

FIELD TRIP #1 - FUNDAMENTALS

Knots, Belaying, Prusiking, Anchors, Leader Tie-off and Belay Escape

FIELD TRIP #1– FUNDAMENTALS & PRUSIK TEST	
Time:	Date: February 17 th or 18 th Starting Time: Arrive by 7:30 am and be ready to go by 8:00 am. Duration: Approximately 8:00 am to 5:00 pm
Location:	<i>Tacoma Mountaineer Clubhouse 2302 North 30th St, Tacoma</i>
Purpose:	<ul style="list-style-type: none"> ▪ Practice Knots ▪ Practice Prusiking ▪ Practice Belaying (Munter and Device Belays) and climbing signals ▪ Practice Leader Tie-off and Belay Escape ▪ Understanding Anchors ▪ Discuss the care of a climbing rope and practice rope coiling ▪ 10 Essential systems checked
Prerequisites:	<ul style="list-style-type: none"> ▪ Lecture #1 ▪ Field Trip #1 Prep
Assignments:	<ul style="list-style-type: none"> ▪ Read Basic Rock & Glacier Climbing Manual Field Trip 1 material ▪ Review all Field Trip 1 Prep assignments

EQUIPMENT

See Required Equipment FT1 on the Equipment Matrix

PROCEDURES

When you walk in, start getting ready for the day by putting on your helmet, harness, and boots. Next the field trip leader will split you into groups and/or assign you to an instructor and send you to a station. While at the stations you will be practicing the skills listed above in the purpose section. Keep in mind, we don't expect you to be an expert, but we do expect you to have done your reading so be prepared to be asked questions, and hopefully you come with some of your own. You will then rotate and complete all stations before the end of the day.

If you find that you have down time, practice knots or take the knots test. Help other students. Be useful and/or practice skills. Eat when you are hungry, drink when you are thirsty, but make sure you are not holding up a group by doing so.

NOTE: Some of the stations will be outside so make sure you have appropriate clothing. Take all your gear with you everywhere you go, so if it is raining and you don't have a dry sack, line the inside of your pack with a large garbage bag so everything stays dry.

10 ESSENTIAL SYSTEMS STATION

We want to take a first look at what you carry for your 10 Essentials, and talk about things that you could/should use. Remember: These are your personal backup safety items. Have good ones, and replace bad ones as required. They will be "tested" at the beginning of Field Trip 3, and checked on EVERY field trip after that.

TEXAS PRUSIK STATION

Here you will get another chance to practice tying into a rope for glacier travel, prusiking, and safely dropping your pack. This time, however, try to come prepared, remembering how to tie into the rope and set up your prusiks.

ROPE CARE AND COILING STATION

At this station, you will be shown how to properly butterfly coil a rope, and given a chance to practice. In addition, we will discuss proper rope maintenance and care. Make sure you learn these techniques properly, you will be expected to do them many times during the year.

ANCHOR SYSTEMS

Here we are going to talk about anchors:

1. What it means to have a SERENE anchor, and how to recognize one.
2. Sport anchors (fixed) vs trad (removable) anchors vs natural anchors
3. To recognize the different parts of an anchor:
 - a. Master Point vs. Shelf
 - b. How/When to attach to an anchor using a PA vs Clove Hitch vs both
4. Tie and Size your personal anchor (PA)

BELAYING AND CLIMBING SIGNALS STATION

Here we will teach you about the belay chain for lead climbing (flaking out the rope, tying in for climbing, attaching to the anchor, and set up you belay device), and how to properly belay with a munter hitch and a device using the PBUS method of belay. We will also explain and have you practice the climbing signals. To prepare you for this station, take a look at how to correctly clip a carabiner.

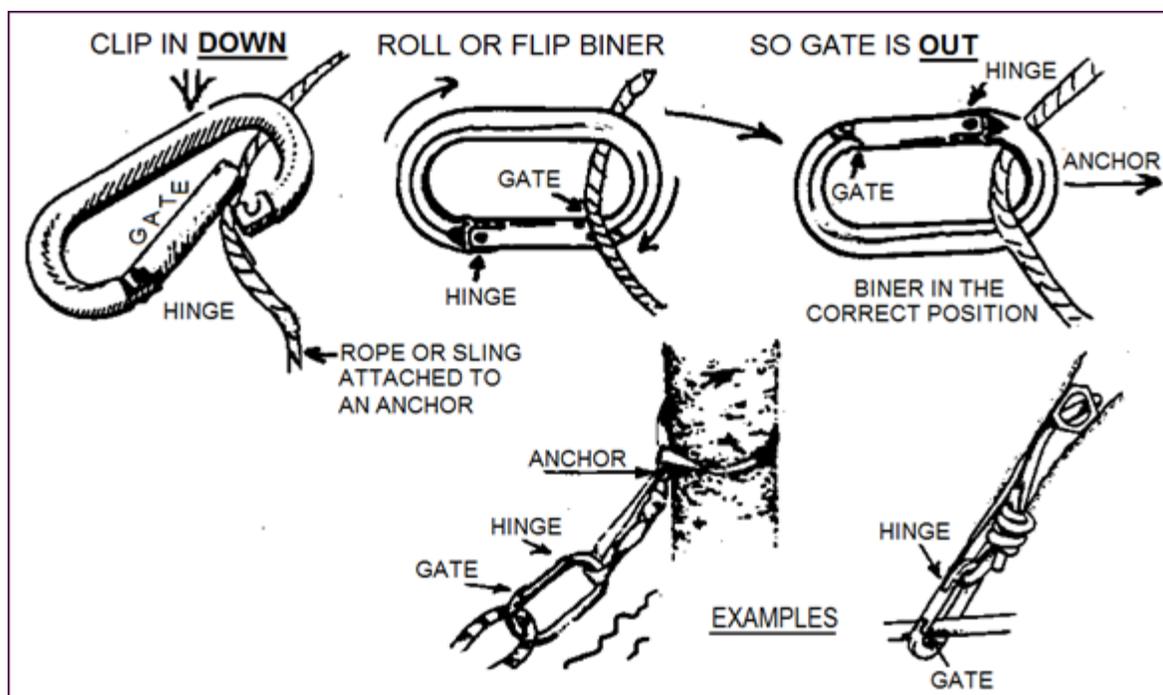
DOWN AND OUT: HOW TO CLIP CARABINERS INTO AN ANCHOR POINT

The term down-n-out serves as a mnemonic to help ensure carabiners are clipped correctly into an anchor.

Step 1: You should be holding the spine of the carabiner, with the gate opening across from the fingers and the gate hinge across from the palm,

Step 2: Using a top **DOWN** action (See the illustration), clip the carabiner onto the rope or sling of the anchor

Step 3: Once clipped in, roll or flip the carabiner over so the gate is **OUT**. Notice that the hinge end of the gate is toward the anchor.



HOW TO TELL IF YOU CARABINER IS PROPERLY CLIPPED IN:

- * **THE GATE OPENING IS AWAY from the anchor:** This allows you to clip a second rope or slings into the carabiner with minimum chance of it becoming disconnected from the anchor. It also keeps the stress of a pull on the spine of the carabiner.
- * **THE GATE IS OUT (OR UP):** When you look at a clipped-in carabiner the gate should be facing **out (or up)** from the rock face, the ground, etc. The gate has less of a chance of being opened by contact with the ground, and your rope from accidentally becoming unclipped.

BASIC BELAY SYSTEM SETUP (see figure 10-2 pg 173 in FOH 9th edition for a diagram)

1. Flake out the rope onto the ground next to what will become the braking hand side of the belay. Make sure you are less than an arm's reach from the anchor.
2. Using the "bottom" end of the rope (the end that would be under all the rope after its flaked out) tie a rewoven Figure-8 knot directly to your seat harness, making sure it goes through both hard points.
3. Standing no longer than an arm's length from the anchor clip a locking carabiner (down-n-out) into the anchor and clove hitch the rope coming from your seat harness to the locking carabiner. Adjust the rope length, if necessary, by adjusting the clove hitch so that the rope is taut to the anchor when you are in a comfortable belay stance.
4. Take rope coming from the (tied in) lead climber, and connect it to your seat harness through your belay device with a locking carabiner. Make sure the rope to the climber is coming out of the "top" of your belay device, and the braking strand is coming from the "bottom" edge. Lock the carabiner.
6. Check that your tie-off sling and any equipment that might be necessary is accessible to you.
7. Now you are ready to belay. Do a systems check with the lead climber to double check everything has been set up correctly. Assuming everything is good to go and you have your belay glove on, your climber is ready to climb, you call "BELAY ON".

LEADER TIE-OFF AND ESCAPING THE BELAY STATION

At this station we will walk you through Leader Tie-off and belay escape. As well as discuss the circumstance of when you would use both. We do this very slightly differently than is stated in FOH. See the steps below.

Step 1: Go hands free

Tie off *belay device/munter* with a mule knot (device-mule/munter-mule) backed up with an overhand knot and a carabiner clipped through the bight and around the rope.

Step 2: Transfer the load to the anchor

- A) Attach the tie-off/hero loop to the rope of the fallen climber using a prusik hitch, and clip the hero loop with a locking carabiner.
- B) Using the rope coming from the clove hitch (belayer's tie in) off the anchor, tie a munter-mule overhand knot to the locking carabiner clipped to the hero loop, and back up the mule overhand knot with a non-locking carabiner clipped through the bight and around the rope.
- C) Untie the first overhand backup knot and device-mule/munter-mule, and slowly transfer the load to the tie-off loop using the *belay device/munter*. **Make sure the students keeps their hand on the braking strand at all times during this step.**

Step 3: Connect the rope from the fallen climber to the anchor/starting to remove yourself from the system

- A) Using the slack rope (braking strand) behind the belay device/munter, tie a munter hitch on a new locking carabiner attached to the anchor. This step introduces a secondary belay point.
- B) Now it is safe to remove the primary *belay device/munter* maintaining control of the braking strand through the secondary munter off the anchor.
- C) Take in all the slack from removing the primary belay munter/device, and tie off the munter connected to the anchor with a mule knot (munter-mule) backed up with an overhand knot and a non-locking carabiner clipped through the bight and around the rope.

Step 4: Back up the system:

Back up the munter-mule to the anchor with a catastrophe knot (an overhand or figure-eight on a bight) attached to the anchor with another locking carabiner.

Step 5: Get your gear back, get out of the system, and go get help:

- A) Untie the overhand/carabiner backup and mule knot coming from the munter on the carabiner clipped to the hero loop, and slowly transfer the load back to the rope of the fallen climber. Now that the load has full be transferred to the rope attached to the anchor, remove the munter, locking carabiner and prusik hitch.
- B) Get out of the system: Untie the figure-eight from your harness, and go get help.