



Australian Government

Department of Education, Employment and Workplace Relations

SISOCLN406A Apply multi pitch lead climbing skills on natural surfaces

Release: 1

SISOCLN406A Apply multi pitch lead climbing skills on natural surfaces

Modification History

Not Applicable

Unit Descriptor

Unit descriptor	<p>This unit describes the performance outcomes, skills and knowledge required to apply lead climbing skills to multi pitch routes on natural surfaces.</p> <p>This unit also focuses on the application of second climbing and belaying skills suitable for multi pitch lead climbing. It does not include the competencies required to instruct or guide others.</p> <p>No licensing, regulatory or certification requirements apply to this unit at the time of endorsement.</p>
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Application of the Unit

Application of the unit	<p>This unit applies to those working as climbing guides or assistant guides in a range of natural multi pitch conditions.</p> <p>This unit may also apply to leaders working for outdoor education or adventure providers; volunteer groups; not-for-profit organisations or government agencies.</p>
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Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Prerequisite units	Nil

Prerequisite units	Nil	

Employability Skills Information

Employability skills	This unit contains employability skills.
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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.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Plan for the climbing activity.	1.1. Identify and plan <i>food and water requirements</i> according to <i>principles of nutrition</i> and the duration of the activity. 1.2. Identify and select an appropriate activity site according to <i>relevant legislation</i> and <i>organisational policies and procedures</i> . 1.3. Identify associated <i>hazards</i> and procedures to minimise <i>risks</i> to climber and belayer on multi pitch <i>natural surfaces</i> . 1.4. Access <i>relevant sources</i> to interpret detailed <i>weather and environmental information</i> to determine activity plan. 1.5. Establish a suitable <i>communication system</i> to use while climbing and belaying with other participants. 1.6. Consider <i>contingency plans</i> in the case of <i>unforeseen circumstances</i> .
2. Select a route for the climb.	2.1. Identify suitable access to and egress from the climbing site, according to relevant legislation. 2.2. Select a suitable route for the climb and inspect the position and quality of <i>features</i> according to the <i>capabilities</i> of the climbing party. 2.3. Interpret a <i>route description</i> for the climb. 2.4. Identify and communicate route features, hazards and belay stations with climbing party members. 2.5. Determine the potential need of artificial or natural protection required for the safe ascent of the route.
3. Select and utilise equipment.	3.1. Select and use <i>equipment</i> according to manufacturer's specifications, after consideration of <i>contextual issues</i> . 3.2. Adjust and fit equipment to ensure personal comfort and safety. 3.3. Complete all necessary personal and equipment <i>safety checks</i> , according to organisational policies and procedures, prior to commencement. 3.4. Demonstrate attachment to a suitable <i>belay system</i> at bottom of pitch, in accordance with manufacturer's specifications, and apply correct rope handling and <i>knot tying</i> techniques. 3.5. Apply safety procedures at the top and bottom of climbing site, and at belay stations.

ELEMENT	PERFORMANCE CRITERIA
4. Demonstrate climbing techniques.	<p>4.1. Display correct posture and fluent <i>climbing techniques</i> suitable to features and possible holds.</p> <p>4.2. Maintain effective communication between climber and belayer throughout climb.</p> <p>4.3. Locate and evaluate the main features of the climb whilst climbing.</p> <p>4.4. Apply safe and correct climbing techniques to minimise injury in the event of a rock or gear fall.</p> <p>4.5. Locate and utilise <i>rest positions</i> to reduce fatigue.</p> <p>4.6. Negotiate <i>obstacles</i> and avoid or remove hazards to climb in a controlled manner.</p> <p>4.7. Use equipment in a manner that minimises damage to the environment.</p>
5. Ascend a multi pitch route as a lead climber.	<p>5.1. Set up <i>anchors</i> and belay system safely and efficiently.</p> <p>5.2. Select and use suitable natural, fixed or artificial protection for the chosen climb and rack protection so that it is accessible during the climb.</p> <p>5.3. Place <i>protection</i> periodically throughout the climb to reduce fall distance, after consideration of the possible direction and magnitude of force during a fall.</p> <p>5.4. Apply correct techniques to minimise rope drag, displacement of protection, and injury in the event of a fall.</p> <p>5.5. Retreat from pitches both greater than and less than 25m in length.</p> <p>5.6. Monitor and maintain the safeguard system continuously.</p> <p>5.7. Establish a belay system at the top of the pitch which maximises climber and belayer safety at all times.</p>
6. Change over safely at belay stations.	<p>6.1. Ensure all climbing party members are always attached to an anchor or belay system.</p> <p>6.2. Conduct changeovers from one system to another in a safe and efficient manner.</p> <p>6.3. Apply efficient rope handling skills at the belay stations.</p>
7. Demonstrate belaying technique.	<p>7.1. Establish <i>belaying position</i> by moving body in relation to chosen <i>belay device</i> that allows effective use of belay system.</p>

ELEMENT	PERFORMANCE CRITERIA
	<p>7.2. Demonstrate a safe and efficient escape from belay system.</p> <p>7.3. Perform all safety checks in accordance with organisational policies and procedures to ensure belayer safety in the event of a rock or gear fall.</p> <p>7.4. Maintain rope tension to ensure fall distance is minimised whilst not restricting climber movement.</p> <p>7.5. Monitor climber progress constantly and respond appropriately to climber calls.</p> <p>7.6. Arrest falls promptly using technique suitable to the belaying device and situation.</p>
8. Evaluate climbing activity.	<p>8.1. Evaluate relevant aspects of lead climbing and belaying.</p> <p>8.2. Identify improvements for future lead climbing activities.</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

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

Required skills

- communication skills to inform progress and interact with climber and or belayer whilst participating in activity
- problem-solving skills to:
 - determine type of protection to use and where to place it to minimise fall distance during lead climbing
 - select an appropriate climbing route
- organising skills to arrange climbers at belay stations
- rope handling, rigging and knot tying skills to maintain adequate rope tension when climbing and belaying on a multi pitch site
- first aid and emergency response skills appropriate to the location to enable initial response to emergencies and personal health care.

Required knowledge

- relevant legislation and organisational policies and procedures to enable safe conduct of all activities
- minimal impact climbing codes to ensure protection of the environment

REQUIRED SKILLS AND KNOWLEDGE

- equipment types, characteristics and technology used for lead climbing on natural surfaces, the advantages and disadvantages of the range of equipment, and factors affecting appropriate selection of equipment
- care and maintenance of climbing equipment to ensure prolonged life span and safety requirements
- lead climbing techniques and common communication methods and calls used between climbers and belayers to reduce risk during lead climbing on natural surfaces
- belay techniques and devices appropriate for multi pitch natural surfaces
- technical climbing knowledge of various types of protection, ropes, knots and anchors used on multi pitch natural surfaces
- weather and environmental information to ascertain possible conditions and their affect on the activity
- hazards and fall factors that may be experienced during lead climbing on multi pitch natural surfaces
- emergency procedures, potential hazards and obstacles relevant to the location to ensure safety of self and others.

Evidence Guide

EVIDENCE GUIDE	
<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>	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<p>Evidence of the following is essential:</p> <ul style="list-style-type: none"> • applies relevant processes to plan for lead climbing activity and describes suitable route to take • selects and fits equipment independently and carries out safety checks to ensure effective working order • places protection at sufficient distances apart to reduce the distance of climber fall and removes and safely carries protection during second climbing • communicates effectively to monitor progress when belaying and to organise climbing group at belay stations safely and efficiently • negotiates obstacles and hazards during lead climbing, and adapts quickly to problems or issues that may arise to ensure safety of self and other participants • evaluates and reflects on own lead climbing and belaying performance to identify strengths, weaknesses and areas for improvement.
Context of and specific resources for assessment	<p>Assessment must ensure participation in multiple lead climbing and belaying activities on multi pitch natural surfaces to demonstrate competence and consistency of performance.</p> <p>Assessment must also ensure access to:</p> <ul style="list-style-type: none"> • resources and information regarding lead climbing and belaying, to accurately plan for the activity • suitable natural multi pitch climbing sites with obstacles and features that allow participant to demonstrate lead climbing skills and belaying • other climbing participants, to assist with belaying and second climbing • equipment such as harnesses, helmets, belay devices, ropes, protection, nut tools, gloves, karabiners, climbing shoes and first aid equipment.
Method of assessment	<p>A range of assessment methods should be used to assess practical skills and knowledge. The following examples</p>

EVIDENCE GUIDE	
	<p>are appropriate for this unit:</p> <ul style="list-style-type: none"> • oral or written questioning to assess knowledge of relevant legislation and organisational policies and procedures to enable safe conduct of all climbing activities • observation of safe participation and demonstration of lead climbing skills, such as placing protection periodically and communicating with belayer to inform of progress • observation of dealing with contingencies, such as equipment failure or change in weather • third-party reports from a supervisor detailing performance. <p>Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, for example:</p> <ul style="list-style-type: none"> • SISOVTR402A Perform complex vertical rescues • SISOCLN407A Establish belays for multi pitch climbing on natural surfaces.
Guidance information for assessment	

Range Statement

RANGE STATEMENT	
<p>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.</p>	
<p><i>Food and water requirements</i> may include:</p>	<ul style="list-style-type: none"> • range of foods: <ul style="list-style-type: none"> • perishability • packaging • storage.
<p><i>Principles of nutrition</i> may include:</p>	<ul style="list-style-type: none"> • food groups • dietary guidelines.

RANGE STATEMENT	
<i>Relevant legislation</i> may include:	<ul style="list-style-type: none"> • occupational health and safety • permits or permission for access • environmental regulations.
<i>Organisational policies and procedures</i> may include:	<ul style="list-style-type: none"> • operating procedures and company or enterprise policies • occupational health and safety • use and maintenance of equipment • communication protocols • emergency procedures • code of ethics.
<i>Hazards</i> may include:	<ul style="list-style-type: none"> • temperature extremes • slippery or unstable terrain • dangerous animals and insects • stinging trees and nettles • dense vegetation • group management hazards.
<i>Risks</i> may include:	<ul style="list-style-type: none"> • hypothermia • heat exhaustion • injuries • exhaustion • lost party or party member • equipment failure.
<i>Natural surfaces</i> may include:	<ul style="list-style-type: none"> • cliffs • boulders.
<i>Relevant sources</i> may include:	<ul style="list-style-type: none"> • Bureau of Meteorology • media • land managers or agencies • local knowledge.
<i>Weather and environmental information</i> may include:	<ul style="list-style-type: none"> • satellite images • daily and weekly forecasts • maximum and minimum temperatures • weather warnings • event warnings • river levels • synoptic charts • high and low tide predictions.
<i>Communication system</i> may include:	<ul style="list-style-type: none"> • calls • radio • hand signals

RANGE STATEMENT	
	<ul style="list-style-type: none"> whistles.
<i>Contingency plans</i> may include:	<ul style="list-style-type: none"> poor communication conditions injuries escape or retreat options off route possibilities.
<i>Unforeseen circumstances</i> may include:	<ul style="list-style-type: none"> equipment failure change of route unresolvable obstacle or hazard dramatic change of weather climber or belayer injury.
<i>Features</i> may include:	<ul style="list-style-type: none"> aretes chimneys corners cracks edges flakes jugs ledges overhangs.
<i>Capabilities</i> may include:	<ul style="list-style-type: none"> body weight ratio strength stamina flexibility balance mental perceptions.
<i>Route description</i> may include:	<ul style="list-style-type: none"> verbal written.
<i>Equipment</i> may include:	<ul style="list-style-type: none"> helmets karabiners harnesses climbing shoes belay device chalk and calk bag tapes and slings ropes and cord. nuts spring loaded caming devices quick draws hexes

RANGE STATEMENT	
	<ul style="list-style-type: none"> tut tool
Contextual issues may include:	<ul style="list-style-type: none"> weather conditions, including times season transport location trip distance and duration group objectives group size.
Safety checks may include:	<ul style="list-style-type: none"> A - anchors - secure and suitable to application B - buckles - locked as per manufacturers recommendations C - connectors - locked, secured and orientated D - devices - threaded correctly and secured E - everything else including end of rope knots, friction hitches, belayer ready, helmet chin strap, clothing, jewellery and hair secured F - friend - cross check.
Belay system may include:	<ul style="list-style-type: none"> top belay bottom belay single rope double rope.
Knot tying may include:	<ul style="list-style-type: none"> figure eight Bowline.
Climbing techniques may include:	<ul style="list-style-type: none"> bridging dynamic movement, such as dead pointing heel hooks jamming lay backing layaways and side pulls mantle pinch grips smearing underclings. crimping chimneying.
Rest positions may include:	<ul style="list-style-type: none"> edge to lean against ledge to lean against. No hands rest.
Obstacles may include:	<ul style="list-style-type: none"> ledges

RANGE STATEMENT	
	<ul style="list-style-type: none"> • overhangs • squeezes. • Traverses • Vegetation.
Anchors may include:	<ul style="list-style-type: none"> • multi-directional • uni-directional • self-equalising.
Protection may include:	<ul style="list-style-type: none"> • artificial • fixed • natural.
Belaying position may include:	<ul style="list-style-type: none"> • top of the pitch • bottom of the pitch.
Belay device may include:	<ul style="list-style-type: none"> • plate device • tube device • auto locking device. • hitch such as munter or Italian.
Belayer safety may include:	<ul style="list-style-type: none"> • wearing of helmets • attaching to safety ropes • standing out of direct line of gear fall.
Relevant aspects may include:	<ul style="list-style-type: none"> • objectives • planning process • activity site • weather • equipment selection • clothing selection • food selection • instructional content • instructional technique • assessment technique • group feedback • directing techniques • rescue techniques employed.

Unit Sector(s)

Unit sector	Outdoor Recreation
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Co-requisite units

Co-requisite units		

Competency field

Competency field	Climbing-natural surface
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