



Department of
Education

APPENDIX H: CAVING

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CAVING

This document contains specific requirements related to caving activities and must be read in conjunction with *Appendix A: General Requirements in the Recreation and Outdoor Education Activities for Public Schools Procedures.*

1. BACKGROUND

Caving involves the exploration of underground passages and caverns that have been created by natural processes over time. Caves vary in size, depth and fragility and can be found in diverse environments including metropolitan suburbs, coastal and remote regions.

Typically, caving is described as: horizontal caving or vertical caving.

DEFINITIONS

ADVENTURE CAVING

Caves in which established tracks are not marked and/or students are able to crawl and/or walk around at their own risk.

ARTIFICIAL CAVE

A construction that is designed to mimic the environmental conditions of natural caves. Often used for introductory caving activities.

ASSISTANT SUPERVISOR

Assists the Qualified Supervisor and or Department teacher-in-charge. May or may not have relevant qualification or experience.

FOUL AIR/BAD AIR

A cave's atmosphere which has a noticeable abnormal physiological effect on humans. In limestone caves, 'foul air' can be described as containing greater than 0.5% carbon dioxide and/or lower than 18% oxygen by volume.

HORIZONTAL CAVING

Involves crawling through openings, scrambling up and down rock faces with or without fixed ladders.

NATURAL/TOURIST CAVING

Caving in naturally formed caves following established and marked tracks.

TEACHER-IN-CHARGE

The member of the teaching staff who is authorised by the Department of Education to manage the school activity.

VERTICAL CAVING

Involves using ropes, caving ladders and other descending/ascending equipment to enter, explore and/or exit caves.

WILD CAVING

Caves that have few or no provisions and are not used commercially. Often situated on private property or remote/isolated areas and use of these caves require special permits to be obtained.

Separate advice in these relevant activity specific documents should be consulted if the following activities are proposed within the caving program

- *Abseiling and Climbing*; and
- *Ropes Courses and Bouldering*; and/or
- *Swimming and Water Based Activities* where water is involved.

2. ENVIRONMENT

The suitability of the venue is determined after considering the students' capacity, skills and experience, and supervision ratios that the planned activities require.

Specific attention is given to the physical characteristics of the site (e.g. exposure, access and level of difficulty, loose rock, texture) and to potential risk points where Single Ropes Techniques (SRT) will take place as part of the caving activity.

The relevant *Department of Biodiversity, Conservation and Attractions* regional office, management agency; or private land owner; and/or caving club must be contacted to establish conditions that apply for entry to, and usage of a cave.

The supervisory team must meet all requirements specified by land managers or owners.

Any speleological assessment of the cave environment must be performed under the guidance of recognised management and *Western Australian Speleological Group*.

Students must not be involved in caving activities in areas that have a history of consistent rock fall.

Any cave with a history of foul air must not be included in any program.

A further risk management assessment must take place before conducting caving activities if rainfall has occurred in the local area in the previous 48 hours, or is predicted within twelve (12) hours of entry into the cave system.

If in an isolated area or in the event of a program change, details of the caving activity are left with a relevant authority such as the police, a

Department of Biodiversity, Conservation and Attractions ranger, land manager or responsible community member. Details should include the:

- name of the party, Department teacher-in-charge and method of contact;
- number of participants;
- vehicle registration number(s);
- date; and
- cave entry time, and the estimated time of return.

It is advisable that the above information be left on a relevant vehicle dashboard.

All supervisors should be familiar with the *ASF Minimal Impact Caving Code* (see *Western Australian Speleological Group* or the *Australian Speleological Federation*).

The weather forecast must be checked before and also regularly throughout the activity, as it might be necessary to cancel, or modify the activity at any time.

Many sites have access restrictions. Written permission must be gained from the relevant authority (*Department of Biodiversity, Conservation and Attractions* regional office, local land management body, lease holders or private property owner). These organisations/owners can also be consulted for information about:

- route planning (including evacuation);
- alternative routes in the event of restricted access;
- shelter, toilets, drinking water etc. availability at the location/venue; and
- procedures to follow when there is a risk of bad weather, storms, bushfires and/or other changes to the environment.

Guidance

Minimal impact strategies

For all caving activities, a minimal approach should be adopted, (as per *Leave No Trace* principles), including:

- appropriate disposal of human waste;
- travelling on durable surfaces;
- leaving 'found artefacts' behind;
- respecting all abiotic and biotic features;
- being considerate of other visitors; and
- not exceeding the group size specified by land managers.

The qualified supervisor should have first-hand knowledge of the site. A pre-visit to the proposed cave would identify sensitive features and the best anchor points, reducing the need for unnecessary exploration (for information about venues see *Appendix A: General Requirements* in the *Recreation and Outdoor Education Activities for Public Schools Procedures*).

3. CAPACITY OF STUDENTS

Caving, other than a visit to a tourist cave or artificial cave is not suitable for primary students.

Year 7 students (and above) may participate in all caving activities, providing that each student has been assessed by the Department teacher-in-charge and is deemed to have the physical capacity, caving skills and single rope techniques needed to participate safely in the activity, at that particular location.

Alternative, modified or adjusted activities should be provided for students who have limited capacity to participate.

Students with an impairment may participate in desired activities provided adequate safety and control measures are implemented. Specific consideration is given to:

- the type and level of impairment;
- location and access; and
- curriculum adjustments so that the student can access the curriculum activity on the same basis as their peers.

Students who have a medical condition that may impact on their safety must be cleared by a medical practitioner before they can participate.

Prior to the commencement of the activity, it is confirmed that no participants are known to have reactions to dark and/or confined spaces.

4. STUDENT HEALTH CARE

Refer to *Appendix A: General Requirements in the Recreation and Outdoor Education Activities for Public Schools Procedures* for further requirements.

5. ACTIVITIES

Cave diving activities are prohibited.

Novices must only attempt the simplest of caves. Adventure caving is not recommended for primary school students.

Activities in wild caves that have few or no provisions for the general public should only occur if the students are part of a program that has an established objective to progress to this level of caving. Students can only participate if the Department teacher-in-charge deems that each student has developed the technical skills, knowledge, understandings, attitudes and values necessary to meet the high levels of responsibility and extensive preparation required to use these types of caves.

Abseiling, climbing and other activities often form part of a caving program. Refer to the relevant supporting document for the specific activity to determine the qualifications and supervision requirements that apply.

Cave entrances and passages must not be excavated or enlarged.

Water levels in sumps must not be modified, nor stream flows diverted without the prior consent of the *Department of Biodiversity, Conservation and Attractions* or the land manager/owner.

Established or marked routes are used where they exist. Tracks are followed and care is taken to avoid needless deposition of mud. Supervisors must confirm that participants do not go exploring or try to find their own exit from a cave, unless they are following a clear or marked track.

All participants are expected to adhere to the *Leave No Trace* principles at all times when interacting with any natural environment. Caves must not be disfigured by markings and mud throwing is strictly prohibited.

Caving activities are conducted in ways that prevent damage to speleothems, sediments, biota and other natural phenomena. Sampling of flora, fauna, palaeontologic or archaeological material, dead or alive, does not occur without special permit approval.

Eating of food in caves should be avoided. If food is eaten in a cave, care is taken that small food fragments are not dropped as this may impact on cave biota. Students carry a plastic bag to eat over and to catch food fragments. This can then be folded up and removed from the cave.

All human waste must be removed from the cave and disposed of correctly.

Participants must not light fires (or smoke) in caves.

6. EQUIPMENT

It is recommended supervisors carry:

- at least two spare light sources;
- a pencil and notebook; and
- a watch.

The qualified supervisor must check equipment to confirm that it is appropriate to the activity, safe and in working order. Safety checks are conducted before, and at critical times throughout, the activity.

Emergency equipment must be readily accessible. The equipment may be left in a vehicle (however, all supervisors should know the location of the key if the vehicle is locked) or at the cave entrance.

Appropriate first aid equipment must be readily accessible. The first aid kit must include items that are appropriate for the activity, size and needs of the group and duration of the activity.

Each participant must wear appropriate clothing and fully enclosed footwear. Participants should also wear a hard-shell climbing, caving or roping helmet with a secure chinstrap that meets the relevant Standard (*currently CE-EN 12492, UIAA 106, AS 2316 or AS 2316.2 - an adaption of the EN 15567-1 and -2 Standard*).

All participants have access to a personal light source, preferably helmet-mounted.

If helmet-mounted lights are not available, a carry strap or attachment should be used on the main light source.

Guidance

For further information, refer to [Australian Adventure Activity Good Practice Guide: Caving](#)

Support equipment should include:

- *comprehensive first aid equipment, to be left in a vehicle or at the cave entrance;*
- *a sleeping bag and sleeping mat; and*
- *food, fuel, a stove and water.*

Drinking water should be available at all times (it is recommended that supervisors carry a supply of water).

Purpose designed equipment that meets appropriate Standards must be used for all activities that involve abseiling, climbing and the use of ropes.

All roping equipment must meet international standards.

Manufacturer's equipment instructions must also be taken into consideration.

Ropes, tapes, cords, harnesses, helmets and other specialist equipment specific to the activity must be retired after five years, unless the manufacturer specifies a different service life. Equipment must not be used if there is any doubt about its integrity.

If using ropes, each participant should wear a correctly fitting harness and appropriate gloves of the correct size while handling moving rope. Gloves prevent overheating of the hands and possible loss of rope control. Gloves are not required where friction devices such as Slow-Go pulleys and other controls are used in the belay system.

7. THE SUPERVISORY TEAM

Refer to *Appendix A: General Requirements in the Recreation and Outdoor Education Activities for Public Schools Procedures* for further requirements.

8. EXTERNAL PROVIDERS

Refer to *Appendix A: General Requirements in the Recreation and Outdoor Education Activities for Public Schools Procedures* for further requirements.

9. MINIMUM QUALIFICATIONS AND COMPETENCIES

The Department teacher-in-charge must confirm that the supervisory team members possess skills in caving, navigation and have the appropriate experience, knowledge and skills to identify and manage potential risks at any stage during caving activities.

Refer to *Appendix A: General Requirements in the Recreation and Outdoor Education Activities for Public Schools Procedures* for mandated:

- first aid and CPR accreditation requirements; and
- components of all qualifications and competencies.

At least one member of the supervisory team must have a relevant qualification, and a current first aid certificate with CPR accreditation.

Minimum qualifications for natural, tourist and wild caving activities can include, but are not limited to:

- a current, activity-specific qualification or attainment of competencies gained through a recognised tertiary institution or Registered Training Organisation (RTO), including:
 - relevant units in Caving completed as a part of a *Certificate III* (or higher) in Outdoor Recreation; or
 - *Trip Leader* qualification awarded by a member club of the Australian Speleological Federation; or
 - *Department of Biodiversity, Conservation and Attractions Cave Leader S2* (Horizontal Access); or

- Department of Biodiversity, Conservation and Attractions Cave Leader S3 qualification (Vertical Access, also required relevant roping qualifications - see Abseiling and Climbing specific activity documents) (required to access several caves in WA such as Leeuwin Naturalist National Park and all restricted access caves around the Margaret River region); or
- National Outdoor Leader Registration Scheme (NOLRS) *Activity Leader* award in an appropriate caving activity (a requirement of Parks and Wildlife for entry to national park locations); or
- an equivalent qualification as recognised by the Director General.

No formal caving qualifications are required for artificial caving activities.

For Single Rope Technique (SRT) activities conducted while vertical caving, at least one member of the supervisory team should have a qualification specified in *Abseiling and Climbing* and be familiar with the hazards of abseiling and climbing within a caving context.

At least one member of the supervisory team must also be competent in dealing with emergencies that are consistent with the type of activity and site being used.

10. MINIMUM LEVELS OF SUPERVISION

Group sizes and supervision levels are determined after considering the:

- age, capacity, experience and skills of each student;
- qualifications, capacity and experience of the supervisor(s);
- types of activities to be undertaken;
- students' medical conditions or disabilities; and
- nature of the environment.

Greater supervision must be provided for beginners, primary aged or less able students who are participating in school activities outside the school grounds.

Minimum supervisory requirements and maximum group sizes specified by cave managers must be adhered to at all times.

For all caving activities regardless of age of participants, the minimum level of supervision is:

- two supervisors at all times during caving activities; and
- one of these supervisors must be a qualified supervisor with location specific experience.

For larger groups, consideration should be given to splitting the groups.

ARTIFICIAL CAVING

Kindergarten - Year 12

Must have two supervisors at all times.

- One supervisor for every 10 students or part thereof.

NATURAL/TOURIST CAVE

Kindergarten - Year 3

This activity is not recommended for students in Kindergarten - Year 3.

Year 4 - 6

Must have a minimum of three supervisors at all times:

- One qualified supervisor for every 20 students or part thereof; and
- One supervisor for every six students or part thereof (including the qualified supervisor).

Year 7 - 12

Must have two supervisors at all times:

- One qualified supervisor for every 20 students or part thereof; and
- One supervisor for every 10 students or part thereof (including the qualified supervisor).

WILD CAVE

Kindergarten - Year 6

This activity is not recommended for students in Kindergarten - Year 6.

Year 7 - 12

Must have two supervisors at all times:

- One qualified supervisor for every 12 students or part thereof; and
- One supervisor for every six students or part thereof (including the qualified supervisor).

The table below illustrates the supervision requirements for common group sizes. Groups may be larger than those indicated here but must remain within the prescribed supervision ratios and any limits set out earlier in this document.

Year level	Environment	Number of students	Qualified supervisor	Experienced assistant supervisor	Total supervisory team
K - 12	Artificial caving	1 - 20	0	2	2
K - 3	Natural/ tourist caving and wild caving	This activity is not recommended for K - Year 3 students.			
4 - 6	Natural/tourist caving	1 - 18	1	2	3
		19 - 20	1	3	4
		21 - 24	3	1	4
		25 - 30	3	2	5
	Wild caving	This activity is not recommended for students in Year 4 - 6.			
7 - 12	Natural/tourist caving	1 - 20	1	1	2
		21 - 30	2	1	3
		30 - 40	2	2	4
	Wild caving Please contact land owners or DCBA for maximum participant numbers, any restrictions and for permits to enter all wild caves.	1 - 12	1	1	2
		13 - 18	2	1	3
		19 - 24	2	2	4
	25 - 30	3	2	5	

Refer to *Abseiling and Climbing* for qualifications and supervisory requirements that apply where SRT are used whilst caving.

11. SUPERVISION STRATEGIES

Supervision strategies must be confirmed by the Department teacher-in-charge to ensure the safety and wellbeing of students is maintained at all times.

Supervision strategies must also address circumstances where students are not in clear view of the supervisors.

Supervisors remain aware of each participant's position and their condition, and maintain direct communication at all times. A *whip and tail* configuration will help the group remain connected.

Inexperienced students should remain close to an experienced caver who can assist when required.

The group caves at the pace of the slowest caver.

Team members help each other through the cave. Participants should not split up unless doing so reduces their impact on the cave. If the bigger group splits up, minimum supervision requirements apply; as do appropriate safety, first aid, and communication equipment requirements. One supervisor remains behind the last student or participant at all times.

Students who do not display an appropriately responsible attitude are to be removed from the activity.

12. IDENTIFICATION OF PARTICIPANTS

Refer to *Appendix A: General Requirements in the Recreation and Outdoor Education Activities for Public Schools Procedures* for further requirements.

13. COMMUNICATION STRATEGY

Refer to *Appendix A: General Requirements in the Recreation and Outdoor Education Activities for Public Schools Procedures* for further requirements.

14. RISK MANAGEMENT PLAN

Refer to *Appendix A: General Requirements in the Recreation and Outdoor Education Activities for Public Schools Procedures* for further requirements.

15. EMERGENCY RESPONSE PLAN

Refer to *Appendix A: General Requirements in the Recreation and Outdoor Education Activities for Public Schools Procedures* for further requirements.

16. BRIEFING STUDENTS AND SUPERVISORS

The Department teacher-in-charge must confirm that all participants are briefed about:

- the educational purpose and the cooperative nature of the activity;
- the activity itinerary;
- required skills appropriate to the activity;
- participants' roles and responsibilities, including standards of acceptable behaviour and activity rules;
- the role and location of supervisors;
- the system for identifying students and supervisors;
- food and water requirements;
- procedures that will be followed if members of the party are overdue, or become lost or separated from the group;
- potential hazards and safety procedures appropriate to the activity and venue;
- buddy practices and lost buddy procedures;
- areas demarcated and identified specifically for student groups;
- communication strategies that will be used throughout the activity, including a signal to gain the attention of the whole group; and a signal to be used if assistance is required;
- emergency and evacuation procedures, signals and location of emergency equipment;
- appropriate clothing for the activity and weather conditions;
- minimal impact principles for that location (see Leave No Trace principles);
- aspects of the environment and expected weather conditions (if appropriate); and
- the route to be followed including pre-determined stops and/or meeting points along the way.

Special briefing sessions must be arranged for students who were absent from preparatory briefings.

17. INFORMED CONSENT

Refer to *Appendix A: General Requirements in the Recreation and Outdoor Education Activities for Public Schools Procedures* for further requirements.