



Australian Government

SISOSKT003 Use snow craft skills for alpine touring

Release: 1

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Modification History

Not applicable.

Application

This unit describes the performance outcomes, skills and knowledge required to safely deliver recreational activities in alpine environments in heavy snow. It focuses on abilities required to sustain the physical wellbeing of self and participants in harsh cold conditions, and to survive the impacts of sudden environmental changes that are particular to alpine environments, particularly in winter.

Snow craft skills may be utilised in a range of activity contexts but this unit has particular application to alpine bushwalking, ski touring and other snowsports activities. The mode of travel in alpine regions is covered by complementary units.

It applies to leaders, guides or instructors who lead participants in activities in the alpine region under snow conditions.

This unit applies to any type of organisation that delivers outdoor recreation activities including commercial, not-for-profit and government organisations.

No occupational licensing, certification or specific legislative requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Competency Field

Ski Touring

Unit Sector

Outdoor Recreation

Elements and Performance Criteria

ELEMENTS

Elements describe the essential outcomes

1. Determine and manage risks for alpine activities in snow

PERFORMANCE CRITERIA

Performance criteria describe the performance needed to demonstrate achievement of the element.

- 1.1. Determine and plan for the impacts of sudden weather changes on the wellbeing of self and participants.
- 1.2. Identify and plan for contingency food and water

conditions.	supplies to sustain physical wellbeing of self and participants in winter alpine conditions.
	1.3. Select a line of travel which reduces exposure to avalanches and other hazards associated with alpine terrain and weather conditions.
	1.4. Determine ways to prevent hypothermia and frostbite and to identify signs and symptoms.
2. Select and carry equipment for alpine snow conditions.	2.1. Select and carry additional clothing to account for changing weather conditions.
	2.2. Select and carry contingency food supplies, resources and equipment for use in the event of activity delays or emergencies.
	2.3. Waterproof and pack food, clothing, and other resources to allow for quick access during activity.
3. Negotiate snow conditions and respond to environmental conditions.	3.1. Engage in activities and travel at a pace that conserves energy and reduces exposure to hypothermia.
	3.2. Monitor weather conditions, own response and utilise clothing to prevent exposure.
	3.3. Provide first aid in response to cases of hypothermia and frostbite.
	3.4. Manage a group to move locations in limited visibility during a snowstorm.
4. Construct and manage tents and emergency shelters.	4.1. Select site accounting for terrain, weather and snow conditions.
	4.2. Erect tents or construct emergency snow shelters according to conditions and to maintain stability over extended periods of time.
	4.3. Monitor and manage safety of tents and emergency shelter for duration of use, clear snow, and adjust to account for changing weather conditions.
	4.4. Manage human waste and environmental impacts of the campsite for the duration of the trip.

Foundation Skills

Foundation skills essential to performance in this unit, but not explicit in the performance criteria are listed here, along with a brief context statement.

SKILLS

DESCRIPTION

- | | |
|-------------------|--|
| Reading skills to | <ul style="list-style-type: none"> interpret detailed reports on alpine weather and snow conditions which incorporate technical jargon. |
|-------------------|--|

- | | |
|----------------------------|--|
| Numeracy skills to: | • complete basic calculations to determine required resources to sustain number of party members. |
| Problem-solving skills to: | • identify and quickly respond to changing conditions and party members in need of assistance. |
| Self-management skills to: | • critically analyse all circumstances and implications to provide a prompt and considered response to emergency situations. |

Unit Mapping Information

No equivalent unit.

Links

Companion Volume Implementation Guides -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=1ca50016-24d2-4161-a044-d3faa200268b>

Assessment Requirements for SISOSKT003 Use snow craft skills for alpine touring

Modification History

Not applicable.

Performance Evidence

Evidence of the ability to complete tasks outlined in elements and performance criteria of this unit in the context of the job role, and:

- plan for two trips in an alpine environment in snow conditions, including at least one lasting for a minimum of three days
- for each of the above trips:
 - determine two different lines of travel to avoid alpine environmental hazards
 - determine equipment and resources required for emergency use, including food and water
- complete two alpine trips in snow conditions, including one with an overnight stay:
 - for each trip, select and pack equipment and resources required for emergency use
 - select appropriate location and erect a total of two tents
 - select appropriate location and construct a total of two different types of emergency snow shelters to be chosen from the following list:
 - snow cave
 - quinzhee
 - snow trench
 - snow mound
- during each trip, consistently follow safety procedures and safely negotiate hazards
- participate in simulations to:
 - respond to a participant with hypothermia and one with frostbite and provide appropriate first aid
 - prepare group for a snow storm
 - travel in a snow storm using leapfrogging technique.

Knowledge Evidence

Demonstrated knowledge required to complete the tasks outlined in elements and performance criteria of this unit:

- impacts of cold temperatures on energy requirements of participants at rest and under levels demanded of snow based activities
- types of foods and beverages that provide high energy with emphasis on those that can be readily carried and prepared in alpine snow touring circumstances
- factors that contribute to avalanches and unstable snow conditions:

- slope angle and orientation
- elevation
- recent weather patterns
- deposition
- snowpack structure
- local instability
- terrain
- human activity
- areas within the locality that are known to be subject to avalanche and unstable snow conditions; and routes that can avoid these
- typical alpine environmental hazards, and techniques used to safely negotiate these:
 - ice
 - creek crossings
 - snow bridges
 - thick vegetation
 - rapidly changing conditions
 - soft snow to ice
 - rain to snow
 - benign weather to blizzard
- for hypothermia and frostbite:
 - causes and preventative methods
 - signs
 - first aid treatment
- suitable clothing, footwear and personal protective equipment for alpine regions:
 - types of clothing and fabrics that protect against the effects of weather conditions including sun, temperatures, wind, snow and precipitation of different levels and extremes
 - reasons for layering clothes
 - effective design and construction features of:
 - windproof and waterproof gear
 - gaiters
 - gloves and beanies
 - sunglasses or ski goggles
- resources that should be carried during alpine touring activities and reasons for having these available:
 - contingency food and water
 - first aid and repair kits
 - map and compass
 - stove and fuel
 - whistle

- torch
- cord
- space blanket
- small shelter, sleeping bags and mats
- snow shovel
- mobile phone
- alerting and tracking devices including personal locator beacons (PLBs)
- repair kit for skis, poles, bindings and tent
- techniques used to effectively pack items for ease of access and maximum usage of space
- waterproofing and packing techniques used to keep clothing, food and resources dry during ski tour activities
- features and functions of snow shoes and bindings
- techniques to move a group in limited visibility during a snowstorm
- features of tents and pegs designed for use in the snow and techniques used to ensure stability
- features of different types of emergency snow shelters, advantages and disadvantages, and techniques used to construct and maintain stability:
 - snow cave
 - quinzhee
 - snow trench
 - snow mound
 - bothy or tarp bubble
- factors that affect the selection of a location for tents and emergency snow shelters
- importance of regularly clearing built up snow on and around tents
- importance of adequate ventilation in emergency snow shelters
- methods used to maintain:
 - safety and comfort of site
 - minimize environmental impact
 - manage human waste
 - the stability of tents and snow shelters.

Assessment Conditions

Skills must be demonstrated in an alpine environment in snow conditions.

The following resources must be available to replicate industry conditions of operation:

- first aid equipment
- communication equipment for emergency response, including alerting and tracking devices
- navigation equipment.

Assessment must ensure use of:

- a group of participants with whom the individual interacts during activities
- people who act as participants with whom the individual interacts during simulated activities
- clothing suitable for alpine conditions
- resources to include:
 - contingency food and water
 - stove and fuel
 - whistles
 - torches
 - cord
 - space blankets
 - snow tents, sleeping bags and mats
 - snow shovels.

Assessors must satisfy the Standards for Registered Training Organisations requirements for assessors, and:

- have a collective period of at least three years' experience as a leader, guide or instructor within an winter alpine area where they have applied the skills and knowledge covered in this unit of competency; the three years' experience can incorporate full and or part time experience.

Links

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<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=1ca50016-24d2-4161-a044-d3faa200268b>