Australian Government

Department of Education, Employment and Workplace Relations

SISOCAY406A Establish complex belays in canyons

Release: 1

SISOCAY406A Establish complex belays in canyons

Modification History

Not Applicable

Unit Descriptor

Unit descriptor	This unit describes the performance outcomes, skills and knowledge required to independently select and rig fixed, natural and or artificial anchors for the attachment of ropes and equipment for belays. These anchors are to be used in establishing complex belay systems and rigging rope pitches for canyoning. These systems must accommodate different belayer and abseiler abilities in single and multi pitch contexts. No licensing, regulatory or certification requirements apply to this unit at the time of endorsement.

Application of the Unit

Application of the unit	This unit applies to those working as canyoning guides or assistant guides required to establish complex belays for canyoning activities in a range of single and multi pitch locations with a variety of terrain obstacles, hazards and environmental conditions. This may apply to canyoning leaders working for outdoor education or adventure providers, volunteer groups, not-for-profit organisations or government agencies.

Licensing/Regulatory Information

Refer to Unit Descriptor

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Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.

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. Select equipment for belay system.	1.1. Select a ***belay system*** that minimises ***environmental impact***, according to ***contextual issues***. 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 abseil and abilities of the ***participants***. 1.4. Assess ***condition of the anchors***, including performance under ***likely load***, and stability of surroundings. 1.5. Choose a ***belay device*** that is suitable to the surface conditions and belayer's ability. 1.6. Place ***protection*** in a manner to create an anchor. 1.7. 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. Establish a belay that maintains safety of belayer and minimises movement of the belayer in the event of a fall. 2.5. Avoid or remove belay ***hazards*** to maintain ***safety of belayer***. 2.6. Determine the need for, and establish back up belay systems.
3. Rig rope pitches.	3.1. Identify safe access to and egress from the site according to relevant legislation. 3.2. Determine descent route according to organisational policies and procedures and contextual issues. 3.3. Tie knots that are suitable for the type of system established and for potential retrieval or rescue situations. 3.4. Construct an abseil rig in routine and non-routine multi pitch contexts.

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Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

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

Required skills

- problem-solving skills to:
  - minimise and or eliminate hazards
  - select anchors and belay systems for the context and conditions of canyoning activity
- complex rope handling and knot tying skills to rig ropes and anchors
- first aid and emergency response skills appropriate to the location to enable initial response to emergencies and personal health care.

Required knowledge

- legislation and organisational policies and procedures to enable safe conduct and legal access of all belaying activities conducted in a canyon
- minimal impact canyoning codes to ensure protection of the environment
- equipment types, characteristics and technology used to establish complex belays for abseiling in canyons
- care and maintenance of equipment to ensure prolonged life span and safety requirements, as advised by the manufacturer's recommendations for equipment use
- belay and anchor systems appropriate for multi pitch natural surfaces
- technical abseiling and equipment knowledge to establish top and bottom belays
- advantages and disadvantages of different knots, and their impact on roping activities
- emergency procedures, potential hazards and obstacles relevant to the location to ensure safety of self and others.

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Evidence Guide

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: • selects equipment and conducts safety checks to ensure effective working order • identifies factors affecting the stability and selection of fixed, natural and or artificial anchors, and selects anchors for simple, complex, single and multi-pitch abseils that are suitable for differing participant abilities and rigging situations in a canyon environment • 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 establishment of multiple complex belays in canyon environments to demonstrate competency and consistency of performance. Assessment must also ensure access to: • suitable canyoning locations with vertical multi pitches, a variety of anchors, hazards, obstacles and features that allow participant to demonstrate a variety of rigging skills • equipment required for the establishment of complex belays.
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 selecting equipment according to contextual issues • observation of safe participation and demonstration of setting up a broad range of belay systems and anchors suitable to different contexts and participants • observation of dealing with contingencies, such as equipment failure • oral or written questioning to assess knowledge of relevant legislation and organisational policies and

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EVIDENCE GUIDE	
	procedures, and factors affecting the stability and selection of fixed, natural and or artificial anchors for simple, complex, single and multi-pitch abseils • 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: • SISOCAY405A Apply advanced vertical canyoning skills • SISOVTR402A Perform complex vertical rescues.
Guidance information for assessment	

Range Statement

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 of a pitch • bottom of the pitch • self belay.
Environmental impact may include:	• rock dislodgement • compacting of soil • effect on other users of the site • damage to flora, fauna, and the environment.
Contextual issues may include:	• weather conditions, including times • season • transport • location • trip distance and duration • group objectives • group size.

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RANGE STATEMENT	
Equipment may include:	• ropes • tape slings • karabiners • rope protectors • belay devices • descending 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 • communication protocols • safety and emergency procedures • code of ethics.
Anchors may include:	• natural • fixed • artificial.
Participants may include:	• experienced • inexperienced • adults • children.
Condition of the anchors may include:	• age • location • wear • decay • corrosion • environmental stress • insect damage.
Likely load may include:	• group size • set up • type of abseil conducted • abseiler ability • possible forces generated during a fall.
Belay device may include:	• plate devices • auto-locking devices • tubular devices • Prusik cord and suitable friction hitch.
Protection may include:	• artificial • fixed

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RANGE STATEMENT	
	• natural.
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:	• end-of-rope knots • mid-rope knots • rope joining knots • tape knots.
Hazards may include:	• temperature extremes • slippery or unstable terrain • dangerous animals and insects • stinging trees and nettles • dense vegetation • group management hazards.
Safety of belayer may include:	• attachment to anchor or alternate safety system • positioning out of direct line of rock or equipment fall.

Unit Sector(s)

Unit sector	Outdoor Recreation

Co-requisite units

Co-requisite units		

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Competency field

Competency field	Canyoning

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