SROBWG002 Demonstrate Bushwalking Skills in Difficult & Trackless Areas / SRONAV002 Navigate in Difficult & Trackless Areas

PATHFINDER SPECIALIST AWARD



LOOSE ROCKS ON FLAT GROUND

- Concentrate on your foot placement.
- Walkers may need to lift their feet up instead of using a swinging stride.
- Leaders should warn others in the group if necessary.



FALLING LOOSE ROCKS ON A SLOPE

- Immediately call out, "Rocks".
- The group should space themselves out so that each individual has room to dodge the falling object.
- This is especially if the group are zig zagging up or down a slope.

TREE ROOTS

• Concentrate on placing feet on secure ground so as to avoid tripping.

TEMPERATURE EXTREMES - HOT

- Choose not to walk in the heat.
- If necessary, walk in the early morning and late afternoon.
- Stop in a shaded spot during the middle of the day.
- Drink lots of water.
- Keep covered.



TEMPERATUREEXTREMES - COLD

- Wear clothes in the layered method.
- Keep moving when resting.
- If wind is involved, find shelter and establish camp.
- Heat up something warm to drink.
- Encourage each other.
- Leaders may need to consider going home.



STEEP, SLIPPERY OR UNSTABLE TERRAIN

- Avoid this terrain.
- Choose another route.
- If leaders are aware of the terrain and it is unavoidable, take a short rope to be used as a stabilizer and hand support.
- It would be an advantage to have walking sticks to act as extra points of contact.
- Move smoothly and as quickly as possible across/over the slippery or unstable place.

STEEP, SLIPPERY OR UNSTABLE TERRAIN

- Move smoothly and as quickly as possible across/over the slippery or unstable place.
- Have an escape plan.
- Help each other.
- Have one person at a time covering the problem area.
- It may help to pass packs over.
- Be adaptable.



SNAKES (Australia & Papua New Guinea)

- If one is found, back away carefully so that it will sense a way of escape.
- Don't attack it with a stick.
- If bitten, follow first aid procedures.



BITING INSECTS

- Apply insect repellent early in the morning and from 4pm onwards.
- Camp in exposed windy areas if insects are an issue.

CROCODILES (Australia & Papua New Guinea)

- In northern Australia, crocodiles may be present in any waterway and in the ocean.
- Vary your approach to the water source.
- Do not collect water from the same spot each time.
- If a crocodile attacks, run fast in a zig zagging motion away from the water.

•If possible, zig zag between trees as crocodiles run faster than a man over a short distance.

Crocodiles are most aggressive during the wet season,
 October – March.

CASSOWARY (Australia & Papua New Guinea)

- If threatened, run away zig zagging through the trees until you are a safe distance from the bird.
- Keep watching it until it is out of sight.

STINGING TREES

- Learn to identify the large leaves.
- Do not touch any part of leaves, including dead leaves on the ground.
- Keep well away from the leaves.

STINGING NETTLES

- If nettles are present, put long pants on or gaiters to protect any exposed legs.
- Avoid touching.
- If someone does touch a nettle leaf, most people find the 'stimulating' feeling will quickly subside.



LANTANA

- Avoid at all costs.
- If unavoidable, then travel slowly, trying to find the easiest way through.
- Wear a long shirt, long pants and leather gloves where possible.



WAIT-A-WHILES

- If this hanging vine entangles a walker, stop, reverse and allow the 'teeth' to detach themselves from body parts, clothes, or pack.
- To keep pushing through could mean ripped skin, clothes, or equipment.

DENSE VEGETATION

- Try to detour around this.
- If the group has to continue, wear long sleeves, long pants and boots.
- Walk close behind each other so that walkers can pass bent bushes back to the next person.
- Change the leader regularly.
- Avoid thrashing quickly through dense bush.



SNOW

- If the snow is hard and icy, do not continue unless equipped with correct snow gear.
- If snow conditions are fine, walk normally but keep group together.
- If ascending, kick the toes of boots into the snow.
- If descending, kick boot heels back into the snow.
- If the snow is soft and unable to hold a walkers weight, follow the leader's route. Change the trailbreaker often.



SNOW

- Try and cover snow slope areas early in the day before the sun softens the snow. Watch out for snow falling from trees.
- The snow makes the bush very beautiful.

FLOODING

• Don't move until the flood has subsided.



BUSH FIRES

- Be aware of the fire danger level.
- If it is high, seriously consider not going.
- If you observe smoke while out bushwalking, change your route if necessary, to move away from the fire.
- If fire becomes a threat to the bushwalk, follow one of the prepared escape routes.
- NEVER try to outrun a fire.



If caught in a fire:

- Find cover to protect yourselves from radiant heat.
- The more solid the material between you and the fire, the more radiant heat will be blocked.
- Cover all exposed skin.
- Drink lots of water.
- Keep checking on everyone in the group.



LIGHTNING

- This is a very rare possibility.
- Stay away from exposed rocks, cliffs, peaks, mountain ridges or isolated trees.
- Ensure all walkers are water proof, seek protection where possible, with no points of contact on the ground.



LOCAL WIDE LIFE / DINGOES / FOXES

- Keep all food well covered and stored in packs.
- If aggressive, avoid walking alone and keep watch on them if they are following the group.
- Stand tall or in groups and carry a stick.
- Chase them away if possible.
- Do not feed.

DINGOES/FOXES

- Keep all food well covered and stored in packs.
- If aggressive, avoid walking alone and keep watch on them if they are following the group.
- Stand tall or in groups and carry a stick.
- Chase them away if possible.
- Do not feed.

CATTLE

- If you have to walk past a mob, which could become aggressive, detour around them, making sure that there are trees that can be quickly climbed or hidden behind.
- Do not camp by a water hole that is obviously used by cattle.

BUSHWALKING RISKS

HYPOTHERMIA

• Forgetfulness, loss of judgement, loss of coordination, shivering.

HEAT EXHAUSTION

• Weakness, dizziness, nausea, vomiting, heat cramps, fainting.

HEAT STROKE

 Altered level of consciousness, increased heart rate, increased breathing rate.

BUSHWALKING RISKS

INJURIES

- Pain, sores, broken bones etc.
 DIARRHOEA
- Watery bowel movements, frequent toilet stops.
 COLDS, COUGHS
- Coughing, fatigue, sore throat etc.



BUSHWALKING RISKS

EXHAUSTION

- Overheated, lethargic, fatigue.
 PHOBIA
- Unable to do something because of fear.

FACTORS TO REMEMBER WHEN CROSSING A RIVER

- Run out area where water slows, is it safe, are there obstacles?
- Riverbed look for an even-bottomed, shingle (stony) bed, preferably at a point where the river is just widening out.
- Speed of River gauge the speed by throwing a stick in, if speed is greater then walking pace be careful.
- Depth of Water avoid water deeper then knee level of the shortest member of the group.
- Entry and Exit Points need to be easy to approach or exit

from.

1. INDIVIDUAL

- When water not too fast or too deep.
- Choose a clear route at 45-deg to the current.
- Walk downstream with the side of your body to the current.
- Keep body weight directly over feet.

- 2. INDIVIDUAL WITH SUPPORT POLE
- The pole is used as a third leg.
- It provides an extra anchor point.
- Cross with the body to the side and the pole up the river.
- Put weight on the pole and walk forward carefully.





3. GROUP MUTUAL SUPPORT

- Each person is double linked.
- Able to communicate well with each other.
- The strongest person is put in the upstream position.
- The group lines up on the bank and then sets off across the river, working together.





- **4. GROUP MUTUAL SUPPORT USING PACK STRAPS**
- Good method if people are of a similar height.
- Can be used to cross uneven river bottoms.
- The strongest person stands up river, then the next strongest and so on down river.
- Each person reaches for the next person's pack and holds the pack strap on the furthest shoulder.





5. GROUP MUTUAL SUPPORT USING A THIN POLE

- The pole gives rigidity to the team.
- The strongest person stands upstream, then the next strongest and so on downstream.
- The strongest person stands up river, then the next strongest and so on down river.





6. LINE ASTERN

• Three or more people stand behind each other facing into the flow of the current.

- They hold each other's pack or belt.
- In fast water move sideways across the river together.
- In slower-moving water, move one at a time and support each other.
- The strongest person should be second in line.


BUSHWALKING OBSTACLES

- Scree Layers of stones that cover a slope.
- Crossing over logs step over them where possible, avoid walking on them and causing injury.
- Rocks Step over or walk around them to avoid slipping.
 Watch feet placement.
- Gullies To cross, find an animal track and follow it.
- Exposed areas Move carefully, watching feet placement. If following a rock ledge, use hand holds.



BUSHWALKING OBSTACLES

- Cliffs Avoid at all times. Walkers need to keep a body's length and a half from a cliff edge.
- Night walking Avoid where possible. If unavoidable, each person needs a light. Adequate experience in navigation is also required.
- Ascending steep slopes walking up in a zig zag pattern is the safest and most energy efficient.
- Descending steep slopes walking down in a zig zag pattern is the safest.



THE BACKPACK

- Weight of the pack should be close to the back and centred at the belly button level.
- Pack should feel like part of the body.
- Weight: 1/3 body weight of adult, 1/1 body weight of child.
- Store each item separately in pack liners or waterproof bags.
- Pack things you need to get to quickly near the openings (top), heavy things in the middle, light bulky things at the bottom.

THE BACKPACK

Quick to access: First aid, camera, snack food, water, wet weather gear

Heavy things: Water, cooking gear, food

Light bulky things: Clothes, tent, sleeping mat, sleeping bag

PUTTING ON A BACKPACK

- Bend your knees and keep weight close to the body when lifting (OH&S).
- With the help of another walker.
- With the help of a man made object.
- No help (swing method).

TOPOGRAPHICAL MAPS

- They cover a specific section of land.
- Contour lines represent elevation and the natural shape of the ground.

MAP INFORMATION

- Scale.
- Name.
- Map number.
- Date.
- Universal grid reference.
- North points diagram.
- True north.

ADVENTIST YOUTH MINISTRY SOLITI PACIFIC

- Magnetic north.
- Scale with additional information.
- Contour lines.
- Legend of symbols.
- Weather details.
- Index to adjoining maps.



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ADVENTIST YOUTH MINISTRY

SOUTH PACIFIC



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200





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When contour lines are close together they indicate a steep slope or scarp. When contour lines are far apart they indicate a gentle or dip slope.





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ADVENTIST YOUTH MINISTRY

SOUTH PACIFIC



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ADVENTIST YOUTH MINISTRY

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GRID REFERENCE



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SIX-NUMBERED GRID REFERENCE



TEN-NUMBERED GRID REFERENCE



A BASE PLATE COMPASS



TAKING A SITE BEARING

- Hold the compass in a horizontal position.
- Point the direction of travel arrow toward the object.
- Rotate the (base plate) orienteering compass move the housing until the two arrows point in the same direction (the marriage).
- This establishes the direction for the group.
- Read and record the bearing off the index line.





TAKING A SITE BEARING



MAGNETIC VARIATION

- Due to the change in location of magnetic north.
- The compass reacts to magnetic north.
- The map refers to grid north (closest representation of true north).



CONVERSION BETWEEN NORTHS

- Grid/True North to Magnetic North: ADD.
- Magnetic North to Grid/True North: SUBTRACT.



Magnetic North - Grid North 15 MN + 12.2 variation = 27.2GN

Magnetic North - True North 15 MN + 12.2 - 0.7 = 26.5 TN

LINEAR FEATURES

- Features such as tracks, roads, creeks, rivers, ridges, gullies or spurs.
- Help walkers know where they are and estimate distances.

POINT FEATURES

- Summits, saddles, knolls, quarries, dams, bridges, etc.
- These are signposts that help leaders know exactly where they are.
- Linear and point features are key to walking confidently in the bush.



HAND RAILS

- A natural or man-made feature that runs reasonably parallel to the route the group is taking.
- Eg. river, ridge, mountain range, road, etc.

ATTACK POINTS

• An easily recognizable feature (eg a hill, etc) that is close to the point the group is aiming for.

 From the attack point the group can easily make their way to the destination.





AIMING OFF

- A skill used when a leader knows they won't see their destination when approaching.
- Some other feature such as a creek, road or ridge is used as a linear reference instead.



COLLECTING FEATURES

- A linear feature that runs across a desired route.
- Eg. ridge, spur, creek/river or road.
- Once the group reaches it, it acts as a reference point for the next part of the journey.

CHOOSING THE BEST TERRAIN

- The type of bush is a major factor to consider.
- Gullies and creeks have a thicker vegetation than ridges and spurs – usually the best route to follow.

SPIRAL AND SWEEP SEARCH

- Can be used when looking for a specific location.
- Also used for search and rescue.





BACK BEARING

- This technique uses a compass to return to where the group has come from.
- If the bearing you are on is LESS then 180-deg, then ADD 180-deg to your bearing.
- If the bearing you are on is MORE then 180-deg, then SUBTRACT 180-deg to your bearing.



RESECTION

- This method uses natural visible features to find your general location.
- It can be done with 2 of 3 features and a compass or by line of sight on a map that has been orientated to the features of the terrain around.





GOING AROUND AN OBSTACLE – RIGHT ANGLES



GOING AROUND AN OBSTACLE – 60-DEGREE ANGLES



ESTIMATING DISTANCE TRAVELLED

- By knowing how many of your paces equals 1km.
- Based on walking time.



PLANNING PROCESS FOR A HIKE

- Decide on the group goals.
- Identify the most appropriate map for the area.
- Work out the best route from the map.
- Consult with others who have been in the same area.
- Recognise the features of the area.
- Consider the environmental impact.
- Consider the effect of group size.
- Decide on the campsite.



PLANNING PROCESS FOR A HIKE

- Choose the routes.
- Identify the potential risks.
- Identify escape routes for the different stages of the hike.
- Adapt the route to the anticipated group.
- Identify the route using grid references.
- Fill out a data sheet (Appendix 4).
- Complete the data collection required by the Conference/Mission.


PLANNING PROCESS FOR A HIKE

- Break the route up into legs.
- Each leg should begin and terminate at easily recognizable features.
- For a day walk, each leg should be no more than an hour's walk.
- Fill out a Safety Management Plan (Appendix 3).



OTHER NAVIGATIONAL TOOLS

GLOBAL POSITIONING SYSTEMS (GPS)

- Identifies your location.
- Store all the way points (point features) for a route.
- Estimate the walking rate.
- Provide direction to the next point.
- Provide many more features.



OTHER NAVIGATIONAL TOOLS

NATURAL NAVIGATIONAL TOOLS

- The sun.
- Quick stick method.
- All day sun stick method.
- Watch method.
- Direction at night.
- (Details provided in Chapter 5 of Resource Material).

