

Cave 1



Photo: Neil Silverwood

Scope and Syllabus

With the support of:



NZOIA™ Cave 1

Scope

Cave 1 Profile

The NZOIA Cave 1 is able to:

- Role model and promote accepted environmental and cultural practices
- Plan and prepare cave experiences which include short single vertical pitches
- Instruct the cave skills required for positive, educational and safe experiences
- Lead and manage groups in cave experiences
- Apply effective safety management
- Prepare and deliver teaching sessions
- Provide interpretive information about sites visited

Scope

The holder of this qualification can organise, instruct and guide clients in horizontal caves where short vertical single pitches are expected and active streamways may be encountered. Short vertical pitches, up to a maximum of 15 metres, include only those where there is a clear line of sight and voice communication between the top and bottom person at all times.

The NZOIA Cave 1 can rig, manage and instruct the use of abseil and belay techniques to negotiate vertical pitches. Deep and moving water management techniques can be used to negotiate active streamways.

The NZOIA Cave 1 can demonstrate confident use of Single Rope Technique (SRT) on vertical pitches of up to 15 metres where re-belays and redirects are not encountered.

Prerequisites

Be a current Registered Member of NZOIA

Be 20 years old or over

Hold a current First Aid Certificate

Have the following experience as evidence in a logbook:

Total experience – at least 40 days cave experience (a cave day is considered to be at least 4 hours underground) which includes:

Personal experience - at least 20 days personal cave experience in a minimum of 5 different caves, including at least three trips using SRT

Instructional experience - at least 15 days instructing, leading or guiding groups in caves, including at least 10 instructional sessions

The prerequisite experience requirements are minimums, extra days are recommended so that a broad range of experience is gained. Experience will include co-instructing/guiding or working as an assistant instructor/guide.

Registration and Revalidation

Registration and revalidation with NZOIA provide proof of currency for NZOIA qualification holders.

Progressing to NZOIA Cave 2

As the NZOIA Cave 1 gains more experience, they can progress to gaining the NZOIA Cave 2 qualification. The steps they can follow include:

- Gaining the experience outlined in the NZOIA Cave 2 prerequisites
- Attending an approved NZOIA Cave 2 training course
- Working with an NZOIA Cave 2 holder

Syllabus

Assessment Note

The syllabus outlines what the content of the assessment will include and gives an idea of what assessment tasks the candidate will be asked to complete. All judgements on how the candidate meets the syllabus must be based on current good practice and industry standards.

Assessors use three types of direct evidence to judge a candidate's competency:

- Written questions/assignment
- Questioning and discussion
- Observation of practical tasks

Technical Competence

1. Describe understanding of the history and ethics of caving

The candidate will have a basic understanding and awareness of:

- 1.1** Current conservation practices and techniques for cavers
- 1.2** The development of speleology as a sport and current developments and trends
- 1.3** The NZ Speleological Society's role in caving
- 1.4** The NZ Speleological Society's ethical Code for cavers
- 1.5** NZ Cave Search and Rescue (SAR)

2. Demonstrate the care and correct use of cave equipment and clothing

The candidate will:

- 2.1** Carry and use equipment that is in good condition, well maintained and is used in accordance with the manufacturer's recommendations and current good practice
- 2.2** Describe the advantages and disadvantages of current equipment and clothing used for caving and reasons for choice e.g. lights, static rope, dynamic rope, rigging tape, abseil and belay devices (e.g. racks), prusik cord, helmets, harness, karabiners, personal safety systems, rapides, pulley, overalls, footwear
- 2.3** Carry and use the appropriate clothing for the environmental conditions
- 2.4** Complete a pre-activity check of equipment and describe how to identify worn/damaged equipment and the recommended maximum life for use of equipment

3. Demonstrate land and underground navigation

The candidate will be able to demonstrate the following on topographical and cave maps:

- 3.1** Use of scale, symbols, gridlines, contours and features
- 3.2** Orientating a map using natural features
- 3.3** Locating their position on a map from natural features
- 3.4** Planning a route to and from a cave entrance/exit to a known position e.g. car park, track end
- 3.5** Navigating through bush and cave systems using a map and natural features to a clearly defined feature

4. Demonstrate personal caving techniques

The candidate will be able to demonstrate the following:

- 4.1** Efficient and competent movement in the cave environment e.g. slippery ground, stream ways, limited lighting
- 4.2** Travelling as part of a group and maintaining contact with the group
- 4.3** Dealing with water e.g. sumps, swimming, wading, ducking
- 4.4** Techniques to get through squeezes
- 4.5** Identifying high/low water marks
- 4.6** Effective use of personal safety systems
- 4.7** Ascending and descending a single rope safely
- 4.8** Efficient management of equipment

5. Construct a variety of safe and efficient rigging systems

The candidate will construct the following rigging systems:

- 5.1** Hand line
- 5.2** Traverse lines
- 5.3** Belay systems

- 5.4** The candidate will build safe anchors which consider: minimising potential shock loading, sharing the load between different components, the effect of angles on the forces produced, minimising of wear. The systems could include fixed, placed (e.g. wires, cams, hexes) and/or natural protection (e.g. bollards, threads, formations, trees)

The candidate will demonstrate:

- 5.5** Using a prusik

6. Construct an abseil system

The candidate will construct an abseil system ready for operation which demonstrates:

- 6.1** An anchor setup suitable for use by novice clients, with the focal point situated to provide an easy and safe attachment point and transition to abseiling
- 6.2** Inclusion of a safety rope for the abseil client
- 6.3** The use of an appropriate and effective personal safety system while exposed to a potential fall during setup
- 6.4** Understanding how to de-rig and leave from the bottom of a pitch without leaving gear or equipment behind

7. Demonstrate safe and efficient belaying technique

The candidate will demonstrate:

- 7.1** An appropriate belay method for short vertical pitches
- 7.2** An understanding of the advantages and disadvantages of at least two different belay systems
- 7.3** Systematic checking before the caver leaves the safe zone
- 7.4** Communicating clearly with a caver as they climb, descend or traverse and protecting them effectively with smooth belaying which considers the caver's movement and the terrain
- 7.5** Managing a minimum of two cavers through and abseil safely, smoothly and efficiently
- 7.6** What to do at the end of the rope-protected section

8. Demonstrate simple vertical rescue skills

The candidate will demonstrate:

- 8.1** How to manage a stuck/frozen caver abseiling on a short single vertical pitch e.g. releasing the abseil rope to free jammed clothing or hair, abseiling to them and assisting them to the ground
- 8.2** How to manage an upside-down caver on a rope-protected section
- 8.3** How to assist a tired caver climbing a short single vertical pitch

- 8.4** Creating a system of mechanical advantage to assist and to haul a caver up a short vertical pitch

Environment

9. Apply weather knowledge

The candidate will:

- 9.1** Describe the general weather patterns affecting New Zealand
9.2 Predict how rainfall will affect cave conditions in a given cave and the implications or the forecast for a cave trip

10. Role model and promote accepted cultural and environmental practices

The candidate will:

- 10.1** Demonstrate and/or describe the responsibilities to mana whenua, land owners and other users, including access protocols
10.2 Describe common impacts of visitation on cave features and minimise this through route selection
10.3 Demonstrate and describe the correct use of commonly used cave conservation techniques e.g. taped areas and routes, strung lines, boot washing
10.4 Describe the issues with disseminating information about significant or vulnerable caves
10.5 Role model and promote the NZ Speleological Society's Code for cavers
10.6 Role model and promote the principles of Leave No Trace

11. Demonstrate and/or describe cultural and environmental knowledge and interpretation of caving sites visited

The candidate will understand, and provide interpretive information about:

- 11.1** The natural and cultural history of the area
11.2 The formation of caves, natural features and types of processes at work e.g. speleothems, sediment deposits, fault lines, rock types, cave lifecycles, cave types, stream and drip
11.3 Local flora and fauna

12. Understand connections between te ao Māori and the cave environment

The candidate will engage in discussion around te ao Māori connections and the cave environment. Examples of concepts include but are not limited to:

- Sites of cultural significance likely to be encountered in the bush or caves e.g. Urupā, Pā, middens, kumara pits wahi tapu sites
- Creation stories or pūrākau of the area e.g. Ranginui, Papatūānuku, Rūaumoko, Tāne, Mahuta, Mahuika, Maui, Hine-nui-te-pō

- Relationships with the environment e.g. whakapapa, kaitiakitanga, mauri, wairua, rāhui
- Concepts such as Te Kore, Te Pō, Te Ao Marama

Group Management and Leadership

13. Plan and prepare a cave experience including at least one short vertical single pitch

The candidate will prepare a written activity management plan which:

- 13.1** Identifies any access permissions required
- 13.2** Identifies any hazards of the cave site and the risk management strategies to minimise or avoid the impact of these identified hazards
- 13.3** Contains a relevant weather forecast and identifies any implications of the weather forecast for the planned session
- 13.4** Describes what steps have been taken to minimise environmental impact
- 13.5** Outlines emergency procedures

14. Lead and manage a group during a cave experience which includes at least one short vertical single pitch

The candidate will be responsible for a group and demonstrate:

- 14.1** Awareness of tikanga and te ao Māori in their professional practice
- 14.2** Effective group briefing including setting boundaries/safe areas and ground rules
- 14.3** Coaching, assisting and motivating clients to ensure they are interested and engaged, and have a fun and positive experience
- 14.4** Establishing rapport with clients and having an awareness of their emotional, cultural or other needs
- 14.5** Integrating environmental interpretation and cave knowledge into their session e.g. cave conservation, cave formation, cave history, pūrakau or stories
- 14.6** Appropriate positioning within the group
- 14.7** Assisting client through moderated technical terrain where a rope is not required
- 14.8** Knowledge of local NZSS club and how keen cavers can connect to the clubs that can further their experience

The candidate will manage a minimum of two clients on a rope-protected section where belaying is necessary and demonstrate:

- 14.9** Movement from the safe zone and attachment to the abseil and safety ropes
- 14.10** Clear communication between the instructor/guide and the abseil client including systematic checking before the client begins descent, what the client does at the bottom
- 14.11** Monitoring the use of the abseil device, safe and efficient abseil technique

15. Demonstrate effective safety management

The candidate will:

- 15.1** Demonstrate checking routes for hazards e.g. loose rocks
- 15.2** Identifying locations in the cave where rigging is required
- 15.3** Use an effective communication and checking system with clients during rope protected sections
- 15.4** Have a first aid kit and be able to deal with first aid situations if required
- 15.5** Take reasonably practicable steps to eliminate or minimise the effect of significant risks for self and others
- 15.6** Position clients safely and effectively
- 15.7** Use appropriate tie-on and belay systems for the site
- 15.8** Demonstrate safe practices and good judgement and decision making within the scope of this qualification
- 15.9** Describe crisis management procedures e.g. in case of flood, injured person underground
- 15.10** Describe what to do if a client is lost underground and above ground

Instruction

16. Prepare and deliver teaching sessions

The candidate will:

- 16.1** Develop aims based on the knowledge of the clients
- 16.2** Plan a logical sequence of teaching progressions
- 16.3** Select and prepare a suitable location for client success
- 16.4** Brief the clients and outline the learning outcomes
- 16.5** Use clear demonstrations and explanations
- 16.6** Use a range of teaching skills and methods
- 16.7** Provide opportunities for clients to practice
- 16.8** Deliver feedback that is timely and specific
- 16.9** Maintain a positive learning environment

17. Teach cave skills

The candidate will include a minimum of two appropriate teaching sessions demonstrating effective instruction from the following list while travelling through a cave:

- 17.1** Fitting and checking of harnesses and helmets
- 17.2** Using lanyards/cowstails
- 17.3** Using traverse and hand lines
- 17.4** What to do at the edge and at the bottom of a vertical section
- 17.5** Ascending and descending ladders
- 17.6** Abseiling
- 17.7** Belaying (top roping or body belay)
- 17.8** Bottom Belay
- 17.9** Spotting
- 17.10** Dealing with water e.g. low air space, fast moving water, ducks
- 17.11** Techniques for narrow passages and squeeze