



Department of
Education

APPENDIX N: ROPES COURSES AND BOULDERING

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ROPES COURSES AND BOULDERING

This document contains specific requirements related to ropes courses and bouldering 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

A ropes course is an activity which usually consists of a series of challenges completed along tensioned ropes with high and/or low elements. Ropes courses are also known as challenge ropes courses.

Bouldering is a free solo climbing activity of short duration and at low height, used to foster perseverance and resilience.

Separate advice provided in the *Appendix E: Abseiling and Climbing* activity specific document must also be consulted if any part of a participant's body is above 2.4m in height from ground level or these activities are included as a part of the ropes courses and bouldering activities.

DEFINITIONS

ASSISTANT SUPERVISOR

Assists the Qualified Supervisor and or Department Teacher-in-charge. Must have recent and relevant experience in the activity, at the level being offered to the students.

AUTO BELAY

A device that acts independently from human involvement taking up slack as the participant ascends a surface. When the device is placed under tension (for example, in the event of a fall) the device catches and then slowly lowers the participant to the ground.

BELAY

Controlling a safety rope attached to people or equipment as a back-up in the case of primary system failure or climber fall. Belaying may be done from above (top belay) or below (bottom belay) the participant depending on the nature of the activity and/or the environment.

BOULDERING

A form of rock climbing performed at low heights (where any part of a person's body remains below 2.4m in height from ground level) on small rock formations or artificial surfaces without the use of harnesses or ropes.

DEPARTMENT TEACHER-IN-CHARGE

The member of the teaching staff employed by the Department of Education (or an Approved Provider) and is managing the school activity. For information relating to Approved Providers refer to *Appendix A: General Requirements*.

HIGH ROPES COURSE

Usually constructed at heights in trees or in artificial settings and requires fall safety mechanisms such as a belay system using harnesses, specialist safety equipment or other established methods or systems.

HARNESS HANG SYNDROME (SUSPENSION TRAUMA)

Can occur when a participant is suspended within a harness for a prolonged period of time causing blood to pool. This has the potential to lead to shock, unconsciousness and/or death.

LOW ROPES COURSE

A tension roped course usually constructed less than one metre above the ground in trees or in artificial settings. Participant safety can be achieved by spotting, using an impact absorbing system (matting, soft-sand etc) or by a combination of these measures.

QUALIFIED SUPERVISOR Has the required qualifications, skill, experience and technical knowledge to instruct the activity.

SLACKLINING

The act of walking or balancing along a suspended length of flat webbing tensioned between two anchor points and where any part of a participant's body is less than 2.4m above ground level.

2. ENVIRONMENT

The Department Teacher-in-charge must determine the suitability of the venue after considering each student's capacity, skills and experience, the planned activity and the supervision required.

For bouldering activities, the physical characteristics of the site (exposure, access, and level of difficulty) must be taken into account, with specific attention to loose or slippery rocks, surface texture and any obstacles that may impact student safety.

Ropes courses **must not** be used in excessive winds, wet conditions, during lightning and electrical storms or in extremely hot conditions. The weather forecast must be checked before, and also regularly throughout the activity, as it might be necessary to cancel, modify or relocate the activity at any time. Check the [Bureau of Meteorology](#) for up-to-date conditions and weather warnings.

The design and proportion of the ropes course and equipment needs to be suitable for participants.

Guidance

Key sources of information regarding the venue may include:

- *the venue manager*
- *the local ranger or land manager*
- *other schools that have conducted similar activities at that location*
- *external providers and/or*
- *[Outdoors WA](#).*

3. CAPACITY OF STUDENTS

High ropes courses that include abseiling and climbing may be offered for students from Year 5 as part of a sequential and developmentally appropriate documented program of instruction (refer also to [Appendix E: Abseiling and Climbing](#)).

Prior to commencing a ropes course, bouldering, or slacklining activity, the Qualified Supervisor must determine whether each student has the capacity and maturity to participate safely and can manage safety systems.

Primary-aged school students

Ropes courses that include abseiling and climbing activities (generally high-ropes courses) are not considered suitable for primary students in Kindergarten to Year 4 as younger students:

- generally, do not possess the necessary degree of responsibility and maturity to meet all requirements of the activity
- stages of physical growth and development are usually not suitable.

Primary-aged students to Year 4, may participate in the controlled environments if:

- the selected ropes course or bouldering activity is deemed educationally appropriate
- the selected ropes activity is deemed appropriate for the capacity of the students' to safely participate
- a supervising adult is controlling any belaying systems.

Students with a disability or impairment may participate in ropes courses and bouldering if adequate safety and control measures are implemented. Specific consideration must be given to:

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

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

Alternative activities are to be provided for students who do not have the capacity to participate.

4. STUDENT HEALTH CARE

Refer to *Appendix A: General Requirements* for further requirements.

5. ACTIVITIES

The full ropes course is assessed by the Qualified Supervisor in consultation with the Department Teacher-in-charge to inform the final selection of the course elements appropriate for the student cohort.

A low ropes course, bouldering or slack lining activity must not include climbing activities where any part of a person's body is above 2.4m in height. If a participant is required to climb above 2.4 metres or if abseiling is required to complete any ropes course, refer to the *Appendix E: Abseiling and Climbing* for appropriate qualifications and supervision ratios.

Facilities that include use of auto belay devices are required to produce certificates of inspection for the devices as follows:

- Indoor facilities: Current certificate of inspection (every 12 months)
- Permanent external facilities: Current certificate of inspection (every 6 months).

The use of auto belay devices with mobile climbing walls or structures are prohibited.

Use of body belays are not permitted.

The maximum number of students permitted to participate on each element at any one time must be clearly communicated to both staff and students.

Students and supervisory staff must be briefed, prior to the start of the activity, about the activity requirements and safety aspects (see *Briefing* section in this document).

Guidance

Students should be progressively introduced to elements associated with ropes courses and bouldering, that include:

- belaying on high ropes and spotting on low ropes
- working together as a small team
- ascending and descending from the high ropes course
- procedural instructions for the specific ropes courses
- the use of safety equipment.

Low ropes courses and Slacklining

Low ropes courses and Slacklining are often incorrectly perceived as having a lower risk than high ropes courses because of the absence of a roped safety system and their proximity to the ground. However, safety on low ropes courses and when slacklining, is dependent on the participants' maturity, capacity and concentration, as well as the quality of instruction and appropriate level of supervision.

Students of younger primary school age, generally do not have the ability or maturity to participate as spotters. Older students can participate as spotters, if the Qualified Supervisor has confirmed that each student taking part has the capacity and reactions required. Spotters on low ropes elements need to be in a position to support the upper part of the participant's body (specifically the head) to minimise potential impact with the ground. Specific techniques for spotting must be instructed to the supervisory team prior to commencement of the activity by a Qualified Supervisor.

Spotters must actively watch the participant in order to anticipate their movements.

Stable floor cushioning or mats/crash mats specifically designed for the purpose should be used for landing areas where participants are more than 1 metre above the ground. Any cushioning provided must have an even surface, with no gaps between the mats.

Bouldering

Individuals involved in the spotting of participants who are bouldering or traversing require a thorough briefing, demonstration of the procedures to follow, and a high level of supervision.

When climbing with any part of the body above 2.4 metres, all participants must be on a top rope belay, except where lead climbing is being taught. Refer to [Appendix E: Abseiling and Climbing](#).

Participants can only solo or traverse unroped if all parts of their body remain below a clearly established line no greater than 2.4 metres above the ground. On artificial settings this is clearly marked line that has been painted or taped 2.4 metres above the floor. Unroped activities **must not** be conducted unless the facility has this line in place, or, in natural settings, this line has been established.

The floor, walls and area within 2.4 metres of any part of the climb should be free and clear of sharp hazards (see more information on cushioning in Section 6 Equipment).

High ropes courses

Before using high ropes courses where safety harnesses will be used, students must be trained, monitored as they practise how to clip on and lock carabiners to harnesses, and taught how to belay (if applicable).

Climbers participating on a high ropes course must be attached to the belay line with:

- a direct tie-in, using a follow through figure eight knot
- a direct tie-in plus a single carabiner that has an isolation loop (for example, an alpine butterfly) and/or
- two reversed and opposed locking carabiners.

A Qualified Supervisor must complete a visual check of the belay and personal safety checks before allowing each student to proceed.

Participants on a high ropes course must be on a top belay system and adequately supervised at all times.

In the case of a static belay position, the belayer must be attached to the belay system, which is anchored to the floor or a wall. Back-up belayers do not have to be anchored.

Mobile or dynamic belay systems require the belayer to be attached to the belay system.

The back-up belayer is permitted to move independently to allow freedom of movement and flexibility of position (whichever is considered to be safer in the circumstances). There must be a minimum of three hands on the brake side of the belay at all times.

6. EQUIPMENT

All equipment must be fully inspected by the Qualified Supervisor and deemed safe to use, prior to and at critical times throughout the activity, and immediately after use.

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

A transition belay system and adequate supervision on each platform between high elements is essential for the safety of participants who are between element safety belays.

Manufacturers specifications, instructions and recommendations must be adhered to.

Annual safety inspections of ropes courses must be conducted by a competent person who is not involved in the day-to-day operations. This can be undertaken by a qualified rigger, independent industry expert or independent organisation that is able to inspect the whole facility (as required by the relevant Australian Standard - AS 2316.1.1:2021, or successor).

Refer to [Appendix E: Abseiling and Climbing](#) for mandated auto-belay inspection requirements.

Ropes, tapes, cords, harnesses, helmets, hardware and slacklines must be retired after five years (unless the manufacturer specifies the service life). Equipment **must not** be used if there is any doubt about its integrity.

The Qualified Supervisor in consultation with the Department Teacher-in-charge, must be satisfied with the inspections and maintenance of all relevant equipment. Regular maintenance checks of all equipment must be conducted, logged and records maintained. Facility and equipment maintenance logbooks include:

- item identification system
- manufacturers specification for equipment usage
- date of purchase and/or date of manufacture
- date of initial use and proposed date of retirement
- frequency and type of use
- copies of maintenance inspection and/or construction conformance paperwork and date and details of maintenance.

Any temporary elements must be erected by qualified personnel who are competent in the erection and supervision of challenge ropes courses.

Steel carabiners are recommended for use on ropes courses.

Each participant must wear:

- appropriate clothing
- a correctly fitting harness and hardware (i.e. other specialist equipment specific to the activity)
- a hard-shell climbing or roping helmet (with a secure chinstrap), that meets the relevant Australian Standard for all high ropes courses
- gloves of an appropriate size worn on each hand while handling moving rope (exemptions apply where *Slow Go* pulleys are used)
- fully enclosed footwear
- other specialist equipment specific to the activity that meets Australian Standards.

It is recommended that for low ropes courses students are fitted with helmets.

Emergency and rescue equipment (for example, rope slings, spare carabiners, access ladder, etc.) must be readily accessible.

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

Cushioning

It is recommended where a participant's feet are in excess of one (1) metre from safe ground, that cushioning or crash mats are provided and positioned so that there is no possibility of contacting the hard floor surface if a participant falls. This is part of a multi-barrier approach and other risk management options such as pulleys should also be considered.

Stable floor cushioning or mats/crash mats specifically designed for the purpose are used for landing areas when bouldering and/or traversing, and where spotters are not used.

Any cushioning provided must have an even surface, with no gaps between the mats or the wall.

Guidance

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

A broad-spectrum, water-resistant sunscreen should be applied as per manufacturer's recommendations. Drinking water should be available at all times.

7. THE SUPERVISORY TEAM

Refer to [Appendix A: General Requirements](#) for further requirements.

8. EXTERNAL PROVIDERS

The Department Teacher-in-charge must ensure that when booking an external provider, they are made aware of the documentation that they need to provide, or that must be sighted.

External providers must follow all mandated requirements in the Recreation and Outdoor Education Activities for Public Schools Procedures will be asked to supply copies of certain documentation, and/or make them available for the Department Teacher-in-charge to sight. External providers should familiarise themselves with [Appendix A: General Requirements](#) and [Appendix D: External Provider Checklist](#).

9. MINIMUM QUALIFICATIONS AND COMPETENCIES

The Department Teacher-in-charge must confirm that the supervisory team members possess skills in ropes courses and bouldering activities and have recent and relevant experience, knowledge and skills to identify and manage potential risks at all stages during activities.

Refer to *Appendix A: General Requirements* for mandated:

- first aid qualifications
- evidence requirements for all qualifications of competencies.

At all times, ropes courses and bouldering activities must be supervised by qualified and inducted personnel who are experienced and competent in the erection and supervision of the bouldering course, climbing or ropes apparatus.

At least one member of the supervisory team must be able to affect a support and rescue for all climbing activities offered within the program, including where harness hang syndrome is suspected.

Minimum qualifications and/or formal training requirements (where any part of a participant's body is **more than 2.4 metres from the ground**, the minimum qualification/s apply):

The Qualified Supervisor must have:	AND proof of experience:
<p>The Qualified Supervisor must hold a current, activity-specific qualification and/or have attained current, activity-specific competencies through a recognised tertiary institution or Registered Training Organisation (RTO) including:</p> <ul style="list-style-type: none"> • relevant units in Challenge Ropes Courses or Bouldering completed as a part of a Certificate III (or higher) in Outdoor Recreation or Leadership; or • an equivalent qualification, as recognised by the Director General. 	<ul style="list-style-type: none"> • Relevant, logged evidence that confirms that they have regularly updated their in-service training on the supervision of ropes courses.

In an activity where all of a participant's body **remains below 2.4 metres from the ground**, recent and relevant logged experience must be demonstrated.

Skills and experience

The Department Teacher-in-charge must confirm that the supervisory team:

- has experience in the activity at the level being offered to students
- has the relevant qualifications
- has current First Aid and CPR qualifications
- understands the emergency responses and supervision responsibilities.

Supervisors should have relevant, logged evidence that confirms that they have regularly updated their in-service training on the supervision of ropes courses.

For challenge ropes courses, each Qualified Supervisor must have:

- recent logged experience in single-rope techniques and rescue training (including individual and partner belay systems and self-rescues)
- familiarity with the hazards of ropes courses
- the understandings and skills required to identify and manage potential risks at any stage of the activity
- competency in dealing with emergencies that are consistent with the type of activity and equipment being used
- working knowledge in the selection, use, maintenance and storage of course equipment.

All Qualified Supervisors must have training and experience in checking belay systems.

The logged experience must be validated by a qualified individual. A qualified individual is a person who can meet the Qualified Supervisor requirements in this activity specific document. In the case of site-specific competencies, the qualified individual would refer to the provider administering the competency to school staff.

Guidance

It is recommended that supervisors maintain evidence of their currency and experience through the use of a logbook.

10. MINIMUM LEVELS OF SUPERVISION

Supervisory requirements must take into consideration the:

- purpose of the activity
- age, experience and capacity of each student
- students' medical conditions or disabilities
- supervisors' competence and experience
- competence of supervisors at the venue
- type of activity to be undertaken
- nature of the environment
- location of the activity.

Greater supervision must be provided:

- for less able students who are participating in activities
- if the design and position of the course requires higher supervision levels
- where difficult elements are included on the course.

LOW ROPES COURSES AND BOULDERING

Year K - 4

There must be two supervisors at all times:

- one Qualified Supervisor for every 24 students or part thereof and
- one supervisor for every eight students or part thereof (including the Qualified Supervisor).

LOW ROPES COURSES, HIGH ROPES COURSES AND BOULDERING

Participation in high ropes courses is **not** permitted for students in Kindergarten - Year 4.

Year 5 and Year 6

There must be two supervisors at all times:

- one qualified supervisor for every 24 students or part thereof and
- one supervisor for every 16 students or part thereof (including the Qualified Supervisor).

Year 7 -12

There must be one supervisor at all times:

- one Qualified Supervisor for every 24 students or part thereof and
- one supervisor for every 16 students or part thereof (including the Qualified Supervisor).

Students must be within the Qualified Supervisor's line of sight at all times. If an activity goes outside of line of sight, a second supervisor is required to maintain adequate supervision.

The following table illustrates the minimum 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.

<i>Year</i>	<i>Activity</i>	<i>Number of Students</i>	<i>Qualified Supervisor</i>	<i>Experienced Assistant Supervisor</i>	<i>Total Supervisory team</i>
K - 4	Low Ropes Courses and Bouldering	1 - 16	1	1	2
		17 - 24	1	2	3
K - 4	High Ropes Courses	Not permitted			
5 - 6	Low Ropes Course, High Ropes Course & Bouldering	1 - 24	1	1	2
		25 - 32	2	0	2
7 - 12	Low Ropes Course, High Ropes Course & Bouldering	1 - 16	1	0	1
		17 - 24	1	1	2
		25 - 32	2	0	2

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.

The appropriate number of supervisors directly monitoring the students must be maintained at all times.

The supervisory team should have a clear view of all students at all times.

Supervisors conduct safety checks on all participants and equipment prior to the commencement of, and during the transition between various elements of the course.

Students not directly involved with the ropes courses must be supervised. The area underneath the course must be kept free from bystanders.

Spotters must watch participants at all times whilst on the course, in order to anticipate their moves and be in a position to support the upper part of the participants' body (specifically the head) in order to minimise potential impact with the ground.

Individuals involved in the spotting of participants who are bouldering or traversing should be provided with a specific briefing, demonstration of the procedures to follow, and a high level of supervision.

Belayers must be directly supervised when lowering participants.

A buddy or team system is established so that students can check the safety and wellbeing of their partner(s).

Participants who do not display a responsible attitude or behaviour are to be removed from the activity. Alternative activities are provided for students who do not have the capacity to participate.

12. IDENTIFICATION OF PARTICIPANTS

Students and supervisors must be easily identifiable.

A system of identification is determined by the Department Teacher-in-charge and may include:

- the wearing of coloured helmets, armbands or school shirts
- confining students to designated areas not being utilised by other schools or members of the public.

Refer to *Appendix A: General Requirements* for further requirements.

13. COMMUNICATION STRATEGY

Refer to *Appendix A: General Requirements* for further requirements.

14. RISK MANAGEMENT PLAN

Refer to *Appendix A: General Requirements* and *Appendix B: Risk Management Plan* for further requirements.

Risk management plans must include possibility of harness hang syndrome and an appropriate action plan for when harness hang syndrome is suspected.

15. EMERGENCY RESPONSE PLAN

Refer to *Appendix A: General Requirements* and *Appendix C: Emergency Response Plan* for further requirements.

16. BRIEFING STUDENTS AND SUPERVISORS

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

- the educational purpose (learning intentions) and the cooperative nature of the activity
- components of the activity (including skills required)
- standards of behaviour, including roles and responsibilities
- hazard identification and safety requirements
- buddy practices (and lost buddy procedures when applicable)
- physical boundaries marked for the activity
- communication signals to gain attention and request assistance
- emergency and evacuation procedures
- minimal impact principles for that location (see *Leave No Trace* principles).

In addition to the above, the Department Teacher-in-charge must confirm that the supervisory team have been briefed about the following:

- the role and location of supervisors
- maintaining supervision ratios (including of those students not involved in the activity)
- modified/adjusted activity requirements for students with a disability or impairment
- the system for identifying students and supervisors
- student-specific medical requirements
- conditions associated with hypothermia, sunburn and dehydration
- communication strategies that will be used throughout the activity, including designated signals to gain the attention of the whole group, and to identify when emergency assistance is required
- location of first aid kit and emergency/rescue equipment
- appropriate clothing for the activity and weather conditions, including thermal and sun protection
- aspects of the environment and expected weather conditions.

Special information sessions must be arranged for students or staff who were absent from preparatory briefings.

17. INFORMED CONSENT

Refer to *Appendix A: General Requirements* for further requirements.