



Australian Government

SISOCAY405A Apply advanced vertical canyoning skills

Release: 3

SISOCAY405A Apply advanced vertical canyoning skills

Modification History

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

Release	Comments
3	Editorial updates to PC4.4

Unit Descriptor

This unit describes the performance outcomes, skills and knowledge required to independently undertake vertical canyoning activities in difficult and or non-routine conditions. These canyons may include intermittent vertical pitches of variable length, multi pitch abseils and hazardous hydrological features.

Application of the Unit

This unit applies to those working as canyoning guides or instructors in a range of unpredictable environments and locations with a variety of terrain obstacles, hazards and conditions within the context of the region.

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

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

Pre-Requisites

SISOCAY302A Apply vertical canyoning skills

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. Plan for the canyoning activity.

- 1.1. Identify and plan ***food and water requirements*** according to ***principles of nutrition*** and the duration of the activity.
- 1.2. Identify and select an appropriate activity site according to ***relevant legislation*** and ***organisational policies and procedures***.
- 1.3. Access ***relevant sources*** to interpret detailed ***weather and environmental information*** to determine activity plan.
- 1.4. Select personal clothing according to design and or construction features appropriate for the activity.
- 1.5. Conduct ***pre activity checks*** according to organisational policies and procedures.

2. Select and utilise canyoning equipment.

- 2.1. Select and use ***equipment*** in a safe and efficient manner according to ***contextual issues***.
- 2.2. Fit and adjust equipment to ensure personal comfort and safety according to organisational policies and procedures.
- 2.3. Waterproof food, clothing, equipment and resources where applicable.
- 2.4. Complete personal and equipment ***safety checks*** prior to commencing canyoning and or belaying in ***difficult conditions***.
- 2.5. Select and attach ***descending device*** to the rope and tie ***knots*** suitable to the ***belay system*** being used.
- 2.6. Apply safety procedures at top and bottom of descent site to minimise risk.

3. Travel through a canyon with vertical pitches.

- 3.1. Survey the route through the canyon to identify ***hazards*** and ***obstacles***, assess ***risks***, and select a safe route according to conditions and group ability.
- 3.2. Respond to emergency situations according to organisational policies and procedures.

ELEMENT**PERFORMANCE CRITERIA**

- 3.3. Identify hazardous features of **hydrological formations** and determine alternative routes according to relevant legislation and organisational policies and procedures.
- 3.4. Apply correct body position in moving water to minimise the potential for foot entrapment.
- 3.5. Apply navigation skills and swimming techniques appropriate to the chosen route.
- 3.6. Establish new or alternate anchors in non-routine situations or when designated anchors may not be available or suitable for use.
- 3.7. Demonstrate efficient rope handling and retrieval skills in non routine situations.
- 4. Demonstrate abseiling technique.
 - 4.1. Identify specific considerations and risks associated with the selection of equipment and the rigging of abseil anchors and systems.
 - 4.2. Negotiate obstacles and avoid or remove hazards to descend in a controlled manner.
 - 4.3. Demonstrate correct posture and technique while abseiling using single and double rope taking into account pitch variations.
 - 4.4. Maintain effective communication between the abseiler and the belayer throughout the descent.
 - 4.5. Identify and apply techniques that minimise damage to the environment while abseiling.
 - 4.6. Respond to **emergency situations** according organisational policies and procedures.
- 5. Demonstrate belaying technique.
 - 5.1. Establish belaying position by moving body in relation to **belay device** that enables effective use of belay system.
 - 5.2. Confirm attachment of belayer to anchor to minimise movement during a fall.
 - 5.3. Demonstrate a safe and efficient escape from belay system, and attachment of belayer to anchor to minimise movement during a fall.
 - 5.4. Maintain rope tension to ensure fall distance is minimised while not restricting abseiler movement.
 - 5.5. Monitor abseiler progress constantly and respond appropriately to abseiler calls.
 - 5.6. Arrest falls promptly using technique suitable to the belaying device and or situation.
 - 5.7. Demonstrate the lowering of a conscious or

ELEMENT**PERFORMANCE CRITERIA**

- unconscious canyoner in the event of an emergency.
- 5.8. Demonstrate attachment to alternate belay or safety system when self-belaying to maintain safety in the event of a fall.
6. Maintain canyoning equipment.
- 6.1. Conduct ***maintenance checks and repairs*** of canyoning equipment prior to storage.
- 6.2. Dry equipment prior to storage as appropriate.
- 6.3. Store equipment according to organisational policies and procedures.
7. Evaluate canyoning activity.
- 7.1. Evaluate ***relevant aspects*** of canyoning activity.
- 7.2. Evaluate own performance using self reflection methods and identify potential improvements for future performances.
- 7.3. Make modifications to future canyoning activities where required in response to ***feedback*** from other ***participants and own self reflection outcomes***.

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 other participants
- problem-solving skills to:
 - identify and negotiate obstacles and hazards when abseiling in canyons
 - deal with unpredictable, non-routine and emergency situations
 - assess application of rope tension when belaying
- planning and organising skills to access resources and equipment for the canyoning activity
- self management skills to review and reflect on own performance
- abseiling and belaying skills to apply as part of the canyoning activity
- swimming and navigation skills to safely travel through difficult canyon conditions
- 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 of all canyoning activities
- minimal impact techniques to minimise environmental impact of canyoning activities
- equipment types, characteristics and technology used for canyoning, the advantages and disadvantages of the range of equipment,
- factors affecting selection, use, care and maintenance of equipment and clothing
- advanced canyoning techniques and common communication methods and calls used between abseilers and belayers to reduce risk during multi pitch abseiling
- lay techniques and devices appropriate for activity including anchor selection and rigging of abseils
- technical abseiling and belaying knowledge, such as common improvisation techniques and procedures to suit the unpredictable and possible extreme canyoning conditions
- knots and rope handling to maintain adequate rope tension when belaying
- weather and environmental information to ascertain possible conditions and their affect on the activity
- hazards, obstacles and risks commonly associated with canyoning
- 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 equipment and supply requirements for canyoning activities performed in difficult conditions
- conducts pre-activity checks of the canyon site and equipment to identify potential hazards, obstacles and risks, and applies risk minimisation techniques and maintenance within own area of responsibility
- demonstrates advanced canyoning skills such as negotiating a vertical multi pitch using abseiling and belaying and communication systems
- negotiates obstacles and hazards during canyoning activities and adapts to unpredictable, non-routine and emergency situations that may arise
- evaluates and reflects on own canyoning performance to identify strengths and weaknesses and areas that need improvement.

Context of and specific resources for assessment

Assessment must ensure participation in multiple advanced vertical canyoning activities, within the current or intended context of the candidate's work region to demonstrate competency and consistency of performance.

Assessment must also ensure access to:

- resources and information, such as meteorological data, to plan for the canyoning activity
- a suitable outdoor environment with a canyoning site with difficult and or non-routine multi pitches
- canyoning, abseiling and belaying, navigation, safety and first aid, communication and repair 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 conduct of all canyoning activities
- observation of safe participation and demonstration

of multi pitch abseiling and belaying skills in difficult and unpredictable canyoning conditions

- observation of dealing with contingencies, such as equipment failure or change in weather conditions
- 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:

- SISCAQU202A Perform basic water rescues
- SISOCAY406A Establish complex belays in canyons.

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.

Food and water requirements may include:

- menu planning and preparation
- range of foods.

Principles of nutrition may include:

- food groups
- dietary guidelines
- essential nutrients
- individual food requirements and allergies.

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
- emergency procedures
- communication protocols
- use and maintenance of equipment
- code of ethics.

Relevant sources may include:

- Bureau of Meteorology
- media
- land managers or agencies
- local knowledge
- police.

Weather and environmental information may include:

- satellite images
- daily and weekly forecasts
- maximum and minimum temperatures
- weather warnings
- event warnings
- river levels
- synoptic charts.

Pre activity checks must include:

- condition of equipment
- logistical arrangements
- weather
- review of escape routes and contingency plans.

Equipment may include:

- canyoning equipment
- abseiling and belaying equipment

- navigation equipment
 - safety and first aid equipment
 - communication equipment
 - repair equipment.
- 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 - connectors - locked secured and oriented
 - D - devices - threaded correctly and secured
 - E - everything else including end or rope knots, friction, friction hitches, belayer ready, helmet chin strap, clothing, jewellery and hair secured
 - F - friend - cross check.
- Difficult conditions** may include:
- intermittent vertical pitches of variable length
 - multi-pitch abseils with belay stations mid-pitch
 - terrain obstacles which obstruct regular route
 - wet sections
 - flowing water and resultant hydrological formations.
- Descending devices** may include:
- auto locking devices
 - circular devices
 - plate devices
 - tubular devices
 - improvised devices
 - in line devices.
- Knots** may include:
- rethreaded figure 8
 - figure 8 on bight
 - friction hitches.
- Belay systems** may include:
- top belay
 - bottom belay
 - self belay.
- Hazards** may include:
- temperature extremes
 - slippery or unstable terrain

Obstacles may include:

- dangerous animals and insects
- stinging trees and nettles
- dense vegetation
- group management hazards.
- slippery rocks
- large boulders
- rock pools
- water slides
- tunnel swims
- small drops
- falling water
- logs
- small rapids
- ledges
- trees
- overhangs
- squeezes
- traverses.

Risks may include:

- temperature extremes
- slippery or unstable terrain
- dangerous animals and insects
- stinging trees and nettles
- dense vegetation
- group management hazards.

Hydrological formations may include:

- stoppers
- rapids
- holes
- strainers
- undercuts
- still bodies of extremely cold water.

Emergency situations may include:

- injured, unconscious or frozen canyoner
- anchor point corroded, removed or decayed
- raised water levels
- injured member of group
- abseiler with wedged body parts
- damaged or lost equipment
- hair or clothing jam
- changed conditions at top of pitch.

Belay devices may include:

- plate devices
- auto locking devices
- tubular devices.

Maintenance checks and repairs

may include:

- lilo puncture repair
- lilo valve repair or replacement
- cleaning of rope and harnesses.

Relevant aspects may include:

- 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)

Outdoor Recreation

Competency Field

Canyoning