

PLAINFIELD CENTRAL CLIMBING GUIDE

GOAL: Each student will learn and perform various climbing functions and be able to demonstrate each in an evaluative setting.

SAFETY

1. Warm up activity should always precede climbing and rappelling.
2. Hair must be tied back.
3. No jewelry may be exposed around the neck.
4. Watches, rings, and dangling earrings must be removed.
5. Shirts must be tucked in when wearing a harness.
6. Shoes must be tied; strings from shorts and sweats must be tucked inside.
7. There is no place for "fooling around" in this activity.

CARE OF EQUIPMENT

1. All equipment must be put in the proper place.
2. Harnesses are to be placed in the bins.
3. Helmets returned to the bins
4. At no time should any equipment be tossed or thrown.
5. NEVER step on a rope!
6. NEVER drop a carabineer!

EQUIPMENT

ROPE

The rope is a basic climbing tool. It is the climber's lifeline. It is one link in the chain of safety. Other links include the knots that permit the use of the rope for specialized tasks, the seat harness the rope is tied to, and the carabineers that join parts of the system. Kernmantle rope is the preferred style now. It is made of a core of braided or parallel nylon filaments, covered by a tightly woven nylon sheath called a mantle. This sheath keeps the rope very flexible and strong. The breaking strength of rope varies with diameter. New rope has a breaking strength of 3000 to 5000 pounds.

Ropes are either static or dynamic. Dynamic rope has elasticity; it stretches up to 8% during a fall. Static rope does not stretch; it can be used as fixed rope to ascend mechanically or to rappel. It is NOT used for climbing. All climbing ropes are approved by the Union Internationale des Associations d'Alpinisme (UIAA). This is an internationally recognized organization that sets safety standards for all climbing equipment.

Rope care is very important.

A climbing rope should NEVER be stepped on or used for any other purpose. It must be inspected by hand before and after each use to check for any cuts or abrasions. Ropes should be kept away from heat, chemicals, dirt, and sunlight. When not in use, store them in a cool, dry place. If necessary, rope may be hand washed with a mild detergent and hung to dry. Retire a rope immediately after a hard fall. Ropes should be retired after a maximum of 4 years of service. The guide also suggests that since sport climbing involves repeated falls, ropes should be replaced more frequently. If there is any doubt, replace the rope. Ropes are not cheap, but neither are lives!

KNOTS

Knots used in class: figure 8; figure 8 follow-thru; water knot; fisherman's knot

When tying knot into harness: figure 8 **cannot be more than a fist away from your harness.**

Tie off knot must **not** have **less than four fingers** or **more than a hand span** to be able to climb.

Knots must be **dressed**, nothing should be overlapping

Rope terminology for knots:

Free or working end is the running end of the rope.

Standing end is the fastened part of the rope or the whole coil; it may be called the line or the "rope".

A **bight** is a turn of the rope which does not cross itself.

HARNESSES- Edelweiss harnesses

When climber is tying in: tie in to belay loop only waist loop.

Remove all objects from pockets and tuck clothes into harness.

Harness should be **above** the hip bones, with the Edelweiss logo centered on your belly button.

Harness should be **tight**.

Do not leave rope tied into harness when finished climbing. Each climber must tie into their own harness.

HELMETS

Wearing a helmet is a safety precaution similar to wearing a seat belt in an automobile.

CARABINEERS

Carabineer is a general term used to refer to a large group of devices that have common characteristics. They are oval or "D" in shape. A section of the carabineer is hinged so it has a gate that opens. Carabineers are light and strong. The standard oval and D-carabineers have a breaking strength of about 4000 pounds. Always check the carabineer for damage before use. We use a locking carabineer in class, depress the green button to open carabineer

BELAY DEVICES

The belay devices used in class are the **ATC tuber**. It operates on the friction principle. More friction pressure is created in the device than pulling pressure from the climber. Therefore, a falling climber is stopped.

The belay team must always be aware of the climber's situation. They must be ready for a fall at any time. There should NEVER be any slack in the belay rope.

BELAYING

A belay is a rope system used to protect the climber, not assist the climber in achieving a goal. **The term - belay - means to secure a climber with the rope.** It also refers to the place chosen for belaying and to the entire system including the belayer, climber, and equipment that hold them in place. The rope runs over or through a support point above the area of activity and back down to a second person who is the primary belayer. The **primary belayer** clips into the belay rope with a belay device attached to the seat harness by means of a carabineer.

In class we will use the team approach. In addition to the **primary belayer**, there will be **anchors** holding on to the primary's seat harness to keep him on the floor. There will also be a **secondary or back up belayer** behind and to the side of the primary one. Their responsibility is to lock down the rope in case of a fall. The belay team should be focused on the climber at all times.

Never, Never, Never, let go of your brake hand. Always stay in a locked (down) position. This friction on the Belay device will allow you to hold the climber indefinitely.

Prior to climbing, or belaying, people must be checked from head to toe.

Go through the following check list:

1. Helmet in proper position; strap tucked in
2. Hair tied back
3. No jewelry, scarves, etc. around neck
4. Watches, rings, earrings, off
5. Shirt tucked in

6. Check harness. Is it doubled back?
7. Check belay knot.
8. Shoes tied; nothing hanging from sweats; waist string tied and tucked in.
9. Review commands
10. When finished, have climber touch floor with both hands before going "Off belay".
11. HIGH FIVE BELAY TEAMS!!! Remember this is not a solo activity. We need each other, we cannot do it alone

CLIMBING CALLS: After doing your final checks, call your teacher for the thumbs up to proceed. (**bold is climbers commands**)

Climber says.....Belayer responds...

- **On Belay?**~~~~~Belay on
- **Climbing?**~~~~~Climb on
- **Down climbing or lowering**~~~~~Ok, start down
- **Off Belay?**~~~~~Belay off

Commands used during the climb

TENSION- climber asking for rope to be very tight or

SLACK- is when a climber does not want the rope to be tight

DOWNCLIMBING-as the climber uses the rocks to down climb; try to keep a little slack in the rope to keep ahead of the climber. Do not give enough slack that if a fall occurs the climber will fall further that about 2 feet.

LOWERING- The climber is allowing the belayer to lower them slowly to ground. The climber should face the wall, hips should be at a right angle, feet walking down wall, and arms in front of them, NOT holding the rope, Climber should stay square to the wall.

CLIMBING-

1. Climber should **never** grab rope.
2. Keep the rope centered between your arms.
3. Belayer is there for **safety only, not to aid climber to top.**
4. Stay on your climb route. Too far off center of rope allows for too much swing on a fall.
5. Groups that are tying in, watch above for falling climbers.
6. Do all checks BEFORE calling over teacher for final check.
7. Make sure teacher records your climbing and belaying each day for your group.
8. Have in mind a route to climb before leaving the ground.
9. When climbing, it is always a good approach to have **three points of contact** with the climbing surface. These may be one hand and both feet or both hands and one foot. Using three points of contact greatly eliminates the 'peeling off' effect [swinging off of the climbing surface] encountered in climbing.
10. Balance is also key to climbing. Achieving and maintaining balance throughout a climb assures better climbing results.
11. During a stop in a climb, due to rest or seeking out a route, avoid using muscles. Rather use the skeletal system to bear the weight. This usually means keeping limbs straight rather than bent. Also, transferring the weight to the legs rather than using the arms significantly saves the smaller arm muscles from fatigue.
12. Keep the hips into the climbing surface as much as possible. Climbing with your hips away from the climbing surface places added weight on your arms and hands. Again, let your legs do most of the work.
13. Some climbing handwork consists of **overhand and underhand cling, pinch grip and finger holds.**
14. Some climbing footwork consists of **smearing, outside and inside foot edge, heel hooks and step over.**
15. **90% of climbing should be done with your feet and legs.**
16. Traverse climbing refers to climbing horizontally (sideways)

**REMEMBER: THE CLIMBERS SAFETY IS THE NUMBER ONE PRIORITY
THE SECOND PRIORITY IS TO HAVE FUN CLIMBING AND TO CHALLENGE YOURSELF ON THE WALL
PLAINFIELD CENTRAL ADVENTURE CLASS**

BELAY TEST

STUDENTS WILL BE ABLE TO PERFORM THE FOLLOWING:

1. Properly put on a Plainfield Central harness
 - a. above the hip bones
 - b. all buckles doubled back
 - c. 2 inch tail showing

2. Belayer checks
 - a. helmet-sized correctly and buckled correctly
 - b. harness doubled back and tight
 - c. check knot (figure 8 and follow-through)
 - d. check carabineer is down and out
 - e. no rings on belay team or climber
 - f. anchors and back up belayer in place

3. Climber/Belayer commands given
 - a. (name) ON BELAY
 - b. (name) BELAY ON
 - c. CLIMBING
 - d. CLIMB ON
 - e. LOWERING/THANK YOU
 - f. OFF BELAY
 - g. BELAY OFF
 - h. What does TENSION mean?
 - i. What does UP ROPE mean?
 - j. What does SLACK mean?

4. Proper Belay Technique
 - a. Break hand correct position
 - b. Never let go of break hand
 - c. Lowering technique smooth and a gentle landing

STUDENT SIGNATURE _____

INSTRUCTOR SIGNATURE _____

DATE _____