

Chapter 8

Climbing and Bouldering

For many participants in BSA climbing/rappelling activities, there is nothing quite so challenging and thrilling as tying in to a climbing rope and making their first ascent of a steep face. The power of that experience can affect them on many levels—increasing self-confidence, overcoming personal barriers and fears, gaining skill, and taking on new responsibilities. In addition, they will discover that climbing can be downright fun.

To maximize the climbing experience and minimize the risks inherent in the sport, instructors should thoroughly prepare participants before allowing them to go on the rock. That can include a short introduction to cover the basics of using climbing's verbal signals, of being belayed, and of employing a three-point stance. Instructors can also demonstrate basic holds for the hands and feet and discuss what participants should do during and after a possible fall.

A portion of the introductory segment at a climbing site must include a few minutes of stretching to allow participants to loosen up and prepare for the rigors of the activities ahead. Novices may be further encouraged to be aware of the ways in which their bodies move as they walk on flat surfaces. If the terrain allows it, instructors can have participants do the same on gentle inclines and then more steeply angled rock. That will also allow them to experience the gripping ability of shoe soles, the use of small nubs and edges for holding body weight, and the incorporation of the hands to form a three-point stance, the foundation of all climbing. (For more on guiding participants through a climbing experience, see chapter 11, "Conducting a Climbing/Rappelling Program.")

Falling

Instructors working with a group new to climbing should explain how a belay works, mentioning that dynamic rope will stop falls gradually rather than all at once. Participants who are especially concerned about their safety might find their fears muted if instructors also show them the way that anchors are set and that there are backups in the unlikely event of an anchor failing.

Do not, however, lead participants to believe that they will not fall. Falling is part of learning to climb. The security of a proper belay will protect climbers from falling far. Clear communication with belayers will help ensure that when falls do occur, they will be relatively harmless.

THE THREE-POINT STANCE IS A STABLE POSITION FOR THE CLIMBER. AT ALL TIMES, THE CLIMBER KEEPS GOOD HOLDS ON THE ROCK USING ONE HAND AND BOTH FEET OR TWO HANDS AND ONE FOOT.

FIG. 64. CLIMBER FALLING



Every climber falls occasionally. Climbers and rappellers who are top-rope belayed should not fall more than a couple of feet as the rope stretches.

Falling climbers should try to turn toward the wall and use their hands and feet to cushion any impact against the climbing face and to prevent themselves from spinning. They should avoid grabbing the rope; doing so will occupy their hands rather than leaving them free to absorb the force of bumping into the wall.

Once a fall has been arrested, the climber, before finding good holds for the hands and feet and resuming the climb, may want to take a few moments to collect his or her thoughts and reassure those on the ground that everything is all right. (For more on the correct verbal signals to use, see chapter 7, "Belaying and Belay Signals.")

In Case of Injury

Instructors who suspect that a fall may have resulted in injury to a climber must carefully assess the situation before taking action. If the climber can answer questions, instructors should learn what they can about the climber's condition. In most cases, that will provide assurance that it will be safe for the belayer simply to lower the person to the ground for further diagnosis and treatment. However, if the climber is nonresponsive or if instructors suspect that injuries are more than minor, it may be wise for an instructor to rappel down to the climber to conduct an up-close evaluation and to be in position to assist in completing a rescue.

For more on evaluating injuries and carrying out rescues, see chapter 12, "Incident Resolution, First Aid, and Emergency Response."

Climbing Classification System

Climbing classification systems rate the difficulty of different climbs. Guidebooks for popular climbing areas use these scales to help people decide which routes match their skills. In the classification system most frequently used in the United States—the Yosemite Decimal System—there are usually five classes.

Class 1—Hiking. The hands are not needed for balance.

Class 2—Simple scrambling. The hands are occasionally used for balance. A rope is not needed.

Class 3—Scrambling. Climbers use their hands and some basic climbing skills. A rope may be used to belay anyone who is uncomfortable with the exposure.

Class 4—Simple climbing, often with exposure. Anchored belays are used, and natural protection can be found easily.

Class 5—Roped climbing with protection. All climbing involves using a rope, belaying, and protecting the leader from a fall. A belay is always required with climbers ascending higher than shoulder height.

Class 5 climbing is further divided into 15 categories of difficulty:

5.0-5.5: Novice and beginning climbers will enjoy these areas. They're a great place to start.

5.6-5.9: The climbs are more difficult. Specific climbing skills such as jamming, liebacks, and mantles are used.

5.10-5.15: Progressively more difficult climbing areas that demand physical training and climbing skills, as well as repeated experience climbing that area.

Aid climbing—roped climbing with artificial assistance—is sometimes considered a sixth class of climbing. Climbers on smooth, steep faces or overhangs place their weight on artificial aids such as climbing stirrups.

Bouldering

Bouldering is a fine way to learn climbing techniques. While its name comes from the practice of climbers working out moves on actual boulders, it can also be done on any face that presents usable handholds and footholds—the lower reaches of climbing towers, for example, or of stone buildings or artificial climbing walls. (Always obtain permission from owners or facilities managers before bouldering on structures.)

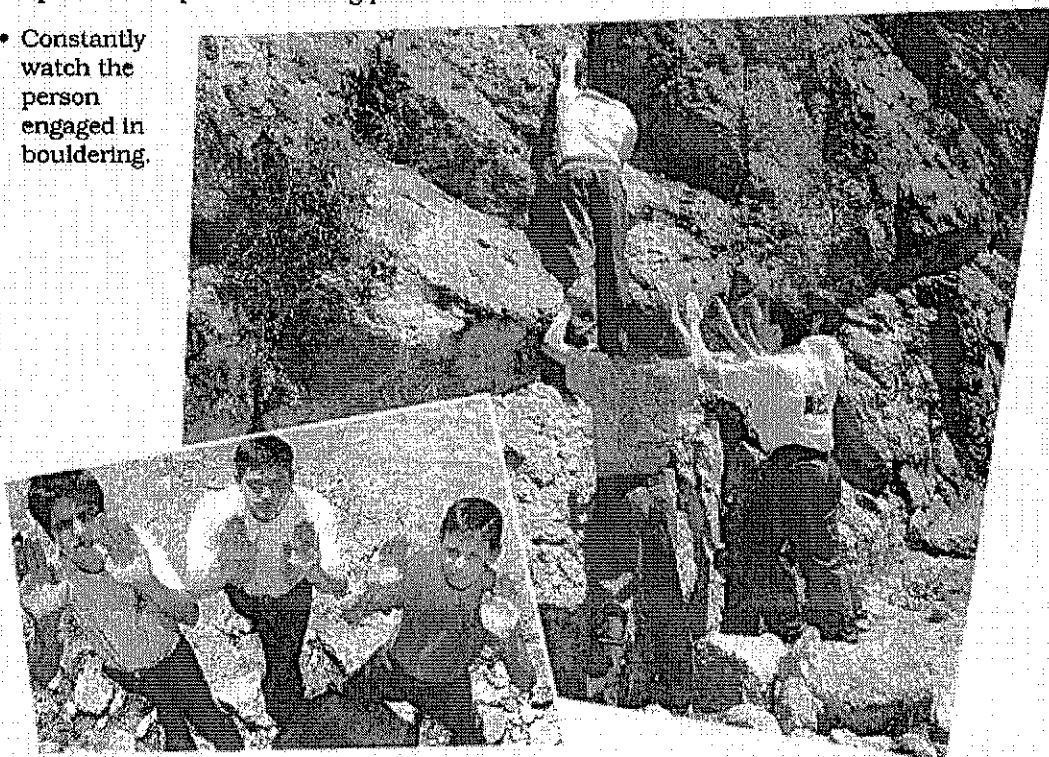
The key to safe bouldering is that climbers keep their feet fairly close to the ground, never ascending higher than their shoulder height above the ground. The goal is to move gracefully from one hold to the next. Boulders are more likely to move sideways than they are to go up or down. They often find that bouldering is ideal for practicing the placement of their hands and feet, learning to balance, and increasing the ease with which they can move in a vertical environment.

Anyone engaged in bouldering must be protected by *spotters*. In addition to spotters, mats or pads should be placed at the base of indoor climbing walls to protect boulderers. Instructors and participants who climb higher than shoulder height above the ground must have a belay to protect them in case they fall. And they will fall. It is part of learning to climb. (For guidance on selecting appropriate sites for bouldering, see chapter 10, "Site Selection.")

Spotting

Spotting means providing protection to a boulderer/climber in such a way as to help prevent injury in case the boulderer/climber falls. Assigning spotters is important whenever someone is bouldering. Every boulderer should have at least two spotters positioned to support the head, neck, shoulders, and torso of a falling person. To accomplish this, spotters must

- Assume a stable stance. Their feet should be apart with one foot forward of the other, and their knees and elbows bent to absorb shock.
- Have their hands in the air with fingers together and with the palms turned outward or upward in a supportive position. Another method is to have spotters extend their arms downward with palms facing upward to help lower a falling person.
- Constantly watch the person engaged in bouldering.



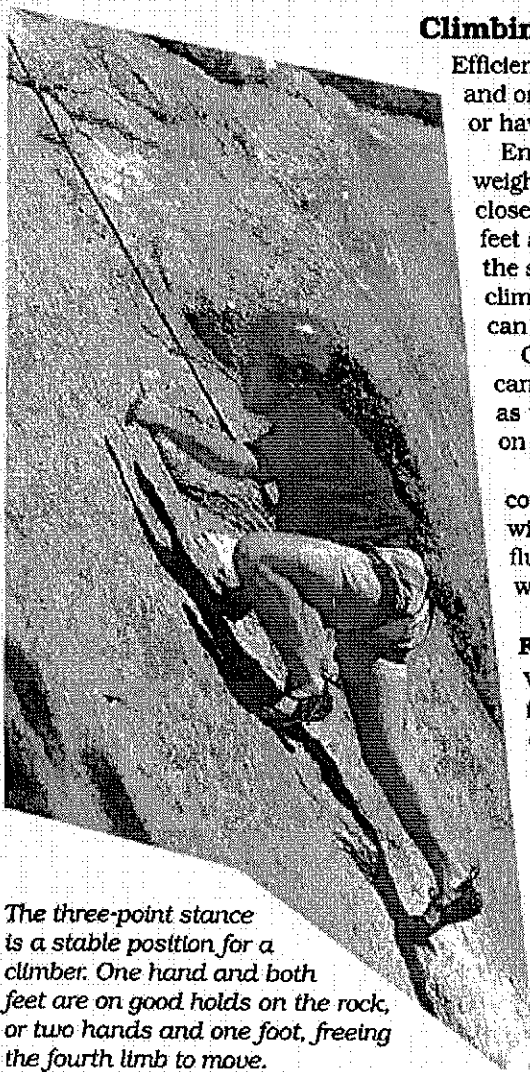
Spotters are not expected to catch a falling boulderer in midair—something that is nearly impossible even in a fall of only a few feet, and may result in injury to both parties. Rather, spotters should support the upper body of a falling person, especially the head and neck, and ease that person to a safe position.

Verbal Signals for Boulderers and Spotters

Boulderers and spotters use the following verbal signals to ensure clear understanding of their intentions and actions.

BOULDERER	SPOTTERS	MEANING
"Spotters ready?"	→	"I'm ready to start."
	"Ready" →	"I'm ready to protect you."
"Climbing!"	→	"I'll start up as soon as spotters give a go-ahead."
	"Climb on!" →	"Go ahead."
"Falling!"	→	"I'm about to fall."

FIG. 65. THREE-POINT STANCE



The three-point stance is a stable position for a climber. One hand and both feet are on good holds on the rock, or two hands and one foot, freeing the fourth limb to move.

Climbing

Efficient climbing is built on the *three-point stance*—keeping two hands and one foot on good holds while moving the free foot to a new location, or having both feet and one hand on holds as the free hand moves.

Encourage climbers to lean out a little from a wall so that the weight of their bodies rests on their feet. A climber whose torso is too close to the rock may find it difficult to look down and see where the feet are moving. Hands should be used primarily for balance while the stronger muscles of the legs do the work. Whenever possible, climbers should avoid climbing on their knees and elbows, as that can put them in precarious positions and inhibit further movement.

Climbing is a mental as well as physical challenge. Instructors can encourage participants to look ahead and plan several moves as they climb, much as a chess player looks for a larger strategy on the board rather than seeing only the next placement of a piece.

With a route in mind and a sense of the motions required to cover the distance, climbers can link together a series of moves with grace, rhythm, and efficiency. Climbers should strive to be fluid in their movements. Teach them to relax, to concentrate on what they are doing, and to remember to breathe.

Footholds

Various techniques allow climbers to gain purchase with their feet on ledges, nubs, cracks, and other irregularities on a wall or rock face. Regardless of the shoes they are wearing, novice climbers can master footwork needed for large holds. More advanced climbers will find that shoes made specifically for climbing will greatly enhance their ability to move.

The sizes and locations of holds will determine the ways climbers position their feet to take advantage of holds.

Encourage participants to place their feet solidly on each hold and keep them still until they are ready to move to the next hold. The foot techniques climbers most often use are *edging*, *smearing*, and *jamming*.

