



**Australian Government**

**Department of Education, Employment and Workplace Relations**

# **SISOBWG509A Apply advanced bushwalking skills in tropical areas**

**Release: 1**

## SISOBWG509A Apply advanced bushwalking skills in tropical areas

### Modification History

Not Applicable

### Unit Descriptor

<b>Unit descriptor</b>	This unit describes the performance outcomes, skills and knowledge required to bushwalk in tropical areas and conditions, with no supervision on trips greater than two day's duration. This unit focuses on the demonstration of advanced bushwalking techniques in extreme environmental conditions. No licensing, regulatory or certification requirements apply to this unit at the time of endorsement.
------------------------	---

### Application of the Unit

<b>Application of the unit</b>	This unit applies to those working as specialist bushwalking guides in more extreme and challenging conditions, such as tropical areas. This unit may also apply to leaders working for outdoor education or adventure providers; volunteer groups; not-for-profit organisations or government agencies.
--------------------------------	--

### Licensing/Regulatory Information

Refer to Unit Descriptor

### Pre-Requisites

<b>Prerequisite units</b>		

## Employability Skills Information

<b>Employability skills</b>	This unit contains employability skills.
-----------------------------	--

## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
---	--

## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Plan a bushwalk.	1.1. Identify and plan <i>food and water requirements</i> for <i>tropical areas and conditions</i> according to <i>principles of nutrition</i> and the <i>duration of the walk</i> . 1.2. Identify an appropriate location according to <i>relevant legislation</i> and <i>organisational policies and procedures</i> . 1.3. Access <i>relevant sources</i> to interpret detailed <i>weather and environmental information</i> to determine activities. 1.4. Obtain and become familiar with detailed maps for the intended walk. 1.5. Identify possible <i>hazards</i> and <i>changing conditions</i> associated with the activity. 1.6. Identify the signs, symptoms, prevention and treatment of possible <i>risks</i> , such as hyperthermia and hypothermia.
2. Select equipment.	2.1. Select <i>equipment</i> according to <i>contextual issues</i> and check to ensure that it is in good working condition. 2.2. Adjust and fit equipment to ensure comfort and safety according to organisational policies and procedures. 2.3. Ensure pack weight is appropriate to body weight and level of fitness. 2.4. Select personal clothing and footwear, and identify the design and or construction features that make it appropriate. 2.5. Identify the importance of sun and eye protection in tropical environments.
3. Apply advanced bushwalking skills.	3.1. Approach <i>obstacles</i> and hazards in a safe manner and minimise risks to self and group where possible. 3.2. Apply <i>ascending techniques</i> and <i>descending techniques</i> on slopes. 3.3. Maintain an appropriate <i>walking rhythm</i> and pace according to conditions. 3.4. Select a campsite appropriate to the team members and conditions according to relevant legislation and organisational policies and procedures. 3.5. Pitch tents according to site and anticipated weather. 3.6. Repair and or improvise items of essential equipment in the case of breakage or loss. 3.7. Identify possible emergency food and water sources from animal tracks and bird flight patterns in the bushwalking location.

ELEMENT	PERFORMANCE CRITERIA
4. Navigate in a tropical environment.	4.1. Apply information contained on maps to plan a suitable route or course. 4.2. Obtain <i>additional information</i> to assist in navigation from the map. 4.3. Calculate grid and magnetic bearings using a map and compass. 4.4. Follow a route in tropical areas and conditions, demonstrating use of <i>navigation aids</i> . 4.5. Apply <i>techniques for estimating distance</i> travelled. 4.6. Maintain a compass course whilst bypassing an obstacle.
5. Evaluate the bushwalk.	5.1. Evaluate <i>relevant aspects</i> of the walk. 5.2. Identify improvements for future walks.

## Required Skills and Knowledge

### REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

#### Required skills

- literacy skills to:
  - read and interpret maps
  - follow instructions and procedures
  - analyse weather and environmental information
- planning and organising skills to allocate and select relevant food, water, clothing and equipment for bushwalks greater than two day's duration in tropical areas
- communication skills to interact with other participants to maintain a positive and safe environment while on the walk
- numeracy skills to navigate and calculate grid and magnetic bearings and distances using a map and compass in tropical areas and conditions
- problem-solving skills to:
  - assess and address hazards and unforeseen circumstances, such as the change in weather conditions
  - repair or improvise items of essential equipment in the case of breakage or loss
- survival skills to enable self protection in the case of extreme environmental conditions
- minimal impact camping skills using lightweight, portable equipment
- first aid and emergency response skills appropriate to the location to enable initial response to emergencies and personal health care.

**REQUIRED SKILLS AND KNOWLEDGE****Required knowledge**

- legislation and organisational policies and procedures to enable safe conduct of all bushwalking activities
- minimal impact camping and walking codes to ensure protection of environment
- equipment types, characteristics and technology used for bushwalking, the advantages and disadvantages of the range of equipment, and factors affecting appropriate selection of equipment
- packing and maintenance techniques before, during and after the activity to protect personal and group equipment and ensure prolonged life
- pack handling, packing and lifting techniques to prevent or avoid injury
- pack hauling techniques should it be necessary to lift packs vertically to navigate a vertical hazard
- clothing requirements and footwear for tropical areas and conditions and factors affecting clothing selection, such as layering and protective clothing
- principles of nutrition to maintain health during activity
- sources of food and water in emergency situations to maintain health for prolonged periods, such as emergency water procurement
- navigation in a broad range of tropical areas and conditions to determine location, direction and potential hazards with no supervision and in a broad range of visibility circumstances
- weather and environmental information to ascertain possible conditions and their affect on the activity including life threatening conditions
- selection of tie-off points and anchors when using handlines to assist on steep terrain
- track signage standards, such as the current Australian Standard, to determine the suitability of the track to skill levels
- emergency procedures and potential hazards relevant to the location to ensure risk minimisation to self and group.

## Evidence Guide

<b>EVIDENCE GUIDE</b>	
<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<b>Overview of assessment</b>	
<b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b>	<p>Evidence of the following is essential:</p> <ul style="list-style-type: none"> <li>• applies relevant processes to plan equipment and supply requirements according to the conditions and duration of the bushwalk</li> <li>• demonstrates advanced bushwalking techniques and safety practices, and adapts to contingencies that may arise during the walk</li> <li>• takes precautions to maintain physical well being of self and group during a bushwalk, and identifies possible signs, symptoms and treatments of conditions such as hyperthermia and hypothermia</li> <li>• evaluates and reflects on own bushwalking performance to identify strengths, weaknesses and areas that need improvement.</li> </ul>
<b>Context of and specific resources for assessment</b>	<p>Assessment must ensure participation in a bushwalking activity in tropical areas and conditions that is of a minimum three day duration to demonstrate competency and consistency of performance.</p> <p>Assessment must also ensure access to:</p> <ul style="list-style-type: none"> <li>• resources and information, such as detailed maps and meteorological data, to plan for the bushwalk</li> <li>• a suitable outdoor location, with tropical areas and conditions that are unmodified so that track alignment is indistinct with no clearance or signage. The track will not be managed for public risk and the onset of extreme environmental conditions may have a significant adverse impact upon the bushwalk</li> <li>• bushwalking, navigation and safety equipment.</li> </ul>
<b>Method of assessment</b>	<p>A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:</p> <ul style="list-style-type: none"> <li>• observation of the planning and review process</li> <li>• oral and or written questioning and reports to assess knowledge of contingency procedures and relevant legislation and organisational policies and procedures</li> </ul>

**EVIDENCE GUIDE**

to enable safe conduct of bushwalking activities  
observation of demonstrating advanced bushwalking skills, such as navigating a course while facing a range of tropical conditions from humidity to thunderstorms

- observation of dealing with contingencies, such as repairing and or improvising items of essential equipment in the case of breakage or loss
- review of plan for the bushwalk
- written and or verbal self evaluation
- third-party reports from a supervisor detailing performance.

Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, for example:

- SISOOPS303A Interpret weather conditions in the field
- SISOBWG404A Apply river crossing skills



**EVIDENCE GUIDE****Guidance information for assessment****Range Statement****RANGE STATEMENT**

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

***Food and water requirements*** may include:

- menu planning and preparation
- range of foods
- emergency food and water
- water purification and conservation.

***Tropical areas and conditions*** may include:

- unmodified natural surface
- no clearance along the track
- unsigned
- steep sections of unmodified surfaces
- track not managed for public risk
- risk of onset of extreme environmental conditions, such as hot and humid conditions with rainfall
- those that align to Class 6 tracks within the Australian Standard for Walking Tracks.

***Principles of nutrition*** may include:

- food groups
- dietary guidelines
- essential nutrients
- individual food requirements and allergies.

***Duration of the walk*** may include:

- three days
- four days
- five days
- more than five days.

***Relevant legislation*** may include:

- occupational health and safety
- permits or permission for access
- environmental regulations.

<b>RANGE STATEMENT</b>	
<b><i>Organisational policies and procedures</i></b> may include:	<ul style="list-style-type: none"> <li>• occupational health and safety</li> <li>• emergency procedures</li> <li>• equipment use and maintenance</li> <li>• communication protocols</li> <li>• code of ethics.</li> </ul>
<b><i>Relevant sources</i></b> may include:	<ul style="list-style-type: none"> <li>• Bureau of Meteorology</li> <li>• media</li> <li>• land managers or agencies</li> <li>• local knowledge.</li> </ul>
<b><i>Weather and environmental information</i></b> may include:	<ul style="list-style-type: none"> <li>• satellite images</li> <li>• daily and weekly forecasts</li> <li>• maximum and minimum temperatures</li> <li>• weather warnings</li> <li>• event warnings</li> <li>• river levels</li> <li>• synoptic charts</li> <li>• high and low tide predictions.</li> </ul>
<b><i>Hazards</i></b> may include:	<ul style="list-style-type: none"> <li>• temperature extremes</li> <li>• slippery or unstable terrain</li> <li>• dangerous animals and insects</li> <li>• stinging trees and nettles</li> <li>• dense vegetation</li> <li>• group management hazards.</li> </ul>
<b><i>Changing conditions</i></b> may include:	<ul style="list-style-type: none"> <li>• weather</li> <li>• equipment failure</li> <li>• injuries.</li> </ul>
<b><i>Risks</i></b> may include:	<ul style="list-style-type: none"> <li>• hypothermia</li> <li>• heat exhaustion</li> <li>• injuries</li> <li>• exhaustion</li> <li>• lost party or party member</li> <li>• equipment failure.</li> </ul>
<b><i>Equipment</i></b> may include:	<ul style="list-style-type: none"> <li>• bushwalking equipment</li> <li>• navigation equipment</li> <li>• safety and first aid equipment</li> <li>• camping equipment.</li> </ul>
<b><i>Contextual issues</i></b> may include:	<ul style="list-style-type: none"> <li>• weather conditions, including times</li> <li>• season</li> <li>• transport</li> </ul>

<b>RANGE STATEMENT</b>	
	<ul style="list-style-type: none"> <li>• location</li> <li>• trip distance and duration</li> <li>• group objectives</li> <li>• group size.</li> </ul>
<i>Obstacles</i> may include:	<ul style="list-style-type: none"> <li>• rivers</li> <li>• logs</li> <li>• rocks</li> <li>• gullies</li> <li>• exposed areas.</li> </ul>
<i>Ascending techniques</i> may include:	<ul style="list-style-type: none"> <li>• zig-zagging</li> <li>• placing feet down flat with a deliberate step</li> <li>• resting heels on any available projections</li> <li>• using walking aids and ropes as handlines.</li> </ul>
<i>Descending techniques</i> may include:	<ul style="list-style-type: none"> <li>• placing toes against projections to avoid overstriding</li> <li>• avoiding placing feet down heavily</li> <li>• using flat- footed or stiff- heeled technique</li> <li>• using walking aids and ropes as handlines.</li> </ul>
<i>Walking rhythm</i> may include:	<ul style="list-style-type: none"> <li>• maintaining same speed of pace</li> <li>• keeping hands free</li> <li>• allowing natural body swing</li> <li>• avoiding jerky movements or springing.</li> </ul>
<i>Additional information</i> may include:	<ul style="list-style-type: none"> <li>• altitude gain or loss</li> <li>• distance</li> <li>• gradient</li> <li>• estimated travelling time.</li> </ul>
<i>Navigation aids</i> may include:	<ul style="list-style-type: none"> <li>• maps</li> <li>• compass.</li> </ul>
<i>Techniques for estimating distance</i> may include:	<ul style="list-style-type: none"> <li>• timing</li> <li>• pacing</li> <li>• observing surroundings.</li> </ul>
<i>Relevant aspects</i> may include:	<ul style="list-style-type: none"> <li>• objectives</li> <li>• planning process</li> <li>• activity site</li> <li>• weather</li> <li>• equipment selection</li> <li>• clothing selection</li> <li>• food selection</li> <li>• instructional content</li> </ul>

**RANGE STATEMENT**

	<ul style="list-style-type: none"> <li>• instructional technique</li> <li>• assessment technique</li> <li>• group feedback</li> <li>• directing techniques</li> <li>• rescue techniques employed.</li> </ul>
--	--

**Unit Sector(s)**

<b>Unit sector</b>	Outdoor Recreation
--------------------	--------------------

**Co-requisite units**

<b>Co-requisite units</b>		

**Competency field**

<b>Competency field</b>	
-------------------------	--