

# Foundation Skill Series

## Determining Direction

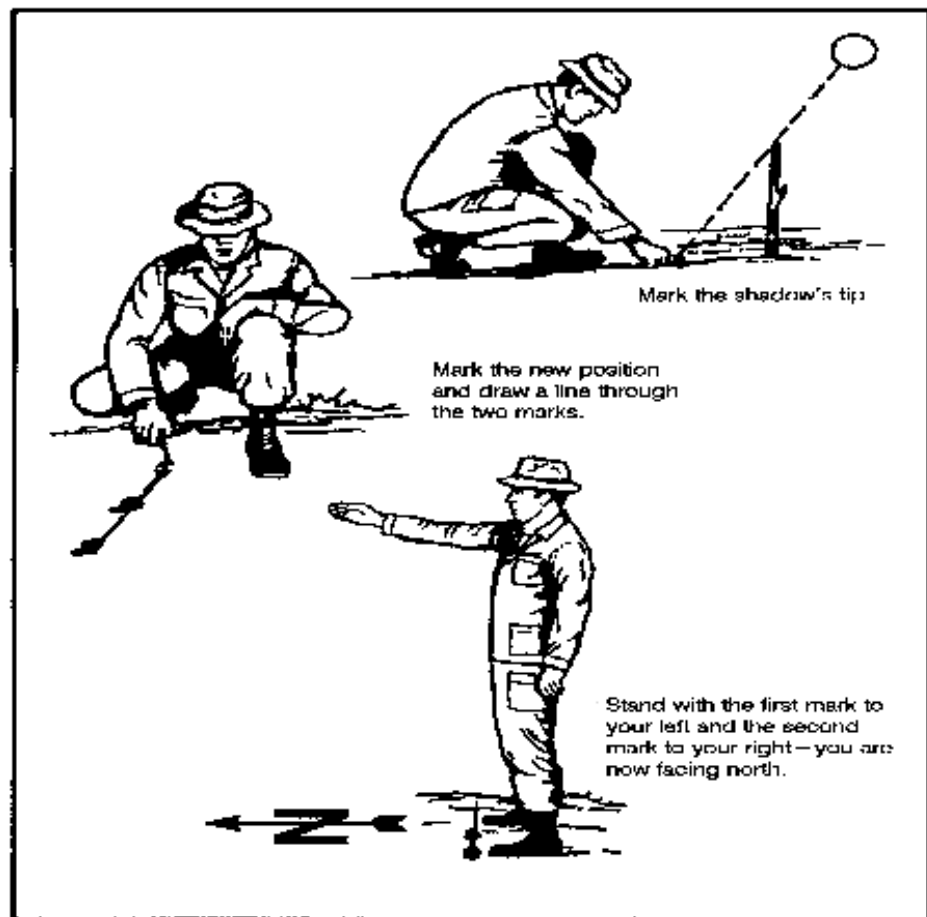


### Determining Direction without a Compass - The Shadow Tip Method

Find a straight stick about 1 foot long, and a level spot free of brush where the stick will cast a shadow. This method is simple and accurate and consists of four steps:

#### Step 1:

Place the stick or branch into the ground at a level spot where it will cast a distinctive shadow. Mark the shadow's tip with a stone, twig, or other means. This first shadow mark is always west - everywhere on earth.



#### Step 2:

Wait 10 to 15 minutes until the shadow tip moves a few centimeters. Mark the shadow tip's new position in the same way as the first.

#### Step 3:

Draw a straight line through the two marks to obtain an approximate east-west line.

#### Step 4:

Stand with the first mark (west) to your left and the second mark to your right you are now facing north. This fact is true everywhere on earth.

An alternate method is more accurate but requires more time. Set up your shadow stick and mark the first shadow in the morning. Use a piece of string to draw a clean arc through this mark and around the stick. At midday, the shadow will shrink and disappear. In the afternoon, it will lengthen again and at the point where it touches the arc, make a second mark. Draw a line through the two marks to get an accurate east-west line.

The earth's relationship to the sun can help you to determine direction on earth. The sun always rises in the east and sets in the west, but not exactly due east or due west. There are also some seasonal variations.

In the northern hemisphere, the sun will be due south when at its highest point in the sky, or when an object casts no appreciable shadow.

In the southern hemisphere, this same noonday sun will mark due north. In the northern hemisphere, shadows will move clockwise. Shadows will move counter clockwise in the southern hemisphere.

With practice, you can use shadows to determine both direction and the time of day.