



Australian Government

SISOC LA412 Instruct top rope climbing on artificial surfaces

Release: 1

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Modification History

The release details of this endorsed unit are in the table below. The latest information is at the top.

Release	Comments
1	New unit.

Unit Descriptor

This unit describes the performance outcomes, skills and knowledge required to instruct participants in top rope single pitch climbing on an artificial surface. This unit focuses on planning, instructing and evaluating an instructional climbing session to enable participants to achieve the skills and knowledge required to participate independently, or with minimal supervision, in single pitch top rope climbing on artificial surfaces.

Application of the Unit

This unit applies to those working as climbing instructors or assistant instructors for private outdoor adventure companies in permanent or mobile facilities, or group leaders in school outdoor education programs in a range of controlled artificial conditions, and who are responsible for instructing participants in the skills and knowledge required to plan, implement and evaluate top rope climbing activities conducted in a range of single pitch artificial conditions. The single pitch climbing site should be free from hazards and complex set-up, and anchors should be fixed, obvious and easily accessible.

This unit may also apply to outdoor recreation 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

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.

- | | |
|---|---|
| 1. Plan a climbing session. | 1.1. Establish <i>participant needs and characteristics</i> .
1.2. Assess current climbing knowledge of participants in order to determine <i>session aims and objectives</i> .
1.3. Determine an appropriate <i>instructional plan</i> according to participant needs and characteristics.
1.4. Develop a <i>climbing plan</i> to meet participant needs and characteristics, <i>relevant legislation</i> and <i>organisational policies and procedures</i> .
1.5. Determine <i>artificial surface</i> for session.
1.6. Identify potential <i>hazards and risks</i> associated with climbing on an artificial surface and minimise according to organisational policies and procedures.
1.7. Access <i>relevant sources</i> to interpret detailed <i>weather and environmental information</i> to determine activity and contingency plans, as appropriate. |
| 2. Select and organise equipment and resources. | 2.1. Select, access and check serviceability of <i>equipment</i> and resources according to <i>contextual issues</i> and organisational policies and procedures.
2.2. Check personal protective equipment for safety and suitability, according to relevant legislation and manufacturer recommendations, and adjust and fit to ensure personal comfort and safety.
2.3. Check anchors and <i>belay system</i> to ensure conformance to relevant standards for artificial climbing surfaces.
2.4. Organise and check that participants are wearing appropriate clothing and climbing footwear.
2.5. Check emergency response equipment including first aid kit and make available to support instructional activities at height. |
| 3. Brief participants. | 3.1. Communicate instructions and <i>relevant information</i> about the climbing session in a manner suitable to the participants.
3.2. Encourage participants to seek clarification, information and feedback as required during the session.
3.3. Establish a suitable <i>communication system</i> for participants |

- to use while climbing and belaying.
- 3.4. Outline **safety procedures** and safe areas and or boundaries for the activity.
- 3.5. Check and confirm participants are properly equipped for the climbing session and that equipment is fitted and adjusted.
4. Instruct a climbing session.
- 4.1. Conduct introductory activities for participants to reduce the risk of injury.
- 4.2. Demonstrate effective climbing, belaying and back-up belaying techniques.
- 4.3. Demonstrate and practice effective procedures for creating a secure and stable rope attachment to the climbers harness.
- 4.4. Demonstrate and practice effective human operated belay procedures.
- 4.5. Apply clear and accurate **instructional techniques** to impart **climbing specific knowledge, skills** and safety and rescue procedures.
- 4.6. Observe **participant performance** during climbing session, provide appropriate feedback and adjust or refine individual and or group technique as required.
- 4.7. Demonstrate procedures for dealing with emergency and non routine situations according to organisational policies and procedures.
- 4.8. Inform participants of opportunities to further develop their climbing skills and knowledge.
5. Instruct a rescue techniques session.
- 5.1. Demonstrate how to manage situations requiring direct assistance, and demonstrate correct **approach procedures** for the particular situation.
- 5.2. Explain the advantages and disadvantages of **rescue strategies** for individual situations.
- 5.3. Demonstrate different direct and indirect rescue strategies according to the degree of urgency, **resources**, rescuee status and ability.
- 5.4. Demonstrate establishing and operating a rescue system efficiently and inform other group members of their role.
- 5.5. Demonstrate lowering procedures to recover a conscious and unconscious person from an artificial surface with assistance from others who are unskilled in rescue techniques.
- 5.6. Demonstrate constructing and using an improvised harness in a rescue situation.
- 5.7. Demonstrate an escape from a belay.
- 5.8. Monitor participants during rescue session, provide appropriate feedback to adjust or refine individual and group technique as required.

- 6. Complete post-session responsibilities.
 - 6.1. Retrieve, inspect and store equipment according to organisational policies and procedures.
 - 6.2. Evaluate *relevant aspects* of the climbing sessions.
 - 6.3. Identify potential areas of improvement for future climbing sessions.
 - 6.4. Review own performance and identify potential improvements.

Required Skills and Knowledge

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

Required skills

- communication skills to:
 - consult with participants to plan a climbing session that meets their needs
 - convey information about the safety aspects of the session
 - interact with participants to create a safe and positive climbing environment
- problem-solving skills to:
 - plan a suitable climbing session
 - address participant difficulties in developing climbing techniques
 - anticipate and respond appropriately to non-routine situations
- planning and organising skills to:
 - source, allocate and coordinate resources, equipment and a suitable artificial surface
 - monitor and evaluate progress
 - organise participants into manageable groups for climbing and belaying
- language and literacy skills to:
 - produce climbing and instructional plans
 - complete post-session participant and self evaluations
- instructional techniques to suit a range of participant needs and characteristics
- highly developed personal climbing skills to demonstrate and explain climbing, belaying and rescue techniques to participants
- first aid and emergency response skills appropriate to the location to enable initial response and or rescue in emergencies whilst instructing climbing on artificial surfaces.

Required knowledge

- relevant legislation and organisational policies and procedures to enable safe conduct of climbing activities
- site specific information to assist in planning and enable management of potential climbing risks and hazards, and any special restrictions applying to the site
- hazards and risks that may be experienced in an artificial climbing environment
- equipment types, characteristics and technology used for climbing on artificial surfaces, the advantages and disadvantages of the range of equipment and factors affecting appropriate selection of equipment
- clothing and footwear requirements for climbing activities to ensure comfort and safety
- care and maintenance of climbing equipment, equipment log books and retirement of gear, to ensure prolonged life span and safety requirements
- instruction techniques and theories applicable to a range of ages and learning abilities
- climbing techniques, common communication methods and calls used between climbers and belayers to reduce risk during climbing on artificial surfaces
- belay systems, devices and anchors appropriate for single pitch artificial surfaces
- technical climbing knowledge, such as techniques and procedures to suit the features of

the surface

- direct and indirect rescue techniques used in various artificial surface situations
- weather and environmental information to ascertain possible conditions and their affect on the activity, if appropriate
- first aid and emergency procedures 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 ability to:

- plan and instruct climbing activities using a variety of instructional techniques that reflect the needs and characteristics of a range of participants
- observe and monitor the progress of participants, provide constructive feedback and intervention and modify instructional techniques and activities to improve climbing performance
- apply effective contingency management techniques to deal with a range of problems and issues that may arise during the climbing sessions
- evaluate and reflect on own instruction performance to identify strengths, weaknesses and areas that need improvement.

Context of and specific resources for assessment

Assessment must ensure that climbing activities reflect the needs of a range of participants and are of sufficient duration to demonstrate competency and consistency of performance.

Assessment must also ensure access to:

- resources and information regarding participants and location to accurately plan, guide and document climbing activities for a variety of participants
- an artificial climbing surface suitable for the participants
- a group of participants to take part in the climbing activities
- climbing equipment such as harnesses, belay devices, ropes, and carabiners.

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:

- observation of interaction with a group of participants, including conveying information for safe participation
- 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 dealing with contingencies such as changing weather conditions and equipment failure
- review of climbing activity plans
- review of portfolios of evidence and third-party workplace reports of on-the-job performance by the individual.

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

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.

Participant needs and characteristics may include:

- age
- fitness level and physical capabilities
- experience
- current skills and knowledge
- injuries and illnesses
- cultural.

Session aims and objectives may include:

- developing climbing skills
- education and self improvement
- therapy
- fitness targets
- social and recreation
- assessment.

Instructional plan may include:

- outcomes
- course content
- sequenced information
- lesson plans
- teaching strategies
- practical exercises
- materials and equipment
- safety and standards
- modification for different abilities
- assessment strategies
- evaluation.

Climbing plan may include:

- activity aims and objectives
- date, time and duration
- location or site
- guide and participant ratios
- resources
- equipment
- food and water
- weather details
- participant information
- safety requirements.

Relevant legislation may include:

- work health and safety
- permits or permission for access.

- Organisational policies and procedures*** may include:
- work health and safety
 - time constraints
 - use and maintenance of equipment
 - communication protocols
 - confidentiality of participant information
 - guide and participant ratios
 - emergency and safety procedures
 - code of ethics.
- Artificial surfaces*** may include:
- portable or fixed walls
 - fixed towers
 - indoor or outdoor.
- Hazards and risks*** may include:
- lack of planning
 - equipment failure
 - temperature extremes
 - slippery or unstable terrain
 - dangerous animals and insects
 - hypothermia
 - heat exhaustion
 - injuries
 - exhaustion
 - group management
 - lack of supervision.
- Relevant sources*** may include:
- Bureau of Meteorology
 - media
 - land managers or agencies
 - local knowledge.
- Weather and environmental information*** may include:
- relevant for artificial surfaces in outdoor settings:
 - satellite images
 - daily and weekly forecasts
 - maximum and minimum temperatures
 - weather warnings
 - event warnings
 - UV index
 - synoptic charts.
- Equipment*** may include:
- ropes
 - harnesses
 - belay devices
 - connective hardware e.g. maillons, carabiners, hooks
 - karabiners
 - chalk and chalk bag
 - helmet

- rope protectors
 - knife
 - rescue pulley
 - adjustable sling (floor anchorage to belay person)
 - accessory cord
 - whistle.
- Contextual issues** may include:
- weather conditions, including times
 - season
 - transport
 - location
 - trip distance and duration
 - group objectives
 - group size
 - age and ability.
- Belay system** may include:
- human operated belay
 - team belay
 - floor/ground anchorage
 - redirects
 - self-locking belay devices
 - belay devices which require hand grip control to arrest fall
 - automatic mechanical belay system - self retracting lines with speed limited lowering.
- Relevant information** may include:
- personal protection equipment requirements
 - safety procedures
 - hazards and associated risks
 - preventative control measures for risks
 - climbing and belaying techniques/procedures
 - objectives
 - assessment
 - site rules and codes.
- Communication system** may include:
- calls
 - hand signals
 - whistles.
- Safety procedures** may include:
- self checks following a well defined logical sequence
 - buddy system checks following a well defined logical sequence
 - ABCDEF Safety Check:
 - A - anchors - secure and suitable to application
 - B - buckles - locked as per manufacturers recommendations
 - C - connector - locked, secured and orientated

Instructional techniques
may include:

- D - devices - threaded correctly and secured
- E - organisation specific procedures, including; end or rope knots, friction hitches, belayer ready, helmet chin strap, clothing, jewellery and hair secured
- F- friend - cross check
- adherence to site rules and procedures
- compliance to instructions given by supervising staff.
- discussion
- questioning
- demonstration
- practical exercises
- discovery
- role play
- problem solving
- revision
- D.E.D.I.C.T.:
 - demonstrate
 - explain
 - demonstrate
 - instruct
 - critique
 - test
- E.D.I.C.T:
 - explain
 - demonstrate
 - instruct
 - critique
 - test
- I.D.E.A:
 - introduce
 - demonstrate
 - explain
 - apply.

Climbing specific knowledge and skills may include:

- climbing technique
- belaying technique
- communications systems
- rescue systems and techniques
- hazards and risks on artificial surfaces
- use and care of equipment.
- use of appropriate communication system
- climbing technique

Participant performance

may include:

- attitude
- use of equipment
- rig ropes and associated equipment

Approach procedures may include:

- ascending rope
- ascending ladder
- work platform.

Rescue strategies may include:

- direct intervention techniques:
 - accessing the climber via portable ladder
 - providing a portable ladder for use as a support tool
 - seizing control of belay system
 - changing out the belay person
 - removing tension/load from the climbing rope
 - lowering technique
- indirect intervention techniques:
 - oral instructions to climber (eg talk them down)
 - provide encouragement
 - provide instructions as deemed necessary to bring the situation under control.

Resources may include:

- portable ladder
- mobile work platform
- rescue equipment
- pulleys
- accessory cord
- tools
 - pliers
 - shifter
 - knife
- connection hardware e.g. maillons, carabiners.

Relevant aspects may include:

- objectives
- planning process
- activity site
- weather (if outdoors)
- equipment selection
- clothing selection
- food selection
- instructional content
- instructional technique
- group feedback
- directing techniques
- rescue techniques employed.

Unit Sector(s)

Outdoor Recreation.

Competency Field

Climbing Artificial Surfaces.