Australian Government
Department of Education, Employment and Workplace Relations

SISOCLA303A Establish belays for climbing on artificial surfaces

Release: 2

ISC INDUSTRY SKILLS COUNCILS
Creating Australia's Future

SISOCLA303A Establish belays for climbing on artificial surfaces

Modification History

Not Applicable

Unit Descriptor

This unit describes the performance outcomes, skills and knowledge required to independently select anchors for the attachment of ropes and equipment for belays, such as tapes and karabiners. These anchors are to be used to establish belay systems on single-pitched artificial climbing surfaces and must be able to accommodate different belayer and climber abilities.

Application of the Unit

This unit applies to those required to establish belays for climbing activities. This may include those working as climbing guides or assistant guides in a range of controlled artificial conditions.

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

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.
1. Select suitable equipment for belay system.	1.1. Select a ***belay system*** according to ***contextual issues*** of the activity. 1.2. Identify and select ***equipment*** according to ***relevant legislation*** and ***organisational policies and procedures***. 1.3. Select ***anchors*** that meet the requirements of the climb and abilities of the ***participants***. 1.4. Assess ***condition of the anchors***, including performance under ***likely load***. 1.5. Choose a ***belay device*** that is suitable to the ***artificial surface conditions*** and belayers ability. 1.6. Complete all necessary equipment ***safety checks***, according to organisational policies and procedures.
2. Set up belay system.	2.1. Rig multiple anchors, ensuring equalisation and minimal shock loading. 2.2. Tie ***knots*** and rig ropes suitable for the type of belay system established. 2.3. Establish a belay from which the belayer is able to escape and safely perform a rescue. 2.4. Avoid or remove belay ***hazards***, to maintain ***safety of belayer***. 2.5. Determine the need for, and, if necessary establish, back up belay systems.

Required Skills and Knowledge

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

Required skills

- problem-solving skills to select appropriate anchors and belay systems for the context and conditions of climbing activity
- rope handling and knot tying skills to rig ropes and anchors adequately and safely
- 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 rigging of belays for top rope climbing on artificial surfaces
- equipment types, characteristics and technology used to establish belays for climbing on artificial surfaces
- care and maintenance of equipment to ensure prolonged life span and safety requirements, as advised by the manufacturer's specifications and recommendations for equipment use
- belay and anchor systems appropriate for single pitch artificial surfaces
- technical climbing and equipment knowledge to establish top and bottom belays
- types of knots, their advantages and disadvantages and their impact on roping activities
- emergency procedures, and knowledge of 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:

- independently selects appropriate equipment and carries out safety checks to ensure effective working order
- differentiates between the different types of belay systems, anchors and knots and their suitability to different rigging situations
- determines the need for, and establishes, back up belay systems to ensure safety of self and other participants.

Context of and specific resources for assessment

Assessment must ensure participation in multiple rigging of equipment that is of sufficient breadth to demonstrate competence and consistency of performance.

Assessment must ensure access to:

- resources and information regarding climbing and belaying equipment
- suitable artificial single pitch climbing sites with simple obstacles and features that allow participant to demonstrate belay rigging skills
- other climbing participants, to assist in belaying and or rigging
- equipment such as anchors, harnesses, belay devices, ropes, karabiners 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 ensure safe and appropriate use of all climbing equipment
- observation of safe participation and demonstration of equipment selection and setting up belay systems suitable to different contexts and participants
- observation of dealing with contingencies, such as equipment failure or misuse
- 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:

- SISOCLA302A Demonstrate top rope climbing skills 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.

Belay system may include:	• top belay • bottom belay.
Contextual issues may include:	• weather conditions, including times • season • transport • location • trip distance and duration • group objectives • group size.
Equipment may include:	• ropes • tape slings • karabiners • rope protectors • belay devices.
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 • emergency procedures • code of ethics.
Anchors may include:	• bollards • bolts • chains • U bolts • beams • wire cables.
Participants may include:	• experienced • inexperienced • adults • children • tourists, club members, clients, school or youth groups.
Condition of the anchors may	• age

include:	• location • wear • decay • corrosion • environmental stress • insect damage.
Likely load may include:	• group size • set up • type of climb conducted • climber ability • technique • possible forces generated during a fall.
Belay device may include:	• plate devices • auto-locking devices • tubular devices.
Artificial surface conditions may include:	• portable or fixed walls • fixed towers or bridges • indoor or outdoor • top- rope set up • vertical climb • single pitch.
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, friction hitches, belayer ready, helmet chin strap, clothing, jewellery and hair secured. • F- friend - cross check.
Knots may include:	• knots that have at least 50% of the static strength of the original rope • end-of-rope knots • mid-rope knots • rope joining knots • tape knot.
Hazards may include:	• temperature extremes • slippery or unstable terrain • dangerous animals and insects • group management hazards.

Safety of belayer may include:

- attachment to anchor or alternate safety system
- positioning out of direct line of equipment fall
- minimising movement of the belayer in the event of a fall
- enabling belayer to be anchored.

Unit Sector(s)

Outdoor Recreation

Competency Field

Climbing artificial surfaces