

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:

- Plan and prepare cave experiences which include short single vertical pitches
- Lead and manage groups in cave experiences
- Apply effective safety management
- Instruct the cave skills required for positive, educational and safe experiences
- Prepare and deliver teaching sessions
- Role model and promote accepted environmental practices
- 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 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 and instruct the use of ladders, abseil and belay techniques to negotiate vertical pitches. Deep and moving water management techniques can be used to negotiate the active streamways.

Prerequisites

Be a current Full Member of NZOIA

Be 20 years old or over

Hold a current First Aid Certificate (minimum of 12 hours or 2 day course including some direct contact with course tutors)

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

Instructional experience - at least 10 days instructing, leading or guiding groups in caves, including at least 5 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 caving history and ethics

The candidate will have a basic understanding and awareness of:

- 1.1** The development of speleology as a sport and current developments and trends
- 1.2** The NZ Speleological Society's role in caving
- 1.3** The NZ Speleological Society's ethical Code for cavers

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

The candidate will:

- 2.1** 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, tubular tape, abseil and belay devices, prusik cord, helmets, harness, karabiner types, cowstails/lanyards, rack, rapides, pulley, overalls
- 2.3** Complete a pre-activity check of equipment and describe how to identify worn/damaged equipment (e.g. ladders, ropes, webbing, karabiners and belay/abseil devices, helmets and harnesses) 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/or 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** 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** Dealing with water e.g. sumps, swimming, wading, ducking
- 4.3** Techniques to get through squeezes
- 4.4** Identifying high/low water marks
- 4.5** Use of cowstails/lanyards
- 4.6** Travelling as part of a group and maintaining contact with the group
- 4.7** Ascend and descend a single rope safely

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 Efficient management of equipment e.g. coiling and uncoiling ropes and ladders
- 5.6 Retrieving equipment in a safe and efficient way (derig from top, descend, pull gear from the bottom)

6. Construct an abseil system

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

- 6.1 Secure anchors which consider; minimising potential shock loading, sharing the load between different components, the effect of angles on the forces produced, minimising of wear
- 6.2 A setup suitable for use by novice clients, with the focal point situated to provide an easy and safe attachment point and transition to abseiling
- 6.3 Inclusion of a safety rope for the abseil client
- 6.4 The use of a personal safety system while exposed to a potential fall during setup

7. Demonstrate safe and efficient belaying technique

The candidate will demonstrate:

- 7.1 An appropriate belay method for short vertical pitches e.g. body belay, Italian hitch, ATC, rack, stitch plate, "meat belay" (body belay with belay device combo)
- 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 Clear communication with a caver including anticipating the climber's movement and paying out and taking in the rope as required
- 7.5 Lowering the caver safely, smoothly and efficiently

8. Demonstrate simple vertical rescue skills

The candidate will demonstrate:

- 8.1 How do deal with a stuck/frozen abseil client 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 deal with a tired climber on a ladder during a short single vertical pitch e.g. direct haul using group, mechanical haul (2:1 or 3:1)

The Environment

9. Apply weather knowledge

The candidate will:

- 9.1** Describe the general weather patterns affecting New Zealand
- 9.2** Describe how rainfall will affect cave conditions

10. Role model and promote accepted environmental practices

The candidate will:

- 10.1** Demonstrate and/or describe the responsibilities to 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** Describe the issues with disseminating information about significant or vulnerable caves
- 10.4** Role model and promote the NZ Speleological Society's Code for cavers
- 10.5** 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

Group Management and Leadership

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

The candidate will prepare a written activity management plan which:

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

13. 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:

- 13.1** Effective group briefing including setting boundaries/safe areas and ground rules
- 13.2** Coaching, encouraging, motivating clients to ensure they are interested and engaged, and have a fun and positive experience
- 13.3** Establishing rapport with clients and having an awareness of their emotional, cultural or other needs
- 13.4** Integrating environmental interpretation and cave knowledge into their session e.g. cave conservation, cave formation, cave history, cave mythology or stories
- 13.5** Appropriate positioning within the group
- 13.6** Assisting with a “helping hand” when needed

The candidate will manage a minimum of two clients through an abseil including:

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

14. Demonstrate effective safety management

The candidate will:

- 14.1** Demonstrate checking routes for hazards e.g. loose rocks
- 14.2** Identifying locations in the cave where rigging is required
- 14.3** Use an effective communication and checking system with clients during ascending and descending
- 14.4** Have a first aid kit and be able to deal with first aid situations if required
- 14.5** Never compromise personal safety or the safety of their clients
- 14.6** Position clients safely and effectively
- 14.7** Use appropriate tie-on and belay systems for the site
- 14.8** Demonstrate safe practices and good judgement and decision making within the scope of this qualification
- 14.9** Describe crisis management procedures e.g. in case of flood, injured person underground
- 14.10** Describe cave Search and Rescue processes

Instruction

15. Instruct the cave skills required for a positive, educational and safe experience

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

- 15.1** Fitting and checking of harnesses and helmets
- 15.2** Using lanyards/cowstails
- 15.3** Using traverse and hand lines
- 15.4** What to do at the edge and at the bottom of a vertical section
- 15.5** Ascending and descending ladders
- 15.6** Abseiling
- 15.7** Belaying (top roping or body belay)
- 15.8** Bottom Belay
- 15.9** Spotting
- 15.10** Dealing with water e.g. low air space, fast moving water, ducks
- 15.11** Techniques for narrow passages and squeezes

The candidate will use:

- 15.12** A logical sequence of teaching progressions
- 15.13** Clear demonstrations and explanations