



Australian Government

Department of Education, Employment and Workplace Relations

SISOCLA406A Apply lead climbing skills on artificial surfaces

Release: 2

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Modification History

Not Applicable

Unit Descriptor

This unit describes the performance outcomes, skills and knowledge required to apply lead climbing skills to single pitch routes on artificial surfaces. This unit also focuses on the application of second climbing and belaying skills suitable for lead climbing.

Application of the Unit

This unit applies to those working as climbing guides or assistant guides in a range of artificial single pitch conditions.

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

No licensing, regulatory or certification requirements apply to this unit at the time of endorsement.

Pre-Requisites

Nil

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

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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|-------------------------------------|--|
| 1. Plan for climbing activity. | <ul style="list-style-type: none"> 1.1. Identify and select an appropriate activity site according to <i>relevant legislation</i> and <i>organisational policies and procedures</i>. 1.2. Identify associated <i>hazards</i> and procedures to minimise <i>risks</i> to climber and belayer on <i>artificial surfaces</i>. 1.3. Access <i>relevant sources</i> to interpret detailed <i>weather and environmental information</i> to determine activity plan, where applicable. 1.4. Establish a suitable <i>communication system</i> to use while climbing and belaying with other participants. |
| 2. Select a route for the climb. | <ul style="list-style-type: none"> 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 of <i>features</i> according to the <i>capabilities</i> of the climbing party. 2.3. Provide an accurate route description for the climb. |
| 3. Select and utilise equipment. | <ul style="list-style-type: none"> 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, according to manufacturer's specifications, and apply correct rope handling and <i>knot tying</i> techniques. 3.5. Apply safety procedures at climbing site. |
| 4. Demonstrate climbing techniques. | <ul style="list-style-type: none"> 4.1. Display correct posture and fluent <i>climbing techniques</i> suitable to features and possible holds. |

ELEMENT	PERFORMANCE CRITERIA
	<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 climbing techniques to minimise injury in the event of a fall or gear fall.</p> <p>4.5. Locate and utilise rest positions to reduce fatigue.</p> <p>4.6. Negotiate obstacles and avoid or remove hazards to climb in a controlled manner.</p>
<p>5. Ascend a single pitch route as a second climber.</p>	<p>5.1. Demonstrate use of belaying system to maximise climber safety at all times.</p> <p>5.2. Remove quick draws in a manner that minimises potential for dropping of gear.</p> <p>5.3. Demonstrate accepted safety procedures, throughout the climb and whilst belaying.</p>
<p>6. Ascend a single pitch route as a lead climber.</p>	<p>6.1. Select and use a suitable number of quick draws for the chosen climb and rack quick draws so that they are accessible during the climb.</p> <p>6.2. Use fixed protection periodically throughout the climb to reduce fall distance.</p> <p>6.3. Apply correct techniques to minimise rope drag.</p> <p>6.4. Demonstrate the ability to down climb.</p> <p>6.5. Select appropriate fixed anchors at the top of the pitch if applicable.</p> <p>6.6. Establish a belay system at the top of the pitch which maximises climber and belayer safety at all times if applicable.</p>
<p>7. Demonstrate belaying technique.</p>	<p>7.1. Establish belaying position by moving body in relation to chosen belay device that allows effective use of belay system.</p> <p>7.2. Demonstrate a safe and efficient escape from belay system, and attachment of belayer to anchor to minimise movement during a fall if applicable.</p> <p>7.3. Perform all safety checks in accordance with organisational policies and procedures to ensure belayer safety in the event of a climber 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</p>

ELEMENT	PERFORMANCE CRITERIA
8. Evaluate climbing activity.	belaying device and situation. 8.1. Evaluate <i>relevant aspects</i> of lead climbing and belaying. 8.2. Identify improvements for future second and lead climbing activities.

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
- problem-solving skills to determine type and placement of quick draw to minimise fall distance during lead climbing
- rope handling skills to maintain adequate rope tension when belaying.

Required knowledge

- relevant legislation and organisational policies and procedures to enable safe conduct of all activities
- equipment types, characteristics and technology used for lead climbing on artificial 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 artificial surfaces
- belay techniques and devices appropriate lead climbing on single pitch surfaces
- climbing knowledge of appropriate types of quick draws, protection, ropes, knots and anchors used on single pitch artificial 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 climbs on artificial surfaces
- emergency procedures, potential hazards and obstacles relevant to the location to ensure safety of self and others.

Evidence Guide

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.

Overview of assessment

Critical aspects for assessment and evidence required to demonstrate competency in this unit

Evidence of the following is essential:

- applies relevant processes to plan for lead climbing activity and determines suitable routes
- selects and fits equipment independently and carries out personal safety checks and ensures effective working order of equipment
- places quick draws at sufficient distances apart to reduce the distance of climber fall and removes and safely carries quick draws during second climbing
- arranges a suitable communication system with climber, when belaying, to monitor progress
- 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 that need improvement.

Context of and specific resources for assessment

Assessment must ensure participation in multiple lead climbing and belaying activities on single pitch artificial surfaces to demonstrate competence and consistency of performance.

Assessment must ensure access to:

- resources and information regarding lead climbing and belaying to accurately plan for the activity
- suitable artificial single 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, slings, quick draws, gloves, karabiners, climbing shoes and first aid equipment.

Method of assessment

A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:

- oral or written questioning to assess knowledge of relevant legislation and organisational policies and procedures to enable safe participation in all climbing activities
- observation of safe participation and demonstration of lead climbing skills, such as placing quick draws 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.

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

- SISOVTR301A Perform vertical rescues
- SISOCLA303A Establish belays for climbing on artificial surfaces.

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.

- Relevant legislation*** may include:
- occupational health and safety
 - permits or permission for access
 - environmental regulations.
- Organisational policies and procedures*** may include:
- occupational health and safety
 - use and maintenance of equipment
 - communication protocols
 - emergency procedures
 - code of ethics.
- Hazards*** may include:
- temperature extremes
 - slippery or unstable terrain
 - dangerous animals and insects.
- Risks*** may include:
- hypothermia
 - heat exhaustion
 - injuries
 - exhaustion
 - equipment failure.
- Artificial surfaces*** may include:
- portable or fixed walls
 - fixed towers or bridges
 - indoor or outdoor.
- Relevant sources*** may include:
- Bureau of Meteorology
 - media
 - land managers or agencies
 - local knowledge.
- Weather and environmental information*** may include:
- satellite images
 - daily and weekly forecasts
 - maximum and minimum temperatures
 - weather warnings
 - event warnings
 - synoptic charts.
- Communication system*** may include:
- calls
 - radio
 - hand signals
 - whistles.

- Features** may include:
- arêtes
 - chimneys
 - corners
 - cracks
 - edges
 - flakes
 - jugs
 - ledges
 - overhangs
 - pockets
 - roofs
 - slabs.
- Capabilities** may include:
- body weight or strength ratio
 - stamina.
- Equipment** may include:
- helmets
 - karabiners
 - harnesses
 - belay device
 - slings
 - ropes
 - tapes
 - anchors
 - quick draws
 - protection
 - footwear
 - chalk bag and chalk
 - first aid kit.
- Contextual issues** may include:
- weather conditions, including times
 - season
 - transport
 - location
 - trip distance and duration
 - group objectives
 - group size.
- Safety checks** may include:
- A - anchors - secure and suitable to application
 - B - buckles - locked as per manufacturers recommendations
 - C- connector - locked, secured and orientated
 - D - devices - threaded correctly and secured
 - E- everything else including end or rope knots, belayer ready, helmet chin strap, clothing,

- jewellery and hair secured.
 - F - friend - cross check.
- Belay system*** may include:
- top belay
 - bottom belay
 - single rope
 - double rope.
- Knot tying*** may include:
- end of rope knot
 - midline knots
 - stopper knots
 - lock off knots.
- Climbing techniques*** may include:
- bridging
 - dynamic movement
 - heel hooks
 - jamming
 - lay backing
 - layaways and side pulls
 - mantle
 - pinch grips
 - smearing
 - underclings.
- Obstacles*** may include:
- ledges
 - overhangs
 - squeezes
 - traverses.
- Fixed protection*** may include:
- fixed hangers
 - fixed draws
 - chains.
- Belaying position*** may include:
- anchored or unanchored
 - bottom of the pitch.
- Belay device*** may include:
- plate device
 - tube device
 - auto locking device.
- Belayer safety*** may include:
- wearing of helmets
 - attaching to safety ropes
 - standing out of direct line of gear fall.
- Relevant aspects*** may include:
- objectives
 - planning process
 - activity site
 - weather
 - equipment selection
 - clothing selection

- directing techniques
- rescue techniques employed.

Unit Sector(s)

Outdoor Recreation

Competency Field

Climbing artificial surfaces