon start to get cold

Recovery Position



Now you have read through the first aid pages, make a list of the first aid equipment that you will need as an individual and as a group. Don't forget any personal equipment such as inhalers.

Don't forget that depending on your group size you may need 2-3 first aid kits.

Equipment I will need	Equipment the group will need	Why are we taking this?

Write up a shopping list and all put money in to purchase the kits.