

## Compass Practice at Basket Slough's Mt Baldy

To get to Basket Slough's Mt Baldy trailhead drive west from Salem on highway 22 to the intersection with highway 99W. Turn right on to 99W and drive north 1.9 miles to the intersection of Coville road. Turn left on to Coville road and drive 1.45 miles to the trail head parking lot which will be on your right.

Take the trail to Mt Baldy observation platform. Hike up the trail which starts at the NW end of the parking lot. Take the left fork at each of the two trail intersections until you reach the platform.

### I. Triangulation (where am I).

For this drill you'll confirm your location by taking three compass bearings from identifiable locations in the field and on the map.

1. Look to the east for your first target, the Coville road & 99W intersection. (in the field and on the map)
2. Take a bearing with your compass.
  - a. Sight the compass at your target. Using either the edge of the compass base or via the sighting mirror, if your compass has one.
  - b. Turn the bezel until the orienting arrow aligns under the compass needle's north end (red).
  - c. Read the bearing off of the compass rose.
3. Convert the magnetic bearing to a true bearing (adjusting for declination).
  - a. Rotate the compass bezel (dial) 17 degrees counter clockwise (you are adding 17 degrees to the bearing just taken).
  - b. If you have a compass with a declination adjustment set it to 17 degrees East, doing this automatically sets all magnetic bearings to true. You can now skip step 3 for all future bearings.
4. Plot the true bearing on the map.
  - a. Place the compass on the map with a front corner of the base plate on the target.
  - b. Rotate the compass about this point until the compass meridian lines are parallel with a north south line on the map.
  - c. Draw a line from the target along the side of the base plate to the back of the compass. (your location is somewhere along this line.)
5. Look in a south easterly direction for the 'lone pine' at the intersection of Highway 22 and a farm road.
6. Repeat steps 2, 3, & 4.
7. Look in a north westerly direction for Smithfield butte. Its an oak covered butte with a farm house at its base.
8. Repeat steps 2, 3, & 4.
9. If done correctly your three plots should intersect on the top of Mt. Baldy. The intersection of the three lines may not all meet at the same point but can form a small triangle. Your location will be somewhere within the triangle. This is usually acceptable.

## II. Plotting a Course (or locating a field location from the map).

For this drill you will be plotting a course to Dunn butte. You can also use this technique to confirm a field sighting with one on the map.

1. Find Dunn butte on the map (south west corner).
2. Plot the true bearing on the map.
  - a. Place the compass on the map with the front right corner of the base plate on the target and the back right corner on your location.
  - b. Rotate the compass bezel until the compass meridian lines are parallel with a north south line on the map. Make sure the orienting arrow is pointing to the top of the map.
  - c. You now have a true bearing to the target.
3. Convert true bearing to a magnetic bearing. (for compasses without a declination adjustment)
  - a. Rotate the compass bezel 17 degrees clockwise (you're subtracting 17 degrees to the bearing just taken).
  - b. You now have a magnetic bearing or heading to the target.
4. Tracking to the target (Dunn butte).
  - a. Hold the compass level with the front of the compass pointing away from you. Hold the compass low enough so you can see the top of it.
  - b. Standing in place turn yourself until the orienting arrow is centered under the north end of the magnetic needle.
  - c. If you start walking in the direction you are facing while keeping the magnetic needle centered you will get to Dunn butte.
  - d. To confirm the location of Dunn butte sight down the compass you should see Dunn butte in the distance.

## III. Finding a Heading (tracking to a field location no map).

For this drill you will be determining a heading that will take you back to the second trail intersection. No map work is required for this drill. You would use this technique if you wanted to go to a location you can see but there may be obstructions between you and your destination (ie. woods, brush, valleys, fog)

1. Look back down the trail you came in on and find the trail fork.
2. Take a bearing of the intersection like you did in the step 2 of the Triangulation drill.
3. No declination adjustment is needed because you are not using a map.
4. Track to the target. Use the techniques from step 4.a, b & c. of the Plotting a Course drill.
5. If you get to the intersection you did it correctly, If not you'd better go back up the hill and redo these drills.

Work Sheet. Print off and take with you to the field.

Compass/GPS Work Sheet



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# Key to field work

Compass/GPS Work Sheet - KEY

