



KITSAP MOUNTAINEERS

**BASIC CLIMBING
COURSE**

Class 4 and Field Trips 4 & 5

BASIC CLIMBING - CLASS #4

ROCK CLIMBING

Class #4 Topics
Rock Climbing Process
Rock Climbing Techniques
Anchors
Field Trip Leader Q & A (Field Trip 4)
Assigned Reading (complete prior to Class #4)
<u>Assigned Reading:</u> Freedom Of The Hills Subject Alpine Rock Climbing.....Ch 12 <i>Basic Climbing Course Manual</i> All Class #4 Material
<i>Additional Resources</i> Find a good book on stretching exercises—it is helpful to loosen up before rock climbing.

ROPED CLIMBING OVERVIEW

Roped climbing involves the leader and follower(s) attached to a rope for protection as they ascend and descend, so that in the event of a fall the rope can be used to catch the falling climber.

In basic rock climbing, the leader is tied into one end of a rope and the follower (second) into the other end. The follower may also attach to a “ground anchor” and will prepare to belay the leader by feeding the rope through his/her belay device. When the follower (belayer) is ready (follower yells: “BELAY ON”), the leader ascends a section of rock (leader: “CLIMBING”, follower: “CLIMB”) while placing protection gear and connecting the climbing rope to the protection as he/she climbs upward. In event of a fall (leader: “FALLING!”), the belayer stops the fall by “braking” the rope at the belay device, and tightening the rope through the protections.

When the leader has reached the top of the section (pitch), the leader sets up an anchor and attaches him/her. The leader tells the follower to take him/her off belay (leader: “OFF BELAY”). When the follower takes the belay off (follower: “BELAY OFF”), the leader brings up the slack in the rope. When the rope is taut to the follower (follower: “THAT’S ME”), the leader feeds the rope through his/her belay device and notifies the follower that he/she is being belayed (leader: “BELAY ON”). The follower detaches him/herself from the anchor and disassembles the anchor. While belayed from above, the follower ascends upward (follower: “CLIMBING”, leader: “CLIMB”) following the route taken by the leader removing the protections placed by the leader on the way. When the follower reaches top of the pitch he/she attaches to the anchor (follower: “OFF BELAY”) and have the leader take him/her off belay (leader: “BELAY OFF”).

The process is repeated for next pitch. Be able to verbalize the correct climbing signals.

ROCK CLIMBING

LEARNING TO ROCK CLIMB

To become a good climber you do not need great physical strength or superior coordination. These help, but far more important are interest and will supported by lots of energy. Nor is learning-rate a reliable indication of one's future prospects.

Practice Climbing:

You can learn much on small rocks, and even experts may spend an entire day practicing on a 20-foot boulder. [Study the information provided] on knots, belaying and climbing. Belaying means protecting your partner with the rope, and doing it right means the difference between the rope being an agent of salvation for a falling climber and one of destruction for the entire party. So before attempting the actual climbing techniques, be sure you know how to tie yourself to the rope and that your belayer can protect you. Before starting, test the belay by practicing paying out slack, taking tension, and catching a fall. Having taken these precautions, climb up using the techniques you have learned. If it gets difficult, don't give up. You will never know how much you can do until you extend yourself.

Seconding Multi-Pitch Climbs:

After learning and practicing the techniques of belaying and climbing, you are ready to apply them on an extended route. You must have a reliable, competent leader, and you must understand belaying and have had sufficient practice so that doing it properly is automatic. Ultimately, the team's lives are in the belayer's hands.

On an extended climb, the party moves one at a time between ledges which are used for belay stances. The area between belay stances is a pitch, or lead. While you belay, the first person climbs, placing protection as needed, until ascending to the end of the pitch (~100-200 ft), when the leader will stop on a ledge, construct and attach to an anchor, and then belay you as you follow the pitch. When you arrive at the ledge, the process is repeated until the party reaches the top. All members of the party should be securely anchored whenever they are not climbing on belay.

Learn From The Leader:

Watch how experienced climbers (e.g. leaders) climb. Observe how they manages difficulties; their upright, relaxed body position, and rhythmic movements. Note how they analyze the problem ahead from a comfortable stance and then moves decisively through the difficult terrain, to the next resting place.

Additionally, you should observe the ways in which leaders protect themselves. When you go up second, and clean the pitch by removing the protection the leader has placed, note how cracks are selected, how leaders extend slings to lessen rope drag, and how natural protection, such as rocks horns, chock stones and vegetation are used. By watching a lead climber, you can learn much. But remember that every leader has subtle bits of knowledge which you can never possess through mere observation. It is dangerous to jump to the conclusion that you are capable of leading what you can follow. It takes time to develop the judgment and self control needed to safely lead difficult routes.

WHAT TO EXPECT ON A ROCK CLIMB

As a student taking this class the assumption is that you have never been on a Rock Climb. The intent here is to explain something about what you can expect on your first rock climb. This will be where you will use a collection of skills you learned and practiced on several field trips: knots, belaying, rappelling, and rock climbing techniques.

Pre-Climb:

After you sign up for your rock climb the climb leader normally emails info about the climb. The leader will cover the specifics of the trip, what the route will be, what equipment you are expected to bring, the climb schedule, and possible weather considerations if any. For the most part rock climbs are one day affairs from the trailhead; at times it's a long day depending on the peak and how the climb goes. If the peak is some distance from the Kitsap area you may travel to the trailhead area the day before and camp overnight in order to get an early start. If the rock climb is to be a pack-in overnight, there will of course be a discussion of who will bring tents, stoves and other group gear. You are expected to have done some preparation prior to the pre-climb and read some of the available information on routes and approaches. Often these logistics will be handled through email as well. If you have questions, ask them. There are no dumb questions. Be honest with the climb leader about your experience level. Always be prepared.

By the time you meet at the trailhead, you should have the following general information:

1. Climb route and pertinent details.
2. Scheduled meeting time and specific location at the trailhead.
3. Carpool meeting times and location.
4. Required equipment for the climb.

The Trailhead:

Be on time and be ready. The climb leader will check everybody out and give last minute instructions. You will be carrying a rope, so if you show up with 65 pounds of 10 essential systems in your day pack, you will end up with all that plus a 9 pound rope. So plan your equipment/food/clothing intelligently because you will carry it.

The Approach:

Don't let the term rock climb create any false impressions. The approach hike into a rock climb will include some distance on trails, some scrambling off trail, and sometimes crossing or climbing snow fields. Depending on current conditions the leader may tell you to bring crampons, ice axe, and snow shoes. Always expect to take your HELMET. Also, wear good boots. Rocky trails, scree/talus slopes and scrambling third class rocks and boulders require rugged footwear to protect your feet. The approach ends when you reach the area where you put on your harness and rope up for the climb.

Terminology:

There are lots of different terms and names used in rock climbing. Most apply to various techniques and equipment items. The belay terminology you have already learned and the knots are standard in all climbing situations where they are used. Some of the rock climbing terms that will be most useful to you at this point are listed below:

1. **A Pitch:** A pitch is generally considered to be a distance of one rope length (max.) in a climbing situation. So if you start at a belay spot and climb up to the next belay spot, that's a pitch. In some situations the belay spots are separated by substantially less than a rope length, this is called a short pitch. A pitch where the belay spots are a full rope length apart is called a full pitch. The use of "short" and "full" to describe pitches has no formal basis other than just general usage. For general information a climbing rope is now generally 200 feet, or 60 meters, and this is the most common accepted basis for the pitch. There are some climbing ropes of 165 feet or 50 meters. So, you can see a 165 foot rope used on a full 200 foot pitch could pose a significant problem.
 2. **"Rock" "Rock".....Etc:** Loud and often is a warning to climbers of falling debris (often, but not necessarily, a rock). If you hear this duck for any possible cover while yelling the warning to climbers below you.
 3. **Helmet:** Never go on a rock climb without one!!! **Required** on ALL Basic climbs except Conditioners.
 4. **Rope Team:** In rock climbing a rope team is normally composed of two people. One climbs while the other belays. Sometimes, two followers will be paired with a leader for a team of three.
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5. **Lead Climber/Leader:** The lead climber leads the pitch and places protection as he/she climbs. So if the leader falls the protection will minimize the fall distance.
 6. **Seconding/Following:** The person who belayed the leader will follow or second the pitch while on belay from above by the leader. This climber has the security of effectively “top-roping” throughout the climb.
 7. **Protection (Pro):** This includes all kinds of devices, such as hexes, cams, stoppers, and nuts that are placed in/on the rock to protect the leader in the event of a fall. You can read up on this in Freedom of the Hills.
 8. **Cleaning The Pitch:** As the second climbs the pitch he/she will remove the protection set by the leader while en route up the pitch.
 9. **Chock Pick:** A small device used as an aid in cleaning the pitch to help extract nuts, stoppers, hexes that are stuck in cracks and crevasses in the rock.

The Climb:

After you have completed the approach and are at the point where the roped portion of the rock climb begins, this is where the fun starts. You will be assigned to a rope leader, you and the rope leader are a rope team. You, as the basic student, will be expected to be able to climb in your mountaineering boots before being allowed to use rock shoes. The rope leader may use rock shoes. The leader has a lot depending on you, and he/she wants to feel confident that you can do your job as the belayer while he/she is climbing. Activities at this point are fun but DEADLY SERIOUS BUSINESS. Do not be distracted by conversations with others, cell phones, or anything else!

All Eyes On You:

The leader and rope leaders will be watching you and everyone else looking for the following:

1. Do you know how to tie-in to your harness?
2. Do you know your knots?
3. Can you get set-up in a belay stance correctly and quickly?

You are not expected to be a polished rock climber and know everything. You will get help where you need it; but you are expected to know your knots and how to set-up a belay once an anchor is established.

Anchors:

You know a good anchor is extremely important, but you are not expected to know how to set-up anchors. The rope leaders will take care of that, but you can see how it’s done and ask questions. Keep in mind that out in the mountains things are not always neat and orderly. Good anchors and good (comfortable & convenient) belay spots are often not co-located, so the general rule is find a good anchor and make the best of the situation.

Doing The Pitch:

Once you’re set up in your belay and have told your climber “belay on,” he/she will start climbing after an exchange of signals (climbing/climb). The leader will set protection as he/she climbs. After the leader reaches the top of the pitch and has established an anchor, he/she will call down “off belay.” This is your signal to pick up your gear and get ready to climb, while still being anchored in. When he/she calls out “belay on” and the slack is out of the rope, you unclip, break down the anchor, and signal “climbing”. As you climb you will clean the pitch by removing the protection placed by your lead climber. You will need a chock pick for this chore, and are required to bring your own. Clip protection to a gear sling over your shoulder, and THEN detach it from the rope. (The purpose of this is to prevent dropping the piece, which can be expensive. It also is a safety issue, avoiding falling objects from hitting someone below.) After you reach the top of the pitch, and tie into the anchor, you’re off belay and can return the “pro” to the lead climber. Again, you set up the belay so the lead climber can start the next pitch.

Loose Rocks:

Loose rocks are a great hazard on rock climbs. Take great care and make every effort not to dislodge rocks. This is something you must be conscious of all the time. If you do dislodge a rock yell “**ROCK, ROCK, ROCK**” as a warning to those below you on the mountain, whether you see them or not.

Time:

You will do a lot of waiting around on rock climbs. The second rope team can't start the pitch until the first team clears the belay spot, and so on for the third rope team, etc. On basic rock climbs, the actual climbing once a rope team is set up does not take all that much time. Most of the time is spent futzing around, setting up and breaking down belays, and getting ready. So if the first rope team wastes 10-15 minutes that delays the second and third rope teams, and if they waste a like amount of time, it does not take much to waste a lot of hours by wasting a few minutes here and a few minutes there. These wasted hours quickly lead to sunset and darkness in the mountain. The idea is to do the climb and get back down before it gets dark. So, it is very important to move with a sense of focus and purpose-- do not waste time.

Sometimes delays and slow going are necessary for reasons of safety or other circumstances that are unavoidable. Ultimately the climbing party will have to determine how to manage the risk of darkness: through an unplanned "bivy" or a headlamp descent.

The Summit:

If your party moved right along you may have time to lounge around and have lunch on the summit, take pictures, and enjoy yourself. The leader will let the party know how much time can be spent.

Going Down:

Remember the climb is only half over, don't get careless. Every bit as much care and caution is needed on the trip down as was exercised on the way up. Generally, rock climbs are descended by rappelling, very few are "walk offs". Be sure to notice how the rope leaders setup the rappel anchors and manage the party at rappel stations. Once everyone is off the mountain gear is packed up for the hike out to the trailhead, you get to carry the rope again.

BELAYER'S ROLE

The belayer's primary duty is to manage the rope and hold it securely if the climber falls. To accomplish this, rig the rope through a belay device and clip it into a strong, locking carabiner attached to your harness. Lock the carabiner so its gate can't open. (You have already shopped around for a carabiner that is easy to unlock when necessary, but one that will not become unlocked when you don't want it to. You have also selected a belay device that will hold well on the diameter of rope(s) you will be using. Thin, new ropes are especially hard to hold with some devices.) Then the belayer takes in or feeds out rope as needed by the climber, and brakes the rope if the climber falls. Wear grippy, leather gloves when belaying, even with modern devices. The intelligent belayer also wears a helmet, knowing that falling rock or gear could injure or kill him or her, and consequently kill the climber when the belayer lets go of the rope.

The primary rule of belaying is that the "brake" hand **NEVER** leaves the rope. The other hand — the "guide" hand — takes in or feeds out rope as it's needed by the climber. It holds the rope each time the belayer slides the brake hand along the rope to the next grip. If the climber falls or hangs, the brake hand must instantly brakes the rope downward. This forces the rope into a Z as it goes from the climber into the belay device, around the locking carabiner, out of the belay device, and to the brake hand. This creates enough friction to hold the rope. Practice belaying using both the left and right hands as the brake so you will be prepared to deal with any situation that may arise.

There are three general belaying situations: (1) top-roping with the belayer on the ground; (2) belaying the leader; and (3) belaying a partner from the top of a pitch.

Top-Roping

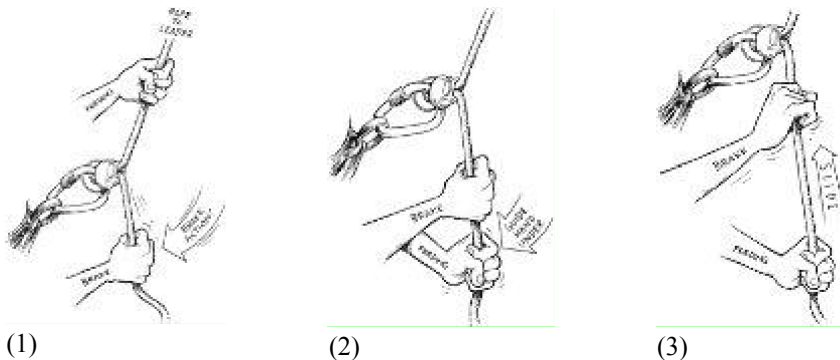
With a "slingshot" top-rope, the rope runs from your belay device up to the anchors (that must be "bomb-proof" — able to collectively withstand 3,000 pounds of weight or force) at the top of the pitch and back down to the climber's tie-in knot. The belayer is on the ground; the climber will attempt to climb to the anchors at the top of the pitch. The belayer takes in rope as the climber ascends and feeds it out as he/she descends. If the climber falls with the rope directly overhead, he/she shouldn't swing or hit anything; such a fall can and should be arrested immediately. If the climber must negotiate traverses, diagonals or overhanging sections where a dangerous swinging fall could occur, it may be necessary to place directional pieces to guide the rope and shorten any potential pendulums.

Belaying the Leader

The Mountaineers, including the Kitsap branch, use the Pull, Brake, Under, Slide (PBUS) belaying method. This is an easier and safer method to learn. See video for top-rope belaying at: <https://www.youtube.com/watch?v=FCUJrXSKWrw> See video for belaying a leader climbing at: <https://www.youtube.com/watch?v=YvEQrKotUZg>

The older, traditional Slip, Slap, Slide (SSS) method is still used by climbers who learned that method. It is also used when belaying with a Munter hitch, which is not a frequent occurrence. SSS is not as secure as the PBUS method when using a belay device.

BELAYING HAND MOVEMENT DEMONSTRATION



1. Hold brake hand (right) palm down with your thumb toward the belay device and feeling hand (left) palm up with your pinky toward the belay device. The feeling hand (left) and brake hand (right) work in unison to pull in rope.
2. At the end of the motion, pull the brake hand (right) into the brake position and move the feeling hand (left) to the brake side of the rope below your brake hand (right). This serves temporarily as the back-up brake.
3. Slide your brake hand (right) up the rope towards the belay device and return the feeling hand (left) back to the climber's side of the rope. Repeat the steps again.
4. **The brake hand does not leave the rope!!!**

Note: **Wear gloves.** Do not use bare hands as illustrated.

When belaying a leader, the belayer feeds rope out as the leader climbs up. Stack the rope so it will feed smoothly (away from dirt and in a place where it won't be stepped on). Before rigging your belay device, scope out the direction the leader's rope will be moving as she climbs, then determine the best way to stack the rope and orient the belay device. Double-check both your own and your partner's harness buckles and tie-in knots, the anchors, and the belay device/locking carabiner before anyone leaves the ground, making sure all are correct.

Next, put the leader on belay and precede through the standard communication procedures (see below).

After each piece of protection is clipped, allow enough slack for the leader to move freely, but not so much that you unnecessarily increase the potential length of a fall. Remember, for every foot of slack, there is another foot of potential fall. On the other hand, it is also important that the rope not impede upward mobility or, worse, pull the leader off.

To feed rope out, the brake hand pulls it toward the belay device as the guide hand pulls it out from the climber's side of the belay device. When the leader is about to clip protection, the belayer must feed rope out quickly, so the leader can easily pull up the necessary slack and quickly clip it into the carabiner. To feed rope rapidly, slide your brake hand along the rope until it is a full arm's length away from the belay device (never release your brake hand!) and slide your guide hand in next to the belay device, so that as soon as you see the leader reach down to pull up slack, you can pull out an arm's length of rope. Then return your hands to the starting position. If the leader grabs for more rope, quickly repeat the process.

Ideally, the leader shouldn't feel any resistance from the rope while climbing or clipping, but it can be hard to feed the rope fast enough. If the clip is super-desperate, you may need to feed slack just before the leader needs it, so she can pull rope freely; be prepared to pull the rope back in if the leader drops it — or suddenly falls — because a fall with extra rope out means an extra-long fall.

If your partner falls or requires support from the rope, quickly bend the rope to the side from the belay device to brake the fall. Be especially attentive for a sudden fall when the leader has clipped protection but is still near the ground. If necessary, sit back into the rope to take up any slack. Quickly moving away from the cliff may also keep the leader from hitting the ground, but this also creates an outward pull on the rope that may pull out pieces of protection.

To hold a climber on tension, keep the rope bent across the belay device so it stays locked.

The belayer has a different visual perspective on the way the rope is running, and can often give useful advice to the leader. Although some leaders don't want to be bothered, most will appreciate comments like: "Flip the rope" (if the rope could impede the leader's upward progress, get caught around a rock projection, or, if it runs over an edge, be sliced during a fall); "extend your pro with a sling or you're going to have rope drag" (if you can foresee the rope having to make sharp bends); "you're almost into ground fall range — get in some pro if you can" (if you realize that the highest piece of protection is soon to be too low to keep the leader from hitting the ground in the event of a fall); or "thirty feet" (when only 30 feet of rope remain).

Belaying The Second

At the top of the pitch, the leader will establish a belay stance with bomb-proof, equalized anchors, clip-in, pull up all the slack in the rope, and put the second on belay. It's especially important to use standard communication procedures so that the climbing party is clear on the status at all times

The leader may belay off of the anchor or off his/her harness with a "redirect."

When you are the second on a pitch, the leader will ready a place for you to clip in when you arrive at the belay — whether it is on a ledge or is a hanging belay. In either case, it's critical for the leader to have already made sure the anchors are solid, multi-directional and well-equalized. Setting such anchors is beyond the scope of this article and should not be attempted without instruction and a substantial amount of practice in non-life-threatening situations. The leader will keep you on belay until you are completely anchored. Remember, as the situation gets more and more complicated, it becomes increasingly important to be systematic and well-organized.

Rope Management

The belayer is responsible for managing the rope so it feeds smoothly for the climber. Before a lead commences, the belayer should stack the rope in a loose pile, out of the dirt, with the lead end on top. Nothing is more frustrating than trying to lead and having the rope repeatedly pull down on you because the belayer is fighting rope tangles. If the rope is kinking, try to keep the kinks several feet ahead of the belay device so the leader can move unimpeded.

If there's not a sufficient ledge on which to stack the rope, it will likely be stored in loops that are draped over something. Be careful not to let the rope hang down too far below your belay — especially if the rock is featured or the wind is blowing. It might snag, making it impossible to feed out rope to the leader, trapping her in a dangerous situation in which she cannot continue up or get lowered off of the pitch. Also, if the rope hangs down too low, its full weight could make it difficult to feed quickly to the leader. A lap or butterfly coil — in which the rope is draped back and forth across the tethers extending from the belayer's harness to the anchors — will keep the rope from hanging too low. If you're on a clean, smooth slab — which has no flakes, horns, cracks, trees, bushes, etc., which could entangle the rope (and no loose rock to dislodge onto anyone below) — you may only need to drape the rope once near its midpoint. If not, drape it back and forth as many times as it takes to keep the loops relatively short.

If a team of two is "swinging" (alternating) leads, the second's end will be on top of the pile when she arrives at the belay stance, and the rope will probably not need to be restacked for her upcoming lead. If the same climber leads all of the pitches, it's best to restack the rope at each belay to keep the leader's end on top so that it feeds without tangling. This can be done by flipping the butterfly loops that are draped across the rope or tether securing the leader as it is transferred to the second.

Lowering a Climber

On sport routes, slingshot-top-rope climbs, or sometimes when retreat is necessary, the belayer lowers the leader back to the ground or belay stance. You should have already tied yourself to your end of the rope, or tied a stopper knot in the end of the rope, before lowering the climber. That way, the rope can't accidentally pass all the way through your belay device.

To lower the climber, bend the rope across the belay device to lock it off, then lean back to give tension. Place both hands on the brake side of the rope and slowly, but steadily, lower the climber to the ground by letting the rope pass slowly through the device. Once the climber is standing securely on safe ground, give out slack to take tension off the climber's harness, so he can begin to untie. Despite the fact that he is standing on the ground next to you, it is a good habit to wait for your partner to tell you that he is off belay, safe, and stable before you remove your brake hand from the rope and undo your belay device.

Communication

Good communication between partners is essential to safe climbing. Sometimes regular partners have their own abbreviated commands, but in general it's best to use the formal signals listed here so there is no misunderstanding. If you're in a crowded climbing area, it's good to follow each command with your partner's name so she knows who's talking and to whom she should be listening. When the wind or river noise is excessive, even the loudest verbal communication may be impossible, so you should have already agreed upon an alternate system (a loud whistle is nice for this).

RAPPELLING

The extended rappel is the standard for most of the Mountaineer branches, including the Kitsap branch. The extended rappel places all of the rappel items in front of the rappeller and has redundancy in the rappel part of the system. See the video at: <https://mountaineers.org/learn/how-to/extended-rappel-and-updated-belay-techniques>

What is a rappelling? How do you set it up? How is it done? All will be taught in this area. The standard rappelling signals will be introduced. These will be used throughout the course and your climbing days. Study the following signals, plus what they mean, and where they are used. Always add your name to the command.

“Name, On Rappel”

“Name, Off Rappel”

“ROCK!! ROCK!! ROCK!!” (anyone)

“Name, Rappelling”

Autoblock

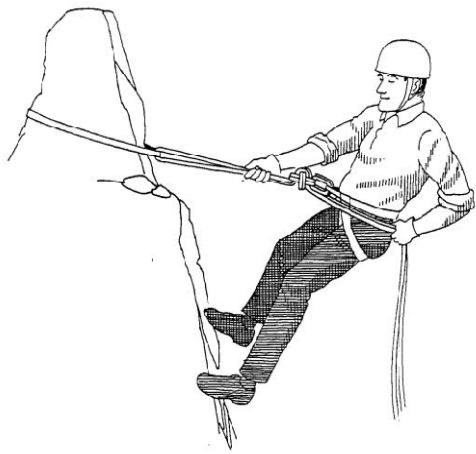
The autoblock is strictly a self belay safety measure to prevent falling if climber becomes incapacitated or removes break hand, in which case autoblock should lock on the rappel rope, stopping descent. Alternately, the primary safety measure is for the rappeller to be belayed from below. The autoblock is NOT to be used for a climber's choosing to pause in the rappel – use leg wrap if you wish to pause in a rappel. The rappel is also not a third hand. The rappeller should always have his/her brake hand on the rope from when the personal anchor is detached until the rappel has ended.

Use

- **This system is not foolproof!** The successful use of the autoblock rappel backup is dependent on several variables including the person's harness, body height and weight, additional weight being carried on the rappel, length of autoblock loop and number of autoblock wraps on the rope.
- **All factors must combine in such a manner that there is no possibility of the autoblock sliding knot entering the rappel device.** If there is, the device may have to be extended away from the harness with a suitably sized quick draw (which in itself introduces another variable in the system).
- **3-6 wraps are typically used for the autoblock. The autoblock is a sliding friction knot. The ability of the knot to lock on the rope(s) and hold your weight depends on the rappel rope(s) diameter, the finish and cleanliness of rappel ropes, the diameter of the perlon cord and the number of wraps. This should be evaluated for each situation. There is always the potential the autoblock will not lock on the rope.**
- Thus a climber must practice and develop a **reliable autoblock set up** on safe practice rappels (e.g., at field trips with the assistance of others) before using it in the field.
- Descend with brake hand on and above the autoblock loops, causing them to slide on the rope during descent. If autoblock locks, press on top of sliding knot to loosen.
- Descend slowly and smoothly – no bounding! Bounding stresses the anchors.
- Do not confuse the Prusik hitch with the autoblock.

There should always be a knot in the ends of the rope for rappels as a safety measure. This prevents rappellers from rappelling off the end of the rope. Always tie a KNOT in each end of the rappel rope(s).

Rappelling Using The Carabiner Brake System & Leg Wrap



RAPPEL BACK UP & AUTOBLOCK

Fireman's Belay

The primary method of backing up (belaying) a rappel is for another member of the climbing party to belay the rappeller from below by holding the tail ends of the rappel ropes and pulling downward with their full weight if the rappeller loses control of their brake (some call this the “fireman’s belay”). It is vitally important that your rappel set up be checked thoroughly by yourself and your climbing partners before setting off to verify it is correctly set up.

Manage the rope below to prevent tangles and jams.

Remember; **DO NOT STEP ON THE CLIMBING ROPE**. It is your lifeline and must be treated with respect.

Basic Climbing Course - Class #4 Study Guide

Rock Climbing

1. The first person up a rock pitch will place devices known as protection to catch him/her in case of a fall. Name three types of protection used in rock climbing.
 - a.
 - b.
 - c.
 2. Why is a helmet mandatory for all Mountaineers rock climbs?
 3. What is a “pitch” as used in rock climbing jargon?
 4. What knot is used to tie the rope to your climbing harness?
 5. When belaying the leader on a pitch, when is it permissible to unclip from and remove your anchor?
 6. Sometimes chocks are placed in such a manner that they are tight and difficult to remove. What is the device called that is used as an aid in “cleaning” this difficult to remove protection?
 7. In a two man rope team, what is the first person called?
 8. Why can descending a climb be just as dangerous as climbing it?
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EQUIPMENT

See Required Equipment FT 4 on the Equipment Matrix (Class 1)

FIELD TRIP #4 – ROCK 1**Rock Climbing & Rappelling**

FIELD TRIP #4– ROCK 1	
Time:	Starting Time: 8:00 am Duration: Approximately six hours
Location:	<i>Tacoma Mountaineer Center, Tacoma WA</i> 2302 North 30th Street, Tacoma, WA 98403
Directions:	Take SR16 across Tacoma Narrows Bridge and take exit to Pearl St. (2 nd exit from bridge) Head north on Pearl Street Take right on 30 th Street Go down steep hill to Old Town Tacoma area and center is on the right a block before the traffic light.
Purpose:	<ul style="list-style-type: none"> ▪ Demonstrate knot proficiency ▪ Practice rock climbing technique ▪ Utilize belaying skills ▪ Practice carabiner brake rappel set up ▪ Size autoblock ▪ Practice rappelling ▪ Practice self belay on rappel (leg wrap & autoblock) ▪ Practice self belay on 4 class rock
Prerequisites:	<ul style="list-style-type: none"> ▪ Class #1, #2, and #4 ▪ Field Trip #1 & #2
Assignments:	<ul style="list-style-type: none"> ▪ Reading: Review the readings assigned for Class 4 from the Freedom of the Hills ▪ Study: Information contained in this section. ▪ Practice knots until you are proficient and can demonstrate all knots

EQUIPMENT

See Required Equipment FT 5 on the Equipment Matrix (Class 1)

FIELD TRIP #5 – ROCK 2**Rock Climbing and Rappelling**

FIELD TRIP #5– ROCK 2	
Time:	Starting Time: Arrive by 8:00 am Duration: Approximately 8 hours
Location:	<i>Mt. Erie at Anacortes</i>
Directions:	Directions to Mt. Erie https://www.alpineinstitute.com/media/31363/erie_map.pdf
Purpose:	<ul style="list-style-type: none">● Discuss rock climbing hazard awareness● Tested on ability to climb rock● Tested on ability to rappel● Tested on ability to belay safely● Practice autoblock rappel back up and leg wrap● Practice cleaning protection
Prerequisites:	<ul style="list-style-type: none">● Class #1, #2, #4● Field Trip #1, #2 & #4● Proficiency in knots
Assignments:	Study: Information contained in this section. Information required for Field Trip # 5
Special Note:	Consider staying overnight the night before.