



VERTICAL SKILLS

Competencies

- 1.1 I know the safety rules for climbing on rocks, trees, fences and man-made structures.
- 1.2 I have been to a jungle gym playground and know how to play safely and cooperatively with others.



VERTICAL SKILLS

Competencies

- 2.1 I have been climbing on an artificial wall or natural rock formation.
- 2.2 I know the safety rules for being at the top of or the bottom of a cliff face.
- 2.3 I can properly put on a climbing helmet.
- 2.4 I can identify and name the parts of a carabiner.





VERTICAL SKILLS Competencies

- 3.1 I have correctly tied a figure-8 follow-through knot.
- 3.2 I know when and where I should have a climbing helmet on.
- 3.3 I know the safety rules for climbing/rappelling at an artificial climbing wall.
- 3.4 I know how to care for, handle and store a climbing rope, harness, helmet and climbing webbing.
- 3.5 I know the basic outdoor Leave No Trace rules for an outdoor climbing site.
- 3.6 I have completed a climb to the top of an artificial climbing wall.
- 3.7 I can put on and adjust a climbing harness.
- 3.8 I know the safety rules for participating on an aerial/ropes challenge course.
- 3.9 I know the difference between: 1. single-pitch, 2. multi-pitch, 3. top-rope, 4. lead climbing 5. seconding climbing methods.





VERTICAL SKILLS Competencies

- 4.1 I have tied a climbing rope into my climbing harness.
- 4.2 I know the main safety rules for climbing or rappelling at an outdoor natural climbing site.
- 4.3 I know how to perform an equipment safety check of myself, my climbing partner and anchor and belay systems.
- 4.4 I know the communication calls and script to follow between a climber and belayer.
- 4.5 I have coiled a climbing rope (any method).
- 4.6 I know what makes a safe and unsafe climbing site.
- 4.7 I can belay using an auto-locking belay device.
- 4.8 I can name and identify the use of three types of locking carabiners and three types of non-locking carabiners.





VERTICAL SKILLS Competencies

- 5.1 I can tie these knots: water (tape), double fisherman's, Prusik, clove hitch and bowline.
- 5.2 I can coil a climbing rope using a butterfly and a mountaineer method.
- 5.3 I can perform a safety inspection of a climbing helmet, harness, rope and carabiners.
- 5.4 I can belay using a friction, (non-moving part) belay device such as a tube or auto-blocking device.
- 5.5 I have attached a friction (non-moving part) rappel device to a rope and harness and used the device to rappel.
- 5.6 I can lower a climber on a top rope down to the ground.
- 5.7 I have constructed and climbed in a "Swiss seat" improvised climbing harness made with tubular or tape webbing.
- 5.8 I know the safety rules for "bouldering" climbing.
- 5.9 I can set and use passive and natural climbing protection to build both top and bottom climbing pitch anchor point systems.
- 5.10 I know the climbing-specific principles of Leave No Trace.
- 5.11 I have set up a 3:1 (or greater) rope pulley system.
- 5.12 I understand the concepts, principles, physics and consequences of shock loading in climbing.





VERTICAL SKILLS Competencies

- 6.1 I have tied and used a Munter hitch knot (also known as an Italian hitch) as a belay method.
- 6.2 I have constructed and used an improvised Parisian Baudrier Chest Harness.
- 6.3 I can maintain the correct foot, body and hand positioning for rappelling.
- 6.4 I know the Yosemite Decimal climbing grading system and how to use it.
- 6.5 I have belayed a rappeller from above a rappel site.
- 6.6 I have set up climbing anchor systems using active protection.
- 6.7 I know how to assess and use in-place climbing bolt anchors and systems.
- 6.8 I have completed a mock lead climb on an artificial climbing wall.
- 6.9 I have set up and used a tube, auto-locking, and auto-blocking belay device.
- 6.10 I know the different types of climbing webbing/ slings and their uses.
- 6.11 I understand the concept, principle, physics and consequences of fall factor in climbing.
- 6.12 I know how to identify what is an approved rope for climbing and what sizes of rope are available.





VERTICAL SKILLS

Competencies

- 7.1 I have completed a climbing route over a 30 degree incline, either on an ice climb, glacier or frozen snow field.
- 7.2 I have constructed and used a highline (also called Tyrolean Travers or Aerial Runway).
- 7.3 I have been caving or on a via ferrata.
- 7.4 I have completed a single pitch mock lead climb on a natural (not constructed) climbing site.
- 7.5 I have used utility cord and a friction knot/system as protection on a rappel.
- 7.6 I know the difference between a dynamic and static climbing rope, and where and when these rope types are used.



VERTICAL SKILLS

Competencies

- 8.1 I have climbed at a natural (not constructed) top rope climbing site where I set up all the anchor and belay systems for the routes I climbed or rappelled on.
- 8.2 I have seconded on a multi pitch rock climb of grade 5.7 or higher.
- 8.3 I have seconded on an ice climb of W3 or higher.
- 8.4 I have assisted with setting up a top rope climbing site and assisted with managing beginner climbers learning to climb at that site.
- 8.5 I have assisted with setting up a rappel site with a belay from above, and assisted with managing beginners learning to rappel at that site.
- 8.6 I have taught younger Scouts to tie these seven knots: follow-through figure-8, double fisherman's, water knot, bowline, Munter hitch, Prusik and clove hitch.





VERTICAL SKILLS Competencies

- 9.1 I have set up a top rope climbing site and managed/instructed beginner climbers learning to climb at that site.
- 9.2 I have set up a rappel site with a belay from above and managed/instructed beginners learning to rappel at that site.
- 9.3 I have completed a lead climb on one of the following multi pitch climbs:
 1. rock climb grade 5.7 or above
 2. ice climb grade WI3 or above
 3. mountain alpine climb grade III or above
 4. caving that requires climbing ropes and harness
- 9.4 I have set up and used a Munter mule combination hitch to facilitate the rescue of beginners learning to rappel.





VERTICAL SKILLS

Requirements

1.1 I know the safety rules for climbing on rocks, trees, fences and man-made structures.

Scouts know to always climb with an adult's permission and an adult present.
Scouts do not climb on fences.
Scouts climb in playgrounds on play equipment—not on inappropriate structures.
Scouts get permission from an adult before climbing trees.

1.2 I have been to a jungle gym playground and know how to play safely and cooperatively with others.

Scouts always take turns and share the equipment.
Scouts do not climb on other people.
Scouts tell adults when they are going to play at the playground.
Scouts do not jump down from high places.





VERTICAL SKILLS Requirements

2.1 I have been climbing on an artificial wall or natural rock formation.

Scouts have tried either climbing in the context of a supervised "bouldering" or a top rope climbing lesson.

2.2 I know the safety rules for being at the top of or the bottom of a cliff face.

Scouts do not play or get close to a cliff edge unless an adult is present.
Scouts do not look over a climbing cliff edge unless tied in with a climbing rope.

Scouts do not play, rest or stand below a cliff face where rocks, dirt and other things could fall down.

Scouts always have a climbing helmet on when at the bottom of a climbing site.

Scouts never push or throw anything over a cliff edge.

2.3 I can properly put on a climbing helmet.

Scouts can properly adjust their helmets so that they fit snugly to stay central on the head and not slide forward or back easily.

The chin strap and attachment straps to the helmet are snug, but do not interfere with breathing or talking.

2.4 I can identify and name the parts of a carabiner.

Scouts can identify the gate, spine, nose, hinge, latch, basket (where the rope sits), crotch (where the attachment connects), barrel and spring on a carabiner.





VERTICAL SKILLS

Requirements

(cont'd on next page)

3.1 I have correctly tied a figure-8 follow-through knot.

Scouts can tie the knot to a mastery level with a firm feel to the knot, symmetry with no twists or crossovers in the knot, with a 5–10 cm tail at the end of the knot.

3.2 I know when and where I should have a climbing helmet on.

Scouts know a helmet is to be worn for any climbing activity where a fall or loss of body control could result in impact to the head, or when a person or an object could fall onto a climber, belayer or spectator.

3.3 I know the safety rules for climbing/rappelling on an artificial climbing wall.

Scouts can describe the safety rules for climbing/rappelling on an artificial wall, including supervision by a qualified instructor; the importance of climbers, belayers and spectators wearing helmets; careful inspection of knots, harnesses and belays before beginning to climb; prohibition of horseplay in the climbing vicinity; and the importance of being belayed when climbing.

3.4 I know how to care for, handle and store a climbing rope, harness, helmet and climbing webbing.

Scouts can describe the care and handling of climbing equipment, including storage in a clean dry place out of direct sunlight; eliminating exposure to ANY petroleum products or ANY chemicals (such as battery acid); preventing the growth of mold on equipment; inspection by sight and feel of all equipment at every use, looking for damage, wear, discoloration and incompleteness; preventing participants from standing on, throwing down or dropping equipment; and ensuring the equipment is only used for its intended purpose.





VERTICAL SKILLS

Requirements (cont'd)

3.5 I know the basic outdoor Leave No Trace rules for an outdoor climbing site.

Scouts can list the seven principles of Leave No Trace.
Scouts do not disturb any flora or fauna to set up a climb or use a climbing site.

3.6 I have completed a climb to the top of an artificial climbing wall.

Scouts (using a top rope climbing method) can climb to the top of a climbing wall under their own power.

3.7 I can put on and adjust a climbing harness.

Scouts can put a harness on with the leg loops and waist belt adjusted properly and securely tightened.

3.8 I know the safety rules for participating on an aerial/ropes challenge course.

Scouts climb under supervision and with permission from the challenge course instructor.
Scouts follow the challenge course instructors' directions and the safety rules for the site.
Scouts always wear climbing helmets.
Scouts are supportive and do not distract others. Scouts respect and look after the equipment.

3.9 I know the difference between:
a. single-pitch,
b. multi-pitch,
c. top-rope,
d. lead climbing
e. seconding climbing methods.

Scouts can describe what is happening with the rope, belayer and the climber in each of these five climbing methods:
a. single-pitch,
b. multi-pitch,
c. top-rope,
d. lead climbing
e. seconding climbing methods.





VERTICAL SKILLS

Requirements

(cont'd on next page)

4.1 I have tied a climbing rope into my climbing harness.

Scouts can tie a climbing rope into their harnesses using any appropriate knot.

The harness tie-in must be accomplished at a masterly level with the knot tied correctly into the proper location on the harness and the harness adjusted properly.

4.2 I know the main safety rules for climbing or rappelling at an outdoor natural climbing site.

Scouts can demonstrate where and when to wear a helmet.

Scouts can demonstrate when to be tied in with a rope, anchored and belayed.

Scouts can demonstrate when it is safe to begin to climb and rappel.

Scouts can demonstrate where to be situated to safely observe climbers.

4.3 I know how (just before starting a climb) to perform an equipment safety check of myself, my climbing partner, and anchor and belay systems.

Scouts can perform a head-to-toe check of clothing and attire (no loose clothing, sharp objects in pockets, untied shoes, jewelry and helmet/harness is properly secured).

Scouts can perform a squeeze and visual check of all knots and carabiners before use.

Scouts can check that there are redundant, equalized and properly loaded anchor systems.

Scouts can establish there is a proper connection/anchoring and loading of belay devices.

4.4 I know the communication calls and script to follow between a climber and belayer.

Scouts can explain when and why the climbing communication script is required, including what specific words to say for the belayer and climber before climbing and when the climb is over; what to say if a rock falls; and how, why and what to ask for to change the rope tension during a climb.





VERTICAL SKILLS

Requirements (cont'd)

4.5 I have coiled a climbing rope (any method).

Scouts can coil at a beginner level.

The coil should be sufficient to be carried in a backpack and can be uncoiled in a short time freely without entanglements or knots.

4.6 I know what makes a safe and unsafe climbing site.

Scouts can recognize and describe the hazards posed by loose rock, soil and vegetation.

Scouts can describe the hazards of flora and fauna: poisonous/thorny plants, tree sap, bees and ants, poisonous snakes, dead/rotted trees, hanging dead trees/branches, animals defending territory or that may kick down rocks.

Scouts can recognize and describe man-made hazards: power lines, telephone/communication cables, pipes and iron works, litter (such as glass and tin cans), standing water/fluid spills, other climbers above.

Scouts can recognize and describe environmental hazards: lighting, rain/snow, waterfalls/flash floods and avalanches.

4.7 I can belay using an auto-locking belay device.
(Note: This is not a tube or auto-blocking type device.)

The Scout belayer can provide a continuous belay to a climber from the start to the finish (when the climber unties from the rope).

The knowledge and skill of attaching and detaching the belay device to the rope is not required.

4.8 I can name and identify the use of three types of locking carabiners and three types of non-locking carabiners.

Scouts can describe the use of and the advantages and limitations of the types of carabiners. (i.e. screw gate steel carabiners are good for setting up top-rope anchors, but they are too heavy to take along on multi-pitch climbing.)

Locking could include: auto-locking, screw gate pear (Munter hitch), screw gate D steel, etc.

Non-locking could include: aluminum oval, bent gate, wire gate, aluminum D, etc.





VERTICAL SKILLS

Requirements

(cont'd on next page)

5.1 I can tie these knots: water (tape), double fisherman's, Prusik, clove hitch and bowline.

Scouts can tie the knots to a mastery level with a firm feel to the knot, symmetry with no twists or crossovers in the knot, with a 5–10 cm tail coming out of the knot.

5.2 I can coil a climbing rope using a butterfly and a mountaineer method.

Scouts can tie the coil to a mastery level with consistent coil lengths and a proper whipping or finish.

The coil should be sufficient to be carried in a backpack, slung over one arm and shoulder and over the back and tied off around the body.

The coil must be able to uncoil freely without entanglements or knots and in short order.

The coils must be in order and of constant length and free of any twists.

5.3 I can perform a safety inspection of a climbing helmet, harness, rope and carabiners.

Scouts know what to inspect on each of these items for wear, damage, improper working condition and missing components.

Helmet: all rivets and fasteners secure, all webbing in good condition, the shell is without cracks or defects, all buckles present and working, all size adjustment functions working.

Harness: all webbing in good condition with no cuts, defects or abrasions, all buckles present and in good condition with no cracks, defects or burs, all buckle adjustments working.

Rope: rope has no constrictions or blowouts; no mantle fibers showing through the kern; no abraded, cut or melted kern fibers; dynamic properties are intact; rope is the proper length (usually 60–70 metres); rope is not overly soiled by dirt or foreign contaminants such as oils or chemicals.

Carabiners: all working parts present, gate opens freely without sticking, on a locking gate the barrel works freely, no cracks or defects in the material, no metal burs or sharp edges.





VERTICAL SKILLS

Requirements (cont'd on next page)

5.4 I can belay using a friction, (non-moving part) belay device such as a tube or auto-blocking device.

The Scout belayer can provide a continuous belay to a climber from the start to the finish of the climb when the climber unclimbs from the rope. The knowledge and skill of attaching and detaching the belay device to the rope is not required.

5.5 I have attached a friction (non-moving part) rappel device to a rope and harness and used the device to rappel.

Scouts can properly feed the rope through the rappel device. Correct attachment by carabiner from the device to the harness is made. Proper hand and body position to operate the device is achieved and maintained during the rappel. Tension by the belay safety rope is not required during the rappel, but a minimum of slack should be in the belay rope.

5.6 I can lower a climber on a top rope down to the ground.

Scouts using a belay breaking device can lower a climber at a controlled rate and in a safe fashion. Scouts can use proper verbal climbing commands and procedures before, during and at the end of the rappel.

5.7 I have constructed and climbed in a "Swiss seat" improvised climbing harness made with tubular or tape webbing.

Scouts can correctly size and tie the knots to make a Swiss seat improvised climbing harness. The harness is to be tied to the body with the correct leg loop and waist tightness. A complete top rope climb and lower back down is to be made with the harness on. The Scout climber is to experience full body weight suspended in the harness.





VERTICAL SKILLS

Requirements

(cont'd on next page)

5.8 I know the safety rules for “bouldering” climbing.

Scouts can explain the rules for bouldering: wear a helmet, do not boulder alone or unsupervised, do not climb with feet over waist height, use a partner to spot climbers and have a crash pad in place.

5.9 I can set and use passive and natural climbing protection to build both top and bottom climbing pitch anchor point systems.

Scouts can use rocks, trees and man-made objects to as anchor points. Natural and man-made attachments must be inspected by Scouts for security.

Scouts must use properly mastered and tied knots (bowline, water knot, overhand, full strength tie off, etc.).

Scouts can demonstrate the use of manufactured passive climbing protection: nuts, hexes, stoppers, cams, etc.

Scouts can explain and correctly apply the principles of the anchor building acronym “SARENE-SA” (Solid Anchors, Redundant, Equalized, No Extension, Small Angles).





VERTICAL SKILLS

Requirements (cont'd on next page)

5.10 I know the climbing-specific principles of Leave No Trace. (cont'd on next page)



Scouts in their climbing practice demonstrate the climbing Leave No Trace principles.

Plan Ahead

- Pick a climb that suits the skill level of your group to minimize the possibility of injury and need of rescue.
- Use appropriate equipment thoroughly checked before the climb.
- Find out about permits and practices; some locations do not allow drilling or anchors, or require permits.
- Carpool to minimize overcrowding at the trailhead.

Durable Surfaces

- Ensure the staging area is large enough to accommodate your group; do not forget other groups or users may be also present.
- Use quick draws to reduce wear on existing permanent anchors.
- When bouldering, ensure the ground is durable so spotters or crash pads will not destroy vegetation.
- Removal of rocks or landscaping to make a bouldering problem safe should be avoided.
- Popular climbing routes have established descent trails—use them.
- Do not wrap rope around trees where the friction can destroy the bark. Instead, tie a sling around the tree and run your rope through the sling with a rappel ring or carabiner.

Dispose of Waste Properly

- Pack out worn out or discarded gear (such as old webbing or discarded tape).
- Minimize chalk dust; keep chalk bags closed to prevent spills. Clean chalk spills.
- Human waste is a problem around popular climbing areas. Go to the bathroom on the way to the climb to avoid the problem altogether.





VERTICAL SKILLS

Requirements (cont'd on next page)

5.10 I know the climbing-specific principles of Leave No Trace. (cont'd)



- Urinate well away from the climbing site location; high concentrations of urine at the site make for an unpleasant environment for all.
- Soil is often thin with little vegetative growth in rocky, arid or alpine climbing areas. Pack out all human waste. Create a human waste pack-out kit or use a commercial one; burying waste results in high concentrations of human waste catholes in a small, highly used area.

Leave What You Find

- Use removable climbing protection as much as possible.
- Use fixed protection sparingly; for fixed protection, use earth-coloured webbing and coloured bolt hangers.
- Before placing bolts, check with local land managers; it may not be legal or it may be required to use a hand drill rather than motorized drill.
- If climbing a new route, avoid lichen-covered rock, vegetated cracks and areas that require cleaning.
- Leave the rocks in place rather than force a route that will leave a noticeable path.

Respect Wildlife

- Critical nesting sites are found in cliff faces for many birds; other animals use rock outcrops for shelter.
- Be aware of seasonal rock site closures (mandatory and voluntary).
- Keep alert for animals protecting their homes; change or abandon climbing routes to leave animals their space.
- Be careful placing hands and feet; do not accidentally destroy a nest or get bitten by hidden wildlife and insects.

Be Considerate of Other Visitors

- Consider climbing on weekdays or less-popular times.
- Wear earth-tone clothes to minimize your visual impact while scurrying up a cliff face.
- Minimize noise while waiting to climb or hanging out with your group.
- Give other climbing parties plenty of room and time to climb at their pace, or politely ask if you can pass when it is convenient and safe.





VERTICAL SKILLS

Requirements (cont'd)

5.11 I have set up a 3:1 (or greater) rope pulley system.

Scouts can set up a pulley system that can raise the weight of an adult. The pulley system should be constructed out of equipment specifically engineered for climbing. The system should not be tensioned on a climbing rope beyond the power of one person pulling.

5.12 I understand the concepts, principles, physics and consequences of shock loading in climbing.

Scouts can explain shock loading: when an object in motion is suddenly met with an equal (or greater) and opposite force, the object (climber) in motion is halted very suddenly; the force of that sudden stop is shock loaded.

Scouts can describe the effect shock loading has on climbing equipment and systems.

Scouts can describe the effect shock loading has on a belayer and climber.

Scouts can describe how to avoid or minimize shock loading from happening.





VERTICAL SKILLS

Requirements (cont'd on next page)

6.1 I have tied and used a Munter hitch knot (also called an Italian hitch) as a belay method.

Using a carabiner specially designed for a Munter Hitch knot, Scouts can belay a climber when climbing up and being lowered back down. Scouts can tie a Munter hitch knot correctly and attach the knot to a Munter Hitch carabiner. Scouts can tie off the Munter hitch knot with a Munter mule knot when the hitch is under load.

6.2 I have constructed and used an improvised "Parisian Baudrier" chest harness.

Scouts can tie a Parisian Baudrier chest harness and incorporate it into their seat harness, and use the two harnesses together on a climb. Scouts can explain when a chest harness is required.

6.3 I can maintain the correct foot, body and hand positioning for rappelling.

Scouts can demonstrate the position with feet shoulder-width apart and semi-flat on the climbing face, back straight leaning back from the climbing face, hands in the position as per the rappel device manufacturer's requirements.

6.4 I know the Yosemite Decimal climbing grading system and how to use it.

Scouts can describe the system and how they can use the system to plan a climb. Scouts can state at what grade of Yosemite Decimal climbing system a climbing rope is required to protect themselves during an ascent or descent.





VERTICAL SKILLS

Requirements (cont'd on next page)

6.5 I have belayed a rappeller from above a rappel site.

A Scout belayer seated at the top of a belay site and using a friction device can belay a climber down the rappel, allowing the rappeller to use the friction of the rappel device to control the descent; rather than tension from the belay line, the belay line is only a safety backup.

6.6 I have set up a climbing anchor systems using active protection.

Scouts can demonstrate setting up a top rope anchor or a bottom belay station anchor system that incorporates at least two placements of active climbing protection.

Scouts can explain and correctly apply the principles of the anchor-building acronym "SARENE-SA" when setting anchors: Solid Anchors, Redundant, Equalized, No Extension, Small Angles.

6.7 I know how to assess and use in-place climbing bolt anchors, bolt hangers and fixed permanent rappel and belay stations.

Scouts demonstrate they can visually and physically check bolt anchors by:

- looking for loose rock material around the bolt placement—bolt attached to rock that looks loose or broken, sounds "hollow" when hit with a rock hammer, 30 cm of solid rock on all sides of a bolt is ideal
- checking the bolt and hanger—hanger held tight, no large amount of rust on metal parts, no cracks or bends in metal, nuts are secure
- Bolt and hanger are of modern-era type. Scouts can describe what modern bolt hangers and bolts look like, and what older designs look like.

6.8 I have completed a mock lead climb as the climber on an artificial climbing wall.

The climbing Scout is to be belayed on a top rope belay safety rope.

The climbing Scout is also tied into a second rope belayed from the ground up. This rope is to be clipped into carabiners attached to pre-set protection placements on the climbing route as the climber ascends.

The climbing Scout is to be belayed with the ground up belay in a fashion consistent with a method used as if the Scout was making an actual non-mock lead climb.





VERTICAL SKILLS

Requirements (cont'd)

6.9 I have set up and used a tube, auto-locking and auto-blocking belay device.

Scouts can set up one of each of a tube, auto-locking and auto-blocking belay device, attached to a climbing rope and used during a climb by the Scout belayer.

6.10 I know the different types of climbing webbing/slings and the uses of these.

Scouts can explain the difference between flat and tubular webbing and the different widths and strengths of webbing.
Scouts can explain the differences between nylon, Dyneema and Spectra webbing materials and the advantages and disadvantages of these webbing fabrics.
Scouts can make a self-constructed climbing sling with a water knot.
Scouts can describe what a commercially sewn climbing sling is.

6.11 I understand the concept, principle, physics and consequences of fall factor in climbing.

Scouts can describe what a fall factor is in climbing and the hazards associated.
Scouts can explain how to minimize fall factors.

6.12 I know how to identify what is an approved rope for climbing and what sizes of rope are available.

Scouts can describe a "UIAA" certified climbing rope.
Scouts can describe a standard length of a climbing rope (60–70 metres).
Scouts can describe the size and use of a single climbing rope: 9 to 11 mm diameter for climbing with a single rope, because larger diameter single ropes can take a greater fall and are more resistant to wear and abrasion, but large ropes are heavier.
Smaller diameter ropes are lighter and better for multi-pitch longer climbing.
8–9 mm diameter ropes offer a full rope length for rappelling, produce less impact force in a fall and offer less chance of both ropes being cut in a rock fall.





VERTICAL SKILLS Requirements

7.1 I have completed a climbing route over a 30 degree incline, either on an ice climb, glacier or frozen snow field.

The completed climb can be a top rope, second or lead climb and is to be a climb of a minimum of a half a rope length.

7.2 I have constructed and used a highline (also called Tyrolean Travers or Aerial Runway).

The construction is to be out of engineered purpose-built climbing equipment.
The weight of one person must be moved from one side of the highline to another.

7.3 I have been caving or on a via ferrata.

Notes: Via ferrata routes are offered by commercial companies and can be found in both the east and west of Canada.
Nationally, caving is generally controlled by a small number of caving clubs. It is best for Scouts to contact one of these clubs to obtain assistance for this requirement.
There are caving clubs in both the east and west of Canada.

7.4 I have completed a single pitch mock lead climb on a natural (not constructed) climbing site.

The climbing Scout is belayed on a top rope belay safety rope.
The climbing Scout is also tied into a second rope belayed from the ground up; this rope is to be clipped into carabiners attached to pre-set protection placements on the climbing route.
The climbing Scout is to be belayed with a ground up belay in a fashion consistent with a method used as if the Scout was making an actual non-mock lead climb.

7.5 I have used utility cord and a friction knot/system as protection on a rappel.

Scouts demonstrate the use of a Prusik knot or other suitable friction knot that attaches the climber to the rappel rope as a redundant back up in case of rappel device failure/malfunction or loss of control by the rappeller.

7.6 I know the difference between a dynamic and static climbing rope, and where and when these rope types are used.

Scouts can describe the climbing activities for which dynamic and static climbing ropes are suitable.
Scouts can describe the functional differences of dynamic and static climbing rope.





VERTICAL SKILLS Requirements

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| 8.1 | I have climbed at a natural (not constructed) top rope climbing site where I set up all the anchor and belay systems for the routes I have climbed or rappelled on. | Scouts can set up anchor and belay systems to the satisfaction of a qualified climbing instructor before use. |
| 8.2 | I have seconded on a multi-pitch rock climb of grade 5.7 or higher. | Scouts can follow a lead climber on a route and clean all the protection from the route. |
| 8.3 | I have seconded on an ice climb of W3 or higher. | Scouts can follow a lead climber on a route and clean all the protection from the route. |
| 8.4 | I have assisted with setting up a top rope climbing site and assisted with managing beginner climbers learning to climb at that site. | Scouts (under the supervision of a qualified climbing instructor) can help to facilitate the technical set up and teaching of beginner top rope climbers. |
| 8.5 | I have assisted with setting up a rappel site with a belay from above, and assisted with managing beginners learning to rappel at that site. | Scouts (under the supervision of a qualified climbing instructor) can help to facilitate the technical set up and teaching of a beginner-level rappel site. |
| 8.6 | I have taught younger Scouts to tie these seven knots: follow-through figure-eight, double fisherman's, water knot, bowline, Munter hitch, Prusik and clove hitch. | Scouts are to teach these seven knots to a beginner level only. The knots are not to be used for climbing or rappelling activities. |





VERTICAL SKILLS Requirements



9.1 I have set up a top rope climbing site and managed/instructed beginner climbers learning to climb at that site.

Scouts must have achieved the status of a qualified top rope climbing instructor to offer this service.
Scouts must work under the direct supervision of a qualified climbing instructor with five or more years of climbing instruction experience.

9.2 I have set up a rappel site with a belay from above the rappeller and managed/instructed beginners learning to rappel at that site.

Scouts must have achieved the status of a qualified top rope climbing instructor to offer this service.
Scouts must work under the direct supervision of a qualified climbing instructor with five or more years of climbing instruction experience.

9.3 I have completed a lead climb on one of the following multi pitch climbs:

1. rock climb grade 5.7 or above
2. ice climb grade WI3 or above
3. mountain alpine climb grade III or above
4. caving that requires climbing ropes and harness

Scouts can complete a lead climb under the direct supervision of a qualified climbing instructor with five or more years of experience.

9.4 I have set up and used a Munter mule combination hitch to facilitate the rescue of beginners learning to rappel.

Scouts can conduct a rescue scenario where a rappeller is freed from the rappelling rope and the belay rope, and the Scout facilitator lowers the rappelling Scout down to the ground on a third backup safety rope with a Munter hitch friction knot.
Scouts can complete this rescue under the direct supervision of a qualified climbing instructor with five or more years of experience.

OUTDOOR ADVENTURE SKILLS