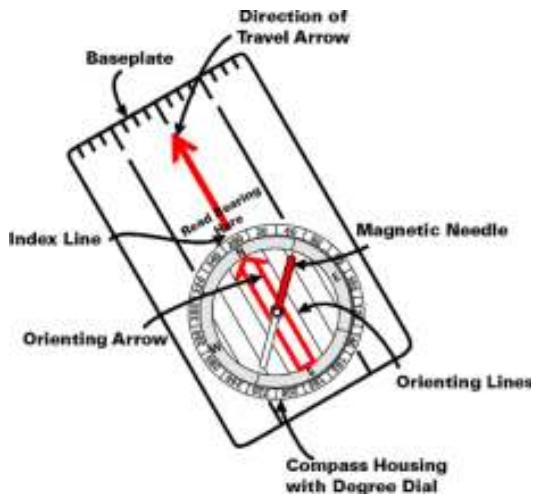


# Using the Compass



The compass consists of a magnetized metal needle that floats on a pivot point. The needle orients to the magnetic field lines of the earth. The basic orienteering compass is composed of the following parts: (See Figure 6.6)

- Base plate
- Straight edge and ruler
- Direction of travel arrow
- Compass housing with 360 degree markings
- North label
- Index line
- Orienting arrow
- Magnetic needle (north end is red)

## Directions for finding your way using a map & a compass with base plate.



#1, To account for declination, turn your dial until the 17.4 degrees is at the top (index line). Next, place your map on a surface free of interference from metal objects such as nails or screws under the surface of a table. With the bottom of the map (south) closest to you, place the compass side edge on a longitude line (vertical line running true north & south), or on the line located on the right side edge of your map. Be sure south is towards the bottom (closest to you), and north is at the top of the map (away from you). Note: If map text is upside down, then you have north at the bottom of the page. Flip the map around and start over.

#2, With the compass edge (long side), lined up on the longitude line, turn the whole map until the red end (magnetic north) of the floating needle lines up inside the Orienting Arrow (outline of an arrow located on the base of the dial). Be sure your compass edge does not move away from the longitude line when aligning the map. Your map is now lined up taking into account for magnetic north. Picture A

#3, Be sure the map does not move even the slightest bit during this next part. Take your compass off the longitude line and place the long edge of the compass on the given direction of travel line A to B. (Picture B). Be sure not to do this backwards B to A). While holding the base plate firmly in place and being sure your map hasn't move at all since taking it off the longitude line along the map's edge,

Picture A



Picture B

(if you think it has, start over!). Now turn the dial until the red end of the magnetic needle is

lined up exactly inside the orientating arrow. Now read the degree number that is lined up with the direction of travel arrow. In picture B, it is 300. This is your degree and direction of travel from point A to point B. You can now put your map away and get ready to hike! Remember to check your compass from time to time and be sure that the red end of the magnetic needle is lined up inside the orienting arrow. If this is the case, then the direction of travel arrow is pointing in the direction of 300 degrees and the direction you want to be traveling! Simply follow your direction of travel arrow being careful not to turn the dial off its degree setting on the index line. In the case of picture B, it is 300 degrees. At the race, you'll be given a map with a starting point and a line drawn to the ending point where your bikes are located. You'll have 3 minutes to align your map and take a reading to figure your direction of travel before you and your partner begin the race! Pairs are sent out every 3 minutes.

### Terminology:

Declination is the difference between magnetic north and true north. True north follows your longitude lines. Magnetic north is approximate 17.4 degrees west for our area.