Climbing Handbook

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Top Rope Climbing at Daradgee

At the Daradgee Environmental Education Centre we encourage accompanying adults to become involved in all activities. By training as a belay you can ensure the optimal student outcomes for the climbing sessions. This includes:

- Developing and applying challenging, new skills.
- Maximising climber participation by operating more climbing stations.
- Helping climbers develop their personal and social capabilities and physical skills through challenge

1. What to expect

Before the session

BOULDERING: Where practical, all climbers (& adults) will participate in a Bouldering session. Bouldering is climbing up to 2.4 metres and does not require a harness and belay. The Bouldering session is an experience where climbing technique is developed and everyone can become familiar with the climbing wall.

THIS HANDBOOK must be read to fulfil your preparatory requirements for the climbing session. Additionally, teachers are required to read relevant CARA's and ensure all climbers have provided written informed consent through the Climbing Permission Letter.

TOP ROPE CLIMBING BELAY TRAINING - The Daradgee instructor will lead a Belay Training Induction. It is your instructor’s job to ensure you are prepared for the session and to oversee all operations in the climbing shed. Our aim is for the belay team to be confident and competent with their job. Please clarify any concerns with the instructor as required. The following procedures must be completed by all participants prior to signing off as competent at belay.

- Accessed and read this Climbing Handbook.
- Completion of induction session with demonstrated competency in practical components of belaying as outlined in this handbook.
- Formally, sign off as competent and capable of belaying on the Top Rope Climbing wall.

DRESS REQUIREMENTS: Clothing of appropriate length must be worn - no 'short' shorts or 'short' shirts or tops. Shirts should be tucked in and shoes should be closed in and firm fitting.

During the session

Mobile phones and cameras are NOT to be used when climbing or belaying. Daradgee staff will have belay stations set up. The instructor/s will induct the climbers & adult belays. You will act as 1st belay and lead students as a belay team and support climbers as necessary. Daradgee staff will ensure supervision of new belays until competence is clearly maintained. Assistance will be given to you as required during the session. Ensure you seek assistance when required. If you are not confident in your ability to belay, discuss with the instructor how you will withdraw from the position

After the session

You may be required to help with packing up the equipment. *N.B: You must complete and sign the Belay Training Induction and Top Roping / Faulty Towers register.*
2. Equipment
The care of all climbing equipment is imperative

<table>
<thead>
<tr>
<th>The Swivel eye, Auto lock, Alloy Carabina MUST always be first to lock into black attachment point of harness</th>
<th>The Pirate, Wire Eye Carabina with Auto lock has a spring loaded lockable gate</th>
<th>The Alloy, Screw gate Carabina with spring loaded lockable gate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Your harness/belt attaches to climbing rope using two carabinas. Note the black attachment point</td>
<td>An Anchor Strap attaches the climbing rope to the anchor chain and footing</td>
<td>The Stitch Plate is a friction braking device</td>
</tr>
<tr>
<td>A Double Figure of 8 Knot is used to attach two captive eye carabinas to the climbing rope. 6-10 cm tail end must be visible at all times</td>
<td>The Prusik Knot is tied to the climbing rope and used as a backup friction braking device</td>
<td>A Thumb Knot is used at ends of the climbing rope where the third belay is positioned.</td>
</tr>
</tbody>
</table>

Please keep climbing equipment out of the sand wherever practical.

Climbing equipment must never be mistreated.

Please report any damages of defects immediately
Using Carabinas

There are three different types of carabinas you will use:

1. The Swivel eye, Auto lock, Alloy Carabina is self-locking. It is tied in to the Double Figure of 8 Knot. It MUST always be first to lock into the black attachment point on harness (insert from below).

<table>
<thead>
<tr>
<th>To open</th>
<th>Locked</th>
</tr>
</thead>
<tbody>
<tr>
<td>pull down, twist 90 degrees then push open gate.</td>
<td>Self-locking - It will spring back into locked position.</td>
</tr>
<tr>
<td>Gate is open.</td>
<td></td>
</tr>
</tbody>
</table>

2. The Pirate, Wire Eye Carabina with Auto lock Carabina with spring loaded lockable is attached to the Double Figure of 8 Knot. Insert into the black attachment point from above.

<table>
<thead>
<tr>
<th>Screw to unlock</th>
<th>Screw to lock</th>
<th>Locked</th>
</tr>
</thead>
<tbody>
<tr>
<td>screw until gate can be pushed open - Pirate skull and cross bones can be seen.</td>
<td>screw till finger tight then back off half a turn. This is unlocked NOTE - skull &amp; cross bone</td>
<td>The skull &amp; cross-bones will be unseen when in locked position</td>
</tr>
<tr>
<td>Gate is open.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

3. The Alloy, Screw gate Carabina with spring loaded lockable gate is secured to first and second belays.

<table>
<thead>
<tr>
<th>Screw to unlock</th>
<th>Screw to lock</th>
<th>Locked</th>
</tr>
</thead>
<tbody>
<tr>
<td>screw until gate can be pushed open</td>
<td>screw till finger tight then unscrew half a turn to avoid jamming.</td>
<td></td>
</tr>
<tr>
<td>Gate is open.</td>
<td></td>
<td>Locked</td>
</tr>
</tbody>
</table>

Avoid carabinas coming into contact with sand at all times
Using a Stitch Plate

A stitch plate is a braking device used to create friction on a climbing rope. It operates best when the slots of the plate are at 90 degree angle to the wall and the rope runs in a direct line into and out of the stitch plate and carabina. This ensures smooth operation.

Twisting the stitch plate and rope will increase friction and make ease of operation difficult.

3. Knots

**THUMB KNOT**

This is already done for you. The third belay has an end knot. On the climbers end, the tag end is taped down above the climber’s Double Figure of 8 loop.

**PRUSIK KNOT**

As a beginner belay, you will not be required to tie this knot. This description is for your information only. The Prusik Knot is a braking device used by the 2nd Belay. Leaving the knot a little loose it can be slid up and down the rope. Weight the knot and it will ‘bite’ the rope and lock off.

1. ![Image of Thumb Knot](image1.png)
2. ![Image of Thumb Knot](image2.png)
3. ![Image of Thumb Knot](image3.png)
4. ![Image of Thumb Knot](image4.png)
5. ![Image of Thumb Knot](image5.png)
6. ![Image of Thumb Knot](image6.png)

**A DOUBLE FIGURE OF 8 KNOT**

You will not be required to tie this knot. It is used to attach captive eye carabinas to the climbing rope. It is important that a 6-10 cm tail end is be visible at all times.

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4. Positions and equipment used by the climbing team

<table>
<thead>
<tr>
<th></th>
<th>CLIMBER</th>
<th>1&lt;sup&gt;st&lt;/sup&gt; BELAY</th>
<th>2&lt;sup&gt;nd&lt;/sup&gt; BELAY</th>
<th>3&lt;sup&gt;rd&lt;/sup&gt; BELAY</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Personal Safety Equipment</strong></td>
<td>Helmet Harness</td>
<td>Helmet Harness</td>
<td>Helmet Harness</td>
<td>Helmet Harness (optional)</td>
</tr>
<tr>
<td><strong>Specialised equipment, knots &amp; connections</strong></td>
<td>Carabina x 2</td>
<td>Carabina x 2 Stich plate Anchor Strap</td>
<td>Prusik knot Carabina</td>
<td>End knot</td>
</tr>
</tbody>
</table>
5. How the climbing session runs

- Harness Demo
- Shirts tucked - harnesses and helmets on
- Warm-up
- Equipment Intro
- A.B.C.D.E.F. Safety Check
- Climbing demonstration
- Everyone tie in; climbers & belay teams set up into position
- Climbing time!

A. B. C. D. E. F. Safety Check

The whole climbing team follows the safety check for each new climber.

<table>
<thead>
<tr>
<th></th>
<th>Anchor</th>
<th>Check the anchor strap is secured &amp; straight, not twisted.</th>
</tr>
</thead>
<tbody>
<tr>
<td>B</td>
<td>Belts</td>
<td>Check that the harness is on the waist, in line with top of hips, not twisted and adjusted to fit firmly. Waist/hips and leg straps should fit firmly as well eg. four fingers can slide in but not the whole hand.</td>
</tr>
<tr>
<td>C</td>
<td>Connections</td>
<td>Check all carabinas are locked and orientated in the correct direction - widest end down.</td>
</tr>
<tr>
<td>D</td>
<td>Devices</td>
<td>Draw the rope through the stitch plate to ensure that it is sliding through smoothly. Check that 2nd belay can feed the rope through the Prusik Knot in both directions.</td>
</tr>
<tr>
<td>E</td>
<td>Ends</td>
<td>Ensure end of the rope is secured with a Thumb Knot for the 3rd Belay and taped down on the climbers end.</td>
</tr>
<tr>
<td>F</td>
<td>Fasten Helmets</td>
<td>Ensure helmets are adjusted to fit.</td>
</tr>
</tbody>
</table>

Verbal cues before climbing

All members of the team participate in the verbal cues. The verbal cues signal that the team is focused and ready to do their jobs.

Climber: “READY?” Belay team: “READY”
Climber: “SET?” Belay team: “SET”
Climber: “CLIMB” Belay team: “CLIMB AWAY!”
6. Ascending the wall
As the climber climbs up the course the belay must draw the excess rope from the climber, through the stitch plate. As belay, you must maintain control of the rope at all times, do not allow there to be any excess rope between the climber and belay device at all times.

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
</table>
| **1** | **Guide rope down with left hand whilst right hand pulls up. Keep these ropes running parallel for smooth operation.**  
**THE DEVICE IS NOW OPEN**  
**Holding the device in the open position should NOT be maintained for any longer than absolutely necessary.** |
| **2** | **Move right hand down below horizontal to the stitch plate.**  
**THE DEVICE IS NOW LOCKED OFF** |
| **3** | **Move left hand and firmly hold the rope closely below the stitch plate.**  
**MAINTAIN LOCKED OFF POSITION** |
| **4** | **Move right hand up the rope to meet the left. Both hands will be together in the locked position.** |
| **5** | **Move left hand back to the starting position. Right hand holds rope in the locked position. Repeat these steps.** |

Left handed belay sequence is the same, tell the instructor that you are left handed so your system and team can be set up for a left-handed orientation.
7. Descending the wall

1. Take in all excess rope from the system. **Ensure the rope is locked off** in belay position 3.

2. On the climbers initial climb (at a height of 2.4m) they are required to do a practice descent. Belay (locked off in position 3) should ensure the weight of the climber is supported by the anchor. Belay should not carry or support the weight of the climber with their own body. Descent will begin with the climber bouncing off the wall approximately 4 times while maintaining correct descent posture as follows. Inform the climber they are about to descend and will need to sit in the harness.
   a. "Sit comfortably in the harness, let go of the wall, hold rope at chest height with both hands".
   b. "Place balls of feet flat on wall at approx. waist height and shoulder width apart.
   c. Using even pressure bend both legs and push off the wall, return to above position and continue this evenly for the duration of decent.

3. Belay maintains lock off position, while smoothly releasing rope through both hands and stitch plate in an even, comfortable speed.

4. Following the initial climb the climber does 3 full climbs (to the top or otherwise). On completion, climbers progress to another position, ie. Climber goes to No. 3 Belay at another station. No. 3 moves to No. 2 Belay position. No. 2 Belay attaches into the climber position.

**Supporting the Climber**

Climbers are presented with a variety of challenges. Some may have difficulty with issues around height and personal safety.

While we work to reinforce the quality and integrity of our equipment, our belays play a critical role in supporting climbers' wellbeing.

Climbing to the top of the wall is a goal for most people but it may not always be achievable.

As first belay you are the leader of the team. It is your responsibility to instil correct procedures and safe practices in your team. Please assist students to develop their skills as both belays & climbers.
Helpful tips for a successful climbing session

- Belaying is voluntary – belays need to be competent and confident with the equipment and procedures – if you’re not – don’t do it!

- Avoid stress to back, hips etc. by ensuring the floor anchor takes the weight of the climber

- If any climber or belay is experiencing any pain or discomfort ie. sore hands or back pain, ensure climbers are safe, inform supervisor, review posture and technique.

- Maintain the rope in a locked position as consistently as possible.

- Encourage the climber to stay in control and show confidence.

- Maintain a “smiley face” or “Big W” in the rope between 1st & 2nd Belay and 2nd and 3rd Belay.

- If in doubt, ask the Daradgee instructor.

Climbers need to use basic skills when climbing

- Stand upright and use your legs, don’t hang back on your arms. Get on your tip toes to reach a good hold.

- Plan your climb – identify problems and be prepared to go around them.

- Choose a climb that is best suited to the climber. Some climbers will do better by starting with their class teacher.

- Success breeds success – fear will diminish with every bit of success. Often the most scared, doubtful and apparently least likely, get the most out of climbing.

- As a climber finishes their climb at one station they then move to the end of another climbing team. Engage in the experience; those that challenge themselves, actively participate and work in well with other teams experience the most success.
Dear Parent/Guardian,

The Daradgee EEC is continuing to develop and present unique activities for your students. The existing indoor climbing facility which includes Top Roping and Bouldering now incorporates the new Milk Crate Tower Stack – The Faulty Towers Challenge. Please consider the following:

**Bouldering (all years)** – low level climbing up to 2.4 metres(m). Students attempt paths along the wall under supervision and with a spotter. This is done without personal climbing safety gear.

**Top roping** (year 5+) – climbing the wall’s full height, up to 6m. Students attempt mostly vertical paths under individual adult supervision. Safety harnesses, ropes and belaying equipment are utilized for a supported upward climb and safe lowering to the ground. Any person moving above a height of 2.4m must be wearing appropriate personal safety equipment and on belay.

**The Faulty Towers Challenge** (year 6+) – Teams of approximately 12 students plan, design, build and have two climbers on belay climb atop a milk crate tower stack. This is a two team competitive situation. Safety harnesses, ropes, belaying equipment and helmets are utilized for a supported upward climb and safe lowering to the ground.

Daradgee has in place these facilities, equipment and procedures to ensure safe participation in climbing activities:

- The construction of all structures and materials as well as all safety equipment being used conform to appropriate safety standards, are in good working order and subject to regular inspection.
- Climbing activities are conducted and managed by experienced/qualified staff.
- All DEEC trained belays ie. Visiting teachers, parents and high school students participate in and sign off to a thorough induction process.
- All stages of the activities are continually monitored.
- Risk Management Procedures and Assessments are in place.
- In multi-aged classes and small school situations some younger students (ie. approximately one year below) are permitted to participate in the Top Roping and Faulty Towers Challenge, providing the safety equipment fits appropriately and parents provide informed consent.

Participants need close fitting rubber soled shoes, for example, joggers and appropriate clothing (Shorts and t-shirts). Alternatives may be discussed with DEEC staff.

Bouldering, Top Roping and the Faulty Towers Challenge activities provide a fun, personal challenge and will also help promote team-building skills. We are looking forward to bringing these challenges to our visitors.

Please complete the permission form below and return it to school by the required date.

I understand the activities being conducted by the DEEC and give permission for ________________________________ Full Name of Child here please to participate in Bouldering, Top Roping and/or the Milk Crate Stack.

Name ___________________________ Signed________________________  Date ______________

Parent/Guardian
Thank you for reading this Climbing Handbook