

**United States Military Academy  
West Point, New York**

**BASIC ROCK CLIMBING COURSE**

**Department of Physical Education**

**By**

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**BASIC ROCK CLIMBING COURSE**  
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# **BASIC ROCK CLIMBING COURSE**

## **ROCK CLIMBING, BELAYING, RAPPELLING, AND TOP ROPING SYSTEMS.**

### **Mission**

- To develop an attitude of safety and good judgment that will further their development as leaders of character.
- To provide the Corps of Cadets with fundamental rock climbing skills and a climbing experience.

### **Goals**

- Provide a safe and constructive course in basic rock climbing techniques and skills.
- Introduce a lifetime activity that has military application.
- Challenge cadets by placing them in a risky situation in which they recognize, feel, and overcome fear and act in a rational manner.
- Develop a cadet's ability to use and develop the decision making process.

### **Objectives**

- Cultivate knowledge of a healthy military activity.
- Promote total body fitness through activity.
- Prepare cadets for lifetime participation in a sport.
- Nurture qualities of perseverance, aggressiveness, courage, and combine these qualities with a sound and rational decision making process.
- Contribute to the development of each cadet in accomplishing a mission within a team framework.
- Provide a safe environment in which to learn an inherently dangerous sport
- Contribute to each cadet's neuromuscular and kinesthetic abilities through the acquisition of rock climbing skills.

### **Course Design**

- 9 Lessons - 2 hour class block during E/F hours = 18 hours.
- Focus will be on climbing and climbing systems using the equipment.
- Basic Harness Setup with a leash/tether and proper racking of gear
- Rappelling & Belaying with respective correct use of the hands
- Knots & Top Roping Anchors
- 16 to 20 students with 2 instructors.
- Facilities will consist of an indoor climbing wall and 3 outdoor crags with bolted routes. These crags were developed and the bolts and anchors were placed by the Mr. Crossley.
- Students will climb using top roping techniques.

## Safety

**Warning: Climbing is a sport where you may be seriously injured or die.**

This is a basic manual on what we do in DPE Basic Rock Climbing. Rock Climbing is a sport that is inherently dangerous. You should not depend solely on the information gleaned from this manual for your personal safety. Your climbing safety depends on your own judgment based on competent instruction, experience, and a realistic assessment of your climbing ability.

There is no substitute for personal instruction in rock climbing and climbing instruction is widely available. You should engage in an instructor or guide to learn safety techniques. If you misinterpret a concept expressed in this manual, you may be killed or seriously injured as a result of this misunderstanding. Therefore, the information in this manual should be used only to supplement competent personal instruction from a climbing instructor or guide. Even after you are proficient in climbing safety, occasional use of a climbing instructor is a safe way to raise your climbing standard and learn advance techniques.

There are no warranties, either expressed or implied, that this course manual contains accurate and reliable information. Your use of this manual indicates your assumption of the risk of death or serious injury as a result of climbing risks and is acknowledgment of your own sole responsibility for your climbing safety. \*

\*This section is paraphrased from Advanced Rock Climbing by John Long and Craig Luebben, Chockstone Press.

### **Safety Rules and Guidelines for Rock Climbing at West Point**

These rules and guidelines are applicable at West Point to both the DPE's climbing instruction and the Cadet Mountaineering Club.

- 1. NEVER let go of the belay side of the rope...not even for a one millionth of a second.** A belay ON is just that. All of your handiwork and type of belay must accomplish this. When you are rappelling, you have yourself on belay.
- 2. ALWAYS double check the "final product" in all systems after setting it up and before loading.** Double check every link and substance in the system from the rock, to the piece of protection, to the carabiner, to the sling, to the carabiner, to the rope, to the tie-in, to the buckle, to the harness. Hand check the system, visualize the loaded system...does it look right?...will it work?...see the next sequence of events...then use the system. "A chain is only as strong as the weakest link" concept.
- 3. Wear a helmet at all times.** They have not performed a successful brain transplant as of yet.

4. Do not exceed your abilities. If you think that you are knowledgeable, infallible, or perfect in the face of the cliff or mountain, you are making a big mistake. Gravity can kill. Falling at 32 ft/sec squared to instant deceleration to zero hurts period.
5. Do not trust anything. Danger is always present in the climbing, therefore, good judgment is the key. By exercising prudent judgment, the inherent danger involved can be kept to a minimum. You must know where the dangers lie. Storms, temperature, wind, lightning, rock fall, equipment fall, pebble fall, person fall, etc. all have dire consequences. Be respectful of the crags and the hills.
6. Ego, showing off, overconfidence, casualness, ignorance, lack of confidence, and inexperience underlie many accidents in climbing.
7. **Climb for the right reasons:**
  - Yourself
  - The joy of effort
  - Satisfaction of the mental and physical accomplishment
  - Efficiency of movement
  - Passion of the feelings one gets from the climbing
  - The beauty
  - To push yourself and your limits
  - To develop one's self concept and to interact with others
  - To live to climb another day
8. Do not step on the rope, it is your lifeline. Care for it.
9. Do not knock down loose rock or drop gear. Careless feet and rope tosses dislodge danger to those below from the top or ledges. Remember you don't want to knock your belayer silly whether leading or top roping.
10. Proper attire, gear, and food is key. Predict problems rather than react to them.
11. Quadruple check everything.
12. Test your handholds and footholds before using each one. They do become dislodged under stress.
13. Be an expert and artist at belaying. Anchor your belays, always use two anchors, use proper verbal communication.
14. Rappel off anchors slowly and steadily. Bounce rappelling is for the less knowledgeable.
15. Calculated, safe, protected falling onto proper systems is okay, but only if it works. Uncalculated falls and accidental falls are types are to be avoided.
16. Do not trust wet and loose rock, branches, bushes, grass, moss, fixed anchors, bolts, fixed pitons.
17. Use three points of contact on the rock as a basic. Balance on your feet and choreograph your moves. Slipping and tripping are common in everyday life, so figure on taking some slips and trips in climbing and falling. Protect yourself and figure it will happen.
18. Proper attitude equals safety.
19. Use the KISS principle. Keep it simple, stupid!
20. Technique, experience, and knowledge increase safety tenfold.
21. Make your pro (protection and anchors) multi-directional. Bombproof everything.
22. Do not lead until you are ready and lead several grades below your ability.
23. Do not climb alone in general.

24. Do not take long run outs.
25. No solo climbing. It is not worth it in respect to your future climbing joy and adventures.
26. Keep bouldering to eight feet or less with one's center of mass. Use a spotter or spotters. Those tiny falls have a reputation of doing great damage.

### **Grading Assessment for Final Grade**

Cadets are graded daily

Each area is worth 1000 points times the % of class grade

Total course grade is then converted to a 1000 pt. scale

Consists of 4 graded areas below:

#### **RAPPELLING (.20)**

- Proper use of ropes and tying a knot in the ends
- Use of the leash/tether in the rappelling sequence
- Belay Device techniques
- Route selection
- Control (rope between legs/2 hands)
- Triple leg wrap tie-off
- Tie off methods
- Figure 8 techniques

#### **BELAYING AND BASIC SYSTEMS (.20)**

- Proper daily use of the harness
- Rope tie in (trace through figure 8 knot w/double overhand tie off)
- Belay positioning
- Proper use of hands (Never let go of passive side of the belay.)
- Proper use of ropes (mountain backpack coiling and flaking out the rope)
- Proper top rope set-up to include all parts.

#### **RATED CLIMBS (.40)**

- Consists of five climbs (best 2 rated climbs, graded 0 to 1000)
- Hand and footwork efficiency
- Buddy checks, calls, and hand signals
- Efficient complete climb with no falls.

#### **JUDGMENT AND SAFETY (.20)**

- Double check on every system (always inspect "the final product")
- Awareness
- Equipment inspection
- Finding the route effectively
- Demonstrate proper sequence of events based on class experience

## Climbing Class Sites\*

Lesson Number	Climbing Sites
1	Lower Flirty
2	Lower Flirty
3	Upper Flirty
4	PI Wall
5	PI Wall
6	PI Wall or Indoor Wall and Video
7	PI Wall or Indoor Wall and Video
8	PI Wall or Indoor Wall and Video
9	PI Wall or Indoor Wall and Video

\*Adjusted based upon weather and needs of the class.

Note that the gear issue and gear turn-in are separate sessions.

## Lesson By Lesson Outline - 2 hours sessions

### Lesson # 1

1. Meet at Lower Flirty
2. Gear up at top of crag with harness, helmets, slings, carabiners, chalk bag, leash/tether system, pearabiner with belay device, and shoes.
3. Cover the danger of the "red zone", that is, working near the top edge of the crag. Show the dropping of the small rock demonstration and where they go from the top.
4. Demonstrate the use of the leash/tether system.
5. Demonstrate and cover the basic top rope system using the top rope sling, locking carabiners, and bolts. Cover uncoiling of the rope, clipping in the middle of the rope to the top rope fulcrum (aka master point), tying the ends of the rope together, and the toss to the bottom. Show some of the variations of the top rope set-up.
6. Instructors set-up 10 top ropes so each pair of cadets will have a climbing rope.
7. Walk the class on the descent trail around to the bottom of the cliff.
8. Demonstrate the untwisting, tying-in, and setting up the belay device with the rope.
9. Review the traced through figure 8 rope tie-in to the harness.
10. Demonstrate the climber tasks like climbing up, climbing down, climbing right, climbing left, lowering the climber, jacking up the rope like a pulley to get over some tough section of rock, and slight falling all with an instructor belaying and proper communication. Cover the basic fundamental climbing skills.
11. Demonstrate again putting the rope into the belay device. Demonstrate proper handiwork on belaying by taking in the slack or paying the rope out. Demonstrate **never** letting go of the passive belay side of the rope.

12. Demonstrate what a belayer does with their hands while the other instructor climbs up, down, left and right and jacking. Demonstrate what a belayer does while the climber prepares to get lowered and the actual lowering of a climber with both belayer's hands on the rope. Demonstrate what the belayer's hands do when a climber takes a slight calculated fall.
13. Have the cadets pair up, untwist and sort out the top ropes, tie-in, and repeat the above things done in the demo and switch roles. Instructors monitor the handiwork of the belayers as well as the climbers themselves.
14. Have each cadet pull the top ropes down and mountain backpack coil the ropes upon their backs.
15. Ascent the ascent trail
16. Recover the top rope slings and carabiners from the top using the leash/tether system as a backup to one's balance.
17. Cover where to meet the next class.

## **Lesson # 2**

1. Meet at Lower Flirty
2. Gear up at top of crag with harness, helmets, slings, carabiners, chalk bag, leash/tether system, pearabiner with belay device, and shoes.
3. Review the danger of the "red zone", that is, working near the top edge of the crag.
4. Demonstrate the use of the leash/tether system.
5. Review and demonstrate the basic top rope system using the top rope sling, locking carabiners, and bolts. Cover uncoiling of the rope, clipping in the middle of the rope to the top rope fulcrum (aka master point), tying the ends of the rope together, and the toss to the bottom. Show some of the variations of the top rope set-up.
6. Each cadet then sets up a top rope with some instructor supervision.
7. Introduce rappelling and rappelling off a top rope set up as used in this class.
8. Show the exact sequence of putting the top rope into the rappelling device and transferring the leash/tether. Show the entry skills to get into the rappelling position and the final checkout of all. Show the release of the leash/tether and rappelling with two hands on the belay side of the rappel rope.
9. Show rappelling with two hands with the rope between the legs.
10. Show the triple leg wrap tie-off and why.
11. Remind the cadets that rappelling is just like belaying and they are **never** to let go of the belay side of the rappel. Remind them that they are "self-belaying themselves down and they are the active climber."
12. Have the cadet rappel down. Get off rappel and ascent the ascent trail and do it again.
13. Have each cadet pair up and repeat the roles of climber and belayer as per lesson #1.
14. Demonstrate some more of the basic climbing skills like small steps, smearing, using balance, third hand, and third leg. Show climbing the easy sections of lower Flirty with one finger or only feet.
15. Have each cadet pull the top ropes down and mountain backpack coil the ropes upon their backs
16. Ascent the ascent trail

17. Recover the top rope slings and carabiners from the top using the leash/tether system as a backup to one's balance.
18. Cover where to meet for the next class.

### **Lesson # 3**

1. Meet at Upper Flirty
2. Gear up at top of crag with harness, helmets, slings, carabiners, chalk bag, leash/tether system, pearabiner with belay device, and shoes.
3. Review the danger of the "red zone", that is, working near the top edge of the crag.
4. Review and demonstrate the basic top rope system using the top rope sling, locking carabiners, and bolts. Cover uncoiling of the rope, clipping in the middle of the rope to the top rope fulcrum (master point), tying the ends of the rope together, and the toss to the bottom.
5. Show some top rope variations and use of the trees in the top rope anchor systems.
6. Review and demonstrate rappelling and rappelling off a top rope set up as used in this class.
7. Each cadet then sets up a top rope with supervision check out and rappels off doing all the correct sequences.
8. Have each cadet pair up and repeat the roles of climber and belayer as per lesson #1-2.
9. Have the cadets pull down the top ropes and mountain backpack coil the ropes.
10. Ascent the ascent trail
11. Recover the top rope slings and carabiners from the top using the leash/tether system as a backup to one's balance.
12. Cover where to meet for the next class.

### **Lesson # 4**

1. Meet at the top of PI Wall north end to set up each top rope station from Window on the Hudson to Sally.
2. Gear up at top of crag with harness, helmets, slings, carabiners, chalk bag, leash/tether system, pearabiner with belay device, and shoes. Tie on the rope in the mountain backpack before going into each top rope station.
3. Review the danger of the "red zone", that is, working near the top edge of the crag and the use of the leash /tether system as this is more real on this particular crag. Discuss that getting to the top rope station, and the ascent trail at the end of the class is just if not more dangerous than the rappelling and climbing.
4. Cover threading the top rope through two chains links attached to the bolts. Many of the stations on PI Wall do not require the use of top rope slings. Cover some require using a tree for a top rope directional to keep unnecessary rope damage to a minimal.
5. Assign instructors to place and supervise each cadet setting up a top rope station.
6. Cadets are escorted and placed and given some details at each top rope station set up.
7. Each cadet sets up a top rope and rappels down after instructor check and cadet buddy checks.

8. Have each cadet pair up and repeat the roles of climber and belayer as per lesson #1-3.
9. Have each cadet pull the top ropes down and mountain backpack coil the ropes upon their backs.
10. Cover where to meet for the next class.
11. Ascent the north ascent trail reminding them the ascent trail and retrieving top rope anchor gear is dangerous at PI Wall.
12. Recover the top rope slings and carabiners from the top using the leash/tether system as a backup to one's balance.
13. Cadets pack up their packs and are dismissed.

### **Lesson # 5**

1. Meet at the top of PI Wall north end to set up each top rope station from Window on the Hudson to Sally.
2. Gear up at top of crag with harness, helmets, slings, carabiners, chalk bag, leash/tether system, pearabiner with belay device, and shoes. Tie on the rope in the mountain backpack before going into each top rope station.
3. Review the "red zone" working near the edge of the crag, and the use of the leash /tether system as this is more real on this particular crag. Discuss that getting to the top rope station, and the ascent trail at the end of the class is just if not more dangerous than the rappelling and climbing.
4. Review threading the top rope through two chains links attached to the bolts. Many of the stations do not require the use of slings. Cover some require using a tree for a top rope directional to keep unnecessary rope damage to a minimal.
5. Assign instructors to place and supervise each cadet setting up a top rope station.
6. Cadets are escorted, placed, and given some details at each top rope station set up.
7. Each cadet sets up a top rope and rappels down after instructor check and cadet buddy checks.
8. Begin grading of all areas.
9. Have each cadet pair up and repeat the roles of climber and belayer as per lesson #1-3.
10. Have each cadet pull the top ropes down and mountain backpack coil the ropes upon their backs.
11. Cover where to meet for the next class.
12. Ascent the north ascent trail reminding them the ascent trail and retrieving top rope anchor gear is dangerous at PI Wall.
13. Recover the top rope slings and carabiners from the top using the leash/tether system as a backup to one's balance.
14. Cadets pack up their packs and are dismissed.

### **Lesson # 6**

1. Meet at the center of the top PI Wall above Knob and Chain.
2. Gear up at the top of crag with harness, helmets, slings, carabiners, chalk bag, leash/tether system, pearabiner with belay device, and shoes.

3. Review the "red zone" working near the edge of the particular crag, and the use of the leash /tether system as this is more real on this crag.
4. Demonstrate the rappel off a "beefy" tree with knots in the ends of the halved climbing rope.
5. Demonstrate and cover rappelling off the top edge and down 10-30 feet to find a two bolt top rope station with rapid links and equalizing chain using the sample top rope bolt/chain system on the rock near the top.
6. Demonstrate getting leashed/tethered and bridging the bolts using a quick draw.
7. Demonstrate untying the knots in the end of the rap rope; securing the rap rope to the harness; pulling the rap rope down from the "beefy tree"; threading the end of the rope through the top rope chains; tying a knot in the ends; and evening the rope off so that the middle is between the chains.
8. Demonstrate the toss and putting oneself back on rappel and checking out the rappel system. Go onto the rappel and recover the quick draw bridge and leash/tether. Rappel to the ground leaving no gear behind except for the top rope through the chain 10-40 feet from the top.
9. Assign instructors to place and supervise each cadet setting up a top rope station.
10. Cadets are escorted and placed and given some details at each top rope station set up.
11. Each cadet set up top ropes around a "beefy" tree and rappels down 10-40 feet from the top to a top rope station after instructor check and cadet buddy checks.
12. Each cadet gets anchored to the station and gets free from the rappel rope and retrieves the rap rope. Each re-threads the rope and sets up for next rappel and top rope. Each rappels off and gets to the base of the crag.
13. Have each cadet pair up and repeat the roles of climber and belayer as per lesson #1-3.
14. Grading of all areas.
15. Have each cadet pull the top ropes down and mountain backpack coil the ropes upon their backs.
16. Cover where to meet for the next class.
17. Ascent the south ascent trail reminding them the ascent trail and retrieving top rope anchor gear is dangerous at PI Wall.
18. Recover the top rope slings and carabiners from the top using the leash/tether system as a backup to ones balance.
19. Cadets pack up their packs and are dismissed.

### **Lesson # 7**

1. Meet at the center of the top PI Wall above Knob and Chain.
2. Gear up at the top of crag with harness, helmets, slings, carabiners, chalk bag, leash/tether system, pearabiner with belay device, and shoes.
3. Review the "red zone" working near the edge of the crag, and the use of the leash /tether system as this is more real on this crag.
4. Review the rappel off a "beefy" tree with knots in the ends of the halved rap rope.
5. Review and cover rappelling off the top edge and down 10-30 feet to find a two bolt top rope station with rapid links and equalizing chain using the sample top rope bolt/chain system on the rock.

6. Review getting leashed/tethered and bridging the bolts using a quick draw. Demonstrate untying the knots in the end of the rap rope, securing the rap rope to the harness, pulling the rap rope down from the "beefy tree", threading the end of the rope through the top rope chains, tying a knot in the ends, and evening the rope off so that the middle is between the chains.
7. Review the toss and putting oneself back on rappel and checking out the rappel system. Go onto the rappel and recover the quick draw bridging between the bolts and leash/tether. Rappel to the ground leaving no gear behind except for the top rope treaded through the chain 10-40 feet from the top.
8. Assign instructors to place and supervise each cadet setting up a top rope station starting from the "Pink Butt Tights" south along the middle 1/2 of the PI Wall.
9. Cadets are escorted and placed and given some details at each top rope station set up.
10. Each cadet set up top ropes around a "beefy" tree and rappels down 10-40 feet from the top to a top rope station after instructor check and cadet buddy checks.
11. Each cadet gets anchored to the station and gets free from the rappel rope and retrieves the rap rope. Each re-threads the rope and sets up for next rappel and top rope. Each rappels off and gets to the base of the crag.
12. Have each cadet pair up and repeat the roles of climber and belayer as per lesson #1-3.
13. Grading of all areas.
14. Have each cadet pull the top ropes down and mountain backpack coil the ropes upon their backs.
15. Cover where to meet the next class.
16. Ascent the south ascent trail reminding them the ascent trail and retrieving top rope anchor gear is dangerous at PI Wall.
17. Recover the top rope slings and carabiners from the top using the leash/tether system as a backup to ones balance.
18. Cadets pack up their packs and are dismissed.

### **Lesson # 8**

1. This lesson can be done lesson 5, 6, 7, or 8 depending on weather etc.
2. Meet at the DPE Projection Room in climbing uniform with packs.
3. View climbing instructional video.
4. Move to Squash Court # 19, the indoor climbing wall.
5. Demonstrate and explain the use of indoor walls.
6. Have each cadet gear up and climb using top ropes and bouldering on the indoor wall.
7. Cover where to meet for the next class.
8. Cadets pack up their packs and are dismissed.

### **Lesson # 9**

1. Meet at the center of the top PI Wall above Knob and Chain.
2. Gear up at the top of crag with harness, helmets, slings, carabiners, chalk bag, leash/tether system, pearabiner with belay device, and shoes.

3. Review the double rappel system from a "beefy tree" to the top roping climbing at the base.
4. Assign instructors to place and supervise each cadet setting up a top rope station starting from the "Pink Butt Tights" south along the middle 1/2 of the PI Wall.
5. Cadets are escorted and placed and given some details at each top rope station set up.
6. Each cadet set up top ropes around a "beefy" tree and rappels down 10-40 feet from the top to a top rope station after instructor check and cadet buddy checks.
7. Each cadet gets anchored to the station and gets free from the rappel rope and retrieves the rap rope. Each re-threads the rope and sets up for next rappel and top rope. Each rappels off and gets to the base of the crag.
8. Have each cadet pair up and repeat the roles of climber and belayer as per lesson #1-3.
9. Grading of all areas.
10. Have each cadet pull the top ropes down and mountain backpack coil the ropes upon their backs.
11. Cover where to meet for the next class for gear issue.
12. Ascent the south ascent trail reminding them the ascent trail and retrieving top rope anchor gear is dangerous at PI Wall.
13. Recover the top rope slings and carabiners from the top using the leash/tether system as a backup to ones balance.
14. Cadets pack up their packs and are dismissed.

### **Detailed Sequential Steps Of The First Three and Last Sessions**

#### **Gear Issue - First meeting**

1. Meet in Scott Barracks 5<sup>th</sup> Floor for gear issue or other designated place.
2. Introductions of course and instructors
3. Your course manual, safety understanding, guidebook, other material will be emailed to you.
4. Cover inclement weather plan and alternatives
5. Safety and risk statement
6. Set the mode of communication rule: "There are no stupid questions or comments in this class." When it comes to climbing safety and procedures in the area we are about to enter, we want open communication by all.
7. Signing and filling out recognition of safety and risk forms
8. Signing and filling out use of gear understanding form
9. Covering fit of helmet
10. Cover fit of climbing seat harness
11. Cover fit of climbing shoes
12. Go to the DPE Climbing Gear Storage Room and get gear.
13. Fit shoes, helmet, and harness. Cadets put them on and have an instructor check it out.
14. Return to the North Gym and each cadet fills out hand receipt.
15. Cover putting on and off the seat harness.
16. Cover the "triple pass thru buckle." Have the cadets do it.

17. Cover the buddy check system. Have the cadets do it on the harness buckle check.
18. Cover the harness leash (tether) system with 9/16" shoulder sling girth hitched to the harness on one end and a locking carabiner on the other end , clipped to a gear loop. Have the cadets do it.
19. Get geared up by making quick draws, harness leashes, racking gear, etc
- 20. Instructors check every buckle, harness, leash/tether, and set up each cadet and make corrections.**
- 21. Cover Rule # 1, "Always check the final product."** Check every link in the chain and does it look "picture perfect" rule when putting gear and linking ropes, slings, harnesses, carabiners, etc, together. Do a minor to major "hand snap load" test on it without snapping yourself off balance. Have the cadets do it.
22. Cover the gear loops and that the gear loops only use is for gear like carabiners not for anchoring systems.
23. Cover racking the gear like on a shoulder sling or on the gear loops of the harness
24. Cover chalk bag and waist belt. Have the cadets do it.
25. Cover uncoiling the rope into a "spaghetti pile" with the ends showing aka flaking out the rope. Have the cadets do it.
26. Cover tying in the end of the climbing rope to the seat harness using the figure 8 trace through knot with the double overhand tie off. Have the cadets do it. Check the final product. Buddy check.
27. Cover using the HMS pearabiner and the belay device and how it should be placed upon the harness using the "clip and flip" method. Note that different harnesses are set up differently. Keep the pearabiner and belay device together. Clipping into the harness with the pearabiner connecting the waist belt and the bridge between the two leg loops is key on most harnesses. Have the cadets do it. Check the final product. Buddy check.
28. Cover putting the live rope with climber attached into the belay device. Have the cadets do it. Check the final product. Buddy check.
29. In a horizontal demonstration with a climber tied in, cover belaying and the belayer "handiwork" as one give slack, or takes the rope in, and locks it off to arrest a fall or secure the belay. Cover the belay hand sequence. **Cover Rule # 2, "Never let go of the belay (passive side) of the rope even for a millionth of a second."**
30. Have each cadet tie in, put a partner on belay, belay each other in the horizontal mode taking in and letting the rope out with the correct handiwork and hand sequence. Practice locking it off to arrest a fall or to secure the belay.
31. Cover coiling the climbing rope into a mountain backpack coil and mounting it on one's back. Have the cadets do it.
32. Have the cadets finalize their gear hand receipt, coil up the ropes and place everything in the pack.
33. Tell the cadets where to meet the next lesson (Lower Flirty).

### **Lesson #1 - Meet at Lower Flirty**

1. Cadets get harnesses on and gear up to include helmets.
2. Review the "buddy check" on harness buckles and girth hitched leashes.

3. **Instructors check every buckle, harness, leash/tether, and set up each cadet and make corrections.**
4. Cover the safety along the top of the practice crag. Cover the "red zone" and show the rock drop demo.
5. Show the use of the leash system and using another 24" sling girth hitched to extend the leash. Instructor gets tethered in using the leash system.
6. Show in detail, the setting up of three separate top rope "sling shot" anchors to include:
  - Use of the "Gene Smith" top rope slings
  - Use of locking carabiners
  - Two locking carabiners with opposing gates at the "Magic X" with gates locked making a "Master Point" or "Top Rope Fulcrum."
10. Show the method for uncoiling the rope, finding the middle, and clipping in.
11. Show the tying knots in the ends of the rope either separately or into individual ends.
12. Show the rope toss.
13. Show at least three top rope stations setups and variations because the next class, the cadets will be doing it.
14. Instructors will set up all 10 top ropes and cadets will observe.
15. Walk the class down the descent trail and around to the base of the crag to the top ropes.
16. Untwist a top rope and adjust by pulling down the top rope so one end is the climbers and the other is the belayer's with the passive extra rope.
17. Give a traced-through-figure-8 tie-in review and both instructors tie-in.
18. Demonstrate the following **"Basic Climbing and Basic Belaying Demonstration":**
19. Show putting the rope into the belay device.
20. Using the self-check and buddy check, **Cover Rule # 1,"Always check the final product."**
21. Cover basic climbing verbal cues like "you're on belay"; "climbing?" "climb when ready", and "climbing!!."
22. Show an instructor climbing up 10-15 feet with the cadets watching the climber. Have the instructor climber look and check the belayer's handiwork (Are the belayer's hands doing the right thing?). Too many climbers "assume" the belayer's hands are the right thing\_little do they know. So while climbing, **Cover Rule # 1,"Always check the final product." This includes your belayer's handiwork. As a climber, the belay is yours not the belayers. Look and know your belayer's handiwork every time you change partners. Make no assumptions here. As a climber, if the belayer's handiwork is not right, stop right here get on down, make corrections or what's ever appropriate.**
23. Show an instructor down climbing 10 -15 feet with the cadets watching the climber.
24. Show instructor climbing up 10 feet, climbing left and right, and the instructor climber looking over his shoulder at the belayer's handiwork with the cadets watching the climber.
25. Show instructor down climbing with the cadets watching the climber.
26. Demonstrate lowering the instructor. Show the proper **lowering the climber sequence:**

- Have the climber communicate and look at the belayer stating "get ready to lower me."
  - Have the climber reach across and grab the other side of the top rope forming a hand belay for oneself.
  - Have the belayer take up all slack in the top rope and lock off with two hands on the belay ready to lower and state "okay ready to lower".
  - Then the climber states "loading the top rope" and while holding the "hand belay" and looking at belayer's eyes, leans back on the top rope placing full weight on the rope. Then the belayer starts to lower the climber to the ground with the climber letting the rope slide through his hand belay while looking down at the belayers hands and eyes.
  - If the climber is satisfied then the climber lets go of the hand belay and enjoys the lowering.
32. Have the cadets only look at the belayer's hands and the proper hand sequence as the other instructor climber climbs up, down, right/left, gets lowered, and takes a tiny fall. **Cover Rule # 2, "Never let go of the belay (passive side) of the rope even for a millionth of a second."** Show the belay device lock off and the "S" formed in the rope when locked off, which gives the holding power of the belay device.
  33. Show them taking in the rope and giving out the rope.
  34. Show the lock off and semi lock off of the belay device.
  35. Show them "jacking up the top rope" (The climber pulls down on the opposite rope, using it like a pulley) to get over a tougher section of rock.
  36. Show the instructor taking a small fall on purpose. Cover the cushioning use of the arms and the legs to avert injury upon the return to the rock after a fall. Cover that this must be done on an appropriate piece of rock not just anywhere.
  37. Have each cadet pair off and go to a top rope do the following sequences of events.
  38. Undo the top rope twists and pull one side down establishing the climbers end for tie-in and the belayer's side with the extra rope.
  39. Both tie-in. One climber puts the other on belay.
  40. Both do self checks. Both do a "buddy check." Both do the climbing verbal cues.
  41. Then they repeat the **"Basic Climbing and Basic Belaying Demonstration"**:
    - Climb up 10-15 feet and have the climber look and check the belayer's handiwork (Are the belayer's hands doing the right thing?).
    - Downclimb 10-15 feet and have the climber look and check the belayer's handiwork (Are the belayer's hands doing the right thing?).
    - Climb up, climb right, climb left, downclimb and have the climber check the belayer's handiwork (Are the belayer's hands doing the right thing?).
    - Climb up 10-15 feet and get lowered using the **lowering the climber sequence**.
    - Climb up passing a section of rock by "jacking up the top rope."
    - After selecting a piece of appropriate terrain, practice a tiny fall with the belayer holding on with two hands on the belay side of the rope.
  48. Cadets switch roles of belayer and climb and repeat the **"Basic Climbing and Basic Belaying Demonstration."**
  49. At the end of the class, the cadets lower their climber, untie, and pull down the top ropes, coil up the ropes using the mountain back pack coil, and walk up the

ascent/descent trail to the top of the crag. Using the leash/tether, they recover the top rope slings and gear.

50. Review the meeting place of the next class and dismiss.

## **Lesson #2 - Meet at Lower Flirty**

1. Cadets arrive at the top of the crag and gear up. Cadets do final product self check and buddy check off another cadet.
2. Review the "red zone."
3. Review the leash/tether system and extending it with another sling(s).
4. Review and show a Gene Smith top rope anchor sling set up showing the use of 4 lockers, the magic X, and the top rope fulcrum.
5. Review the uncoiling of the rope and clipping in the middle of the rope into the two lockers.
6. Review the knot in the ends of the rope and tossing it down methods.
7. Have the cadets each set up a top rope station using their leash/tethers.
8. Instructors will give suggestions at each station and make corrections on each cadet.
9. After the top ropes are set up, a **"basic rappelling off the top rope using a leash/tether backup"** lesson is given:
10. The top rope is all set up and the climber soon to be rappeler is leash/tethered to the anchors. Already, the large pearabiner or HMS- type carabiner and belay device is correctly attached to the climber/rappeler's harness.
11. The rappeler hauls up the top rope slings and grabs the halved top rope just below the double locking carabiners or "Master Point".
12. Then rappeler brings up enough slack and steps on it with one foot.
13. The rappeler bends a bight in both ropes and feeds them correctly into the belay device and clips both bights of rope into the pearabiner to include the keeper part of the belay device.
14. The rappeler then locks the pearabiner, adjusts the slack up, and does a final inspection of the set up.
15. Then, while holding on to the rope with one hand just a few inches below the rap setup, the rappeler unscrews the locking carabiner at the end of the leash/tether, and unclips and transfers it to the end of the top rope slings by re-clipping and screwing the locking gate shut.
16. The rappeler then grabs the top ropes sling and down climbs down over the edge using both hand and feet to get into the rappel position. The leash/tether is the "lifeline" backup to this movement into the rap position.
17. The rappeler then grabs the rap rope with both hands and loads the rap device so that there is slack in the leash/tether system. And does a final product check.
18. The last thing the rappeler does, is to hold on to the weighted rap rope running through the rap device, and then with the other hand unclips the leash/tether backup. Then the rappeler either clips it to a gear loop or if extended places it over the shoulder like a shoulder sling.
19. The rappeler proceeds to lower down by feeding slack through the rappel device with both hands on the rappel belay side of the rope just like belaying. Rappelling is really belaying oneself down either a double rope or a single rope. **Cover Rule # 2, "Never**

**let go of the belay (passive side) of the rope even for a millionth of a second."**  
**The consequences of ever letting go of the belay side of the rappel rope must be emphasized here.**

20. The rope should be between the legs with two hands below the rap device in general.
21. Show the three wraps around the upper thigh method of securing the rappel rope to free the hands to get gear or take a picture (not for all situations, to be sure).
22. Show walking right and left on rappel (not to extremes, however).
23. Have a demonstration of the fireman's belay from the bottom.
24. Demo the **"basic rappelling off the top rope using a leash/tether backup"** lesson again for all to see a second time. Maybe a third time.
25. Have the cadet return to their station, get leash/tethered and proceed to set up for a rappel.
26. Instructors must inspect the final product and rappel setup in detail before the final leash/tether is unclipped.
27. Cadets rappel down with two hands below the rap device.
28. Half way down in an appropriate place, the rappeler practices the three leg wrap tie-off on the upper thigh.
29. After rappelling, each cadet pairs up and climbs repeating the previous lesson's **"Basic Climbing and Basic Belaying Demonstration"** sequence.
30. At the end of the class, the cadets lower their climber, un-tie, and pull down the top ropes, coil up the ropes using the mountain back pack coil, and walk up the ascent/descent trail to the top of the crag. Using the leash/tether, they recover the top rope slings and gear.
31. Review the meeting place of the next class and dismiss.

### **Gear Turn-in - Last Meeting (35 minutes)**

1. Meet in North Gym (women's gymnastics area).
2. Discuss the inventory process, the return of the gear properly in the storeroom, and the course evaluation.
3. Layout and breakdown all the gear on the floor exercise rug.
4. Pass out the individual inventory hand receipts
5. Each cadet inventories their gear and places extras in the middle
6. Place in piles all the similar gear like all the ropes, harnesses, pearabiners, etc.
7. Using the cadets, transfer the gear to the DPE Rock Climbing Storeroom and hang up in appropriate areas.
8. Instructors give a debriefing on the safety and dangers of climbing.
9. Instructors give a summary review of the course and where it leads to from here.
10. Have each cadet fill out the course evaluation form.
11. Dismiss.





## Annex #2 - Details of a Basic Rock Climbing Top Rope Set-up

### ***DETAILS OF A BASIC ROCK CLIMBING TOP ROPE SETUP***

The following items are suggested if you plan to continue climbing. All gear that will be under stress in a fall should meet the UIAA specification. Notice that for under \$400.00, you can get a very good start. Also note that since a climbing team is generally two people, your "belay slave" needs to only buy a harness and shoes to be outfitted.

ITEM OF GEAR	SPECIFICATIONS	APPROX. PRICE \$	COMMENT
Climbing Shoes		80.00-120.00	Try them on.
Rope	11mm x 165'	135.00	Can get 10.5mm Can be "dry"
Harness w/gear loops		45.00	Fit or get adj. leg loops. Comfort
Belay Device	HB Biggerbrake 11/11mm	18.50	Get a ATC or Figure 8 or Tuber
Pearabiner (HMS)	11mm screwgate	16.00	Get an AUTOLOCK
Locking Carabiner	5	5 x \$7.00 = 35.00	1 for leash and 4 for top rope setup
Spectra Slings	10 x 24"	10 x 4.00 = 40.00	Solid and light
Chalk Bag		14.00	Can make or create your own or "be chalkless"
Chalk Bag Belt		3.00	Use rope or sling
		TOTAL \$376.50	

#### MORE GEAR

Straight Gate Biners	10 "D" shaped	10 @ 3.50 = 35.00	
Tubular Nylon Webbing	1 X 25' Piece for Top Rope Sling	.35 x 25' = 8.75	For Top Rope Sling
Pack	2500 cc (volume)	80.00	
Helmet		80.00	Recommended
John Long's "How to Rock Climb" book		10.00	Your life insurance guide.

Remember that *climbing skills, systems, experience, and judgment* are the key ingredients to successful, injury-free longevity in this arena. Most people usually lack experience and judgment. NEVER let go of the belay hand and ALWAYS double check "every little link in system" prior to loading. Many happy UPS AND DOWNS AND WORKING AROUNDS!

**Annex # 3 - Cadet Evaluation Sheet**

**Cadet Evaluation of the DPE Basic Rock Climbing Course**

**Instructions: Please fill out this evaluation constructively and candidly. Also discuss the course with us.**

**How do you rate this DPE course? How does this course compare with all of your courses to date?**

**What did you like about this course?**

**What did you learn about yourself?**

**What improvements would you make to this course?**

**Evaluate your individual instructors by name.**

**Should DPE offer more "lifetime sports" type of courses?**

## **Annex # 4 - Double Rappel from Top of PI Wall ending with a Top Rope from the Bolts with Chain**

### **DPE TOP ROPING CLASS**

**TASK:** (1) Rappel Off Tree, (2) Anchor Off, (3) Pull The Rope, (4) Thread The Chains And Set Up New Rappel Rope, (5) Rappel, (6) Top Rope Climb W/Belay, (7) Pull Rope Down, And End Class

**ALWAYS DOUBLE CHECK EVERY LINK IN THE SYSTEM. THEN LOAD AND CHECK. THEN USE IT. PLAN AHEAD AND SEE THE OVERALL SEQUENCE OF EVENTS.**

### **SEQUENCE OF BASIC STEPS/EVENTS:**

1. Set rap ropes around "beefy" tree, tie overhand in evened ends, set the knot tight, toss or lower.
2. Set up rappel device, rappel to top rope station w/chains over edge of cliff onto face.
3. Anchor yourself in by clipping in with leash, then bridge the two bolts with a "quick draw."
4. Undo rappel device, tie off rope to harness w/figure eight on a bight, retrieve ends and undo knot in ends. Pull down rope from around tree keeping track of the the rope ends. This is where climbers create tangles and all kinds of rope handling problems.
5. Thread one rope end properly through the two chain links for a smooth top rope. Tie the rope ends together with a figure 8 or overhand knot. Set the knot tight. Pull the rope through until the center of the rope is at the chains. Then either toss or lower the knotted ends down.
6. Set up rappel device. Check it out and load.
7. With free hand, undo the "bridge" and the leash putting both back onto the harness.
8. Rappel down always checking the rope and what's below.
9. At bottom, undo the rappel device and untie the knot in the ends of the rope. Untwist the rope above and check to see if it is running okay.
10. Both the belayer and the climber should tie in. If the belayer does not tie in, then at least tie a knot in the loose end of the top rope so that the belay rope can not go through the belay device by accident.
11. Top rope climb. Switch roles. Switch to other ropes.
12. At end of class, pull down the TR, coil and depart.

## **Annex # 5 - Current Climbing Offerings at USMA**

### **ROCK CLIMBING, PIAD ROCK CLIMBING, CADET MOUNTAINEERING CLUB**

**Program:** Rock Climbing is offered as a DPE upperclass course E and F hours during Round 1 and Round 4 and teaches 40 cadets. DPE's PIAD Rock Climbing known as Outer Limits/Mountain Leader is offered for three weeks in June just after Graduation and teaches 14-16 cadets extensively for 14 days. The Cadet Mountaineering Club is a Cadet Competitive Team Club which operates year round with the two main seasons being Fall and Spring. The Mountaineering Club teaches and serves about 50-75 cadets per year.

**Current Facilities:** DPE instructs and provides personnel in all three activities above. The Instruction is conducted at the following sites on post: Lower Flirty, Upper Flirty, Poison Ivy Wall, MP Wall, Dean's Wall, the Indoor Wall in Squash Court #18, and several other small crags. These listed sites are rock cliffs along the Hudson River that have been developed by Mr. Ned Crossley, DPE and others to accommodate group instruction and individual climbing. The PIAD and the Club extensively use the Shawangunk Ridge known as the Mohonk Preserve near New Paltz about 35 miles away. This is a "mecca" for world class rock climbing" and has been used by West Point climbers since the '60's. Reference should be made to the guidebook entitled "Rock Climbing at West Point" by Mr. Ned Crossley, DPE. For inclement weather, the classes and club utilize Arvin Gymnasium, squash court # 18 or reschedule. The PIAD and the Club take many field trips to the "Gunks" and other climbing areas in the US

**State of the Art:** Climbing is an outdoor pursuit. In fair or foul weather it can be done, however, common sense and indoor climbing on artificial walls is the alternative. Our current training cliffs are the state of the art. It is not likely that anywhere in the United States that one institution owns and operates the quality of climbing walls as we do. The USMA climbing sites are setup for safe climbing using state of the art anchor systems (bolts and modern protection), gear, equipment, and plans of instruction. However, because of human judgment and error, rock climbing, mountaineering, and ice climbing are inherently dangerous, risky and definitely vertical.

The AOG has accepted the Class of 1979 project to design, construct, and fund a large indoor climbing wall that would give West Point an improved "state of the art" image.

Both the Mountaineering Club and DPE own and maintain climbing equipment supply rooms to issue the proper shoes, ropes, harnesses, gear to the cadets taking the courses and participating in the club practices and trips. The club needs more funding for gear update and replacement and DPE gear is the top quality.

**Competition:** Just by entering the "vertical climbing world" you compete with risk as defined by GRAVITY, THE LAWS OF PHYSICS, AND MOTHER NATURE. A cadet competes against the rock itself, pre-rated routes and works with a team of two on most

climbs. The Mountaineering Club makes about 10 climbing trips per year. The Mountaineering Club also attends 2-3 climbing competitions per year for comparative results against other climbers and climbing tasks.

**Safety, Code, Gender Equity:** These activities are coed as the cliff and gravity does not know the difference. Under safety, the basics apply like common sense, recognizing the risk and danger, and knowing one's ability based upon experience and judgment, skill, and learning from other climbers. The programs have a very good track record for safety over the past 12 years but USMA stills needs to have a "subject matter expert" constantly involved at all sessions. Currently it does not on trips and in the Spring!

**Point of Contact:** Mr. Ned Crossley, Associate Professor, DPE.

## **Annex # 6 - Safety/Warning — DPE Rock Climbing Courses**

### **United States Military Academy Department of Physical Education Safety/Warning — DPE Rock Climbing Courses**

#### **Nature of the Activity**

This rock climbing activity is designed to provide the cadet an opportunity to acquire fundamental rock climbing skills and climbing system skills. This rock climbing activity is designed to develop physical fitness, to participate in healthful, vigorous lifetime outdoor and indoor recreation, and to utilize numerous opportunities to develop leadership qualities. Specifically, the activity requires climbing and rappelling on vertical rock cliffs using efficient movement and proper accepted procedures of safety in using the rock climbing. Approaches to the top of the cliff, climbing and rappelling on the cliff, and just being at the base of the cliff are dangerous. Rock climbing is inherently dangerous as it is played in the vertical environment. Should a cadet fall and hit rock or other objects, injury could occur. Should other objects fall from above, like rock, a cadet could be injured. Because of the pulling and pushing, stretching, and stressing the body in all ranges of motion via the rock climbing movements on the rock a cadet could become injured.

#### **Purpose of the Warning**

The purpose of the following information is to **inform** the cadet of the risk of potential injury in rock climbing activity. When a cadet participates in a physical activity, especially an vertical activity on rock cliffs involving falls, and system failures, the risk of injury appears high. The information regarding proper climbing systems, safety, and climbing skills are shared with you to create a more enjoyable and productive experience. Describing all potential injuries that a cadet may sustain while participating in rock climbing and mountaineering activity is not conceivable. Proper judgment, experience, execution of fundamentals, elements of instruction, and care of the equipment remains imperative for the safety and zest of those participating.

#### **Potential Injuries**

The following list represents potential injuries that may occur in rock climbing activity:

1. Cadets may die while climbing due to impact as a result of a fall or an impacting falling object.
2. Cadets may suffer severe spinal damage while climbing due to impact as a result of a fall or an impacting falling object.
3. Cadets may suffer severe head trauma while climbing due to impact as a result of a fall or an impacting falling object.
4. Cadets may severely stretch or tear muscles and tendons in the legs, arms, back, neck, ankles, wrists, and fingers either while climbing due to impact as a result of a fall or an impacting falling object.

5. Cadets may incur injury to the any of the body joints via stress and strain while climbing or due to impact as a result of a fall or an impacting falling object.
6. Cadets may amass injury to the mouth and teeth and face while climbing due to impact from falling of having something fall on them.
7. Cadets may injure themselves if jewelry is worn especially rings.
8. Cadets may suffer eye injury while climbing due to impact as a result of a fall or an impacting falling object.
9. Cadets may suffer injury if the cliff and adjacent areas is not void of loose rock, dirt, gravel, and wet spots.
10. Cadets may incur injury while coming into contact with another individual while climbing due to impact as a result of a fall or an impacting falling object.
11. Cadets may incur injury as a result of another cadet or an instructor failing to communicate or do their job such as give a proper belay or setting up a top rope system.

#### Conditioning

1. A cadet's physical condition and current medical limits is what they bring to the rock climbing activity daily and therefore a cadet should climb and participate appropriate to their physical and current medical limits.
2. Daily rock climbing sessions will include activities designed to use a cadet's current level of flexibility, strength, and endurance and improve each area.
3. Stretching activities for the individual may be done prior to, during, and following all rock climbing sessions for joint flexibility and muscular elasticity.
4. The instructor should place emphasis using and improving the cadet's current level cardiovascular performance, strength, and muscular endurance of the arms and legs.
5. Cadets should be aware that conditioning is a continuous process.
6. Cadets should appreciate that the well-conditioned athlete will perform with fewer injuries.

#### Healthful Hints

1. Proper warm-up will be of help in reducing muscle soreness.
2. Proper rock climbing clothing especially a helmet and climbing shoes should be worn for complete safe movement.
3. Cadets should inform the instructor of any disability or illness and report any and all injuries that either happened before the start of the rock climbing sessions or during the rock climbing sessions.
4. Communication should be often between all members of the rock climbing team.
5. Cadets should remember that proper diet and rest is directly related to optimal performances.
6. Cadets should drink plenty of fluids before, during, and after rock climbing sessions.

## Safety

Rock climbing and mountaineering activity are a fun safe activity but with very dire consequences due to human error and improper use of the equipment and set-up. The following safety recommendations are provided for the participants in order to encourage maximum participation with the minimum amount of risk:

### **Safety Rules and Guidelines for Rock Climbing at West Point**

These rules and guidelines are applicable at West Point to both the DPE's climbing instruction and the Cadet Mountaineering Club.

1. **NEVER let go of the belay side of the rope...not even for a one millionth of a second.** A belay ON is just that. All of your handiwork and type of belay must accomplish this. When you are rappelling, you have yourself on belay.
2. **ALWAYS double check the "final product" in all systems after setting it up and before loading.** Double check every link and substance in the system from the rock, to the piece of protection, to the carabiner, to the sling, to the carabiner, to the rope, to the tie-in, to the buckle, to the harness. Hand check the system, visualize the loaded system...does it look right?...will it work?...see the next sequence of events...then use the system. "A chain is only as strong as the weakest link" concept.
3. **Wear a helmet at all times.** They have not performed a successful brain transplant as of yet.
4. Do not exceed your abilities. If you think that you are knowledgeable, infallible, or perfect in the face of the cliff or mountain, you are making a big mistake. Gravity can kill. Falling at 32 ft/sec squared to instant deceleration to zero hurts period.
5. Do not trust anything. Danger is always present in the climbing, therefore, good judgment is the key. By exercising prudent judgment, the inherent danger involved can be kept to a minimum. You must know where the dangers lie. Storms, temperature, wind, lightning, rock fall, equipment fall, pebble fall, person fall, etc. all have dire consequences. Be respectful of the crags and the hills.
6. Ego, showing off, overconfidence, casualness, ignorance, lack of confidence, and inexperience underlie many accidents in climbing.
7. **Climb for the right reasons:**
8. • Yourself
9. • The joy of effort
10. • Satisfaction of the mental and physical accomplishment
11. • Efficiency of movement
12. • Passion of the feelings one gets from the climbing
13. • The beauty
14. • To push yourself and your limits
15. • To develop one's self concept and to interact with others
16. • To live to climb another day
17. Do not step on the rope, it is your lifeline. Care for it.

18. Do not knock down loose rock or drop gear. Careless feet and rope tosses dislodge danger to those below from the top or ledges. Remember you don't want to knock your belayer silly whether leading or top roping.
19. Proper attire, gear, and food is key. Predict problems rather than react to them.
20. Quadruple check everything.
21. Test your handholds and footholds before using each one. They do become dislodged under stress.
22. Be an expert and artist at belaying. Anchor your belays, always use two anchors, use proper verbal communication.
23. Rappel off anchors slowly and steadily. Bounce rappelling is for the less knowledgeable.
24. Calculated, safe, protected falling onto proper systems is okay, but only if it works. Uncalculated falls and accidental falls are types are to be avoided.
25. Do not trust wet and loose rock, branches, bushes, grass, moss, fixed anchors, bolts, fixed pitons.
26. Use three points of contact on the rock as a basic. Balance on your feet and choreograph your moves. Slipping and tripping are common in everyday life, so figure on taking some slips and trips in climbing and falling. Protect yourself and figure it will happen.
27. Proper attitude equals safety.
28. Use the KISS principle. Keep it simple, stupid!
29. Technique, experience, and knowledge increase safety tenfold.
30. Make your pro (protection and anchors) multi-directional. Bombproof everything.
31. Do not lead until you are ready and lead several grades below your ability.
32. Do not climb alone in general.
33. Do not take long run outs.
34. No solo climbing. It is not worth it in respect to your future climbing joy and adventures.
35. Keep bouldering to eight feet or less with one's center of mass. Use a spotter or spotters. Those tiny falls have a reputation of doing great damage.

- **Do you have questions?**
- **I have read the preceding information and certify that I am physically fit for this rock climbing activity.** I further attest that I have sufficient experience to enable me to participate in this rock climbing activity. Should I encounter any physical problems or impairments now or during the course of this rock climbing activity, I agree to immediately notify my instructor. As previously stated, no amount of instruction, precaution, and supervision will totally eliminate all risk of serious, catastrophic, or even fatal injury from rock climbing activity. I fully, know, understand, and appreciate the risks inherent in this rock climbing activity.

\_\_\_\_\_  
**(Signature)**

\_\_\_\_\_  
**(Company)**

\_\_\_\_\_  
**(Date)**

**Annex # 7 - Some Basics Of The Climbing Game by Ned Crossley**

**SOME BASICS OF THE CLIMBING GAME**

Gravity Never Sleeps!  
The Laws Of Physics Are Strictly Enforced!  
May The Net Forces Be With You!

The Mountain Has The Last Word!

Mother Nature Does What She Wants, When She Wants, and How She Wants.

Rig It Right Or Take The Flight!

The Only Two Rules:

**Never** Let Go Of The Belay Side Of The Rope For Even A Millionth Of A Second.

**Always** Double Check And Re-Check Everything In The Chain Of Equipment. The "Final Product" And "Check" Is Crucial!

In actual climbing,  
Walk the walk!  
Then talk the walk!  
Then and only then, talk the talk!

Do you have the 52 cards in the deck of mountaineering? Know your limits based upon your systems, climbing abilities, experience, and judgment.

Know what to do if the "wheels fall off the wagon."

Be a "Sherlock Holmes" in inspecting all the climbing systems.

What's the difference between a basketball player and a rock climber?  
Answer: In rock climbing you are the ball! Have fun like a ball!

