With the compass needle, mounted on a vertical pivot, show that there is a horizontal component of the earth's magnetic field, directed approximately north geographically.

With the dip needle, mounted on a horizontal pivot, set so that its plane of possible rotation is parallel to the horizontal component, show the direction of the actual magnetic field of the earth. The angle of dip at this location is roughly 60°.

Note: Both the direction of the horizontal component and the angle of dip are influenced significantly by the presence of iron in the vicinity.