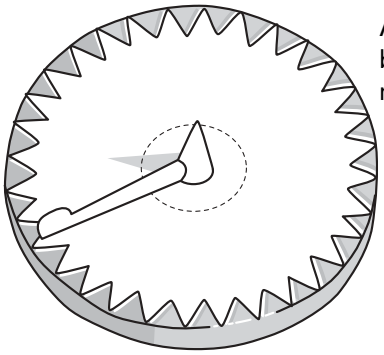
Viking navigation

Navigation is very important. It tells you not only where you are but also the best route to your destination. Most Viking sea journeys were made on well-known routes and within sight of land. The long voyages for which the Vikings are best remembered required enormous bravery, fortitude and a wide range of navigational skills.

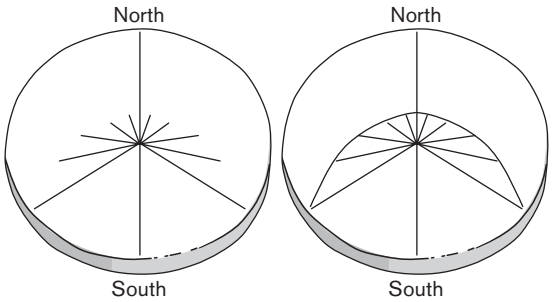
There is no evidence that Vikings had a magnetic compass. A skilled Viking seafarer would 'read' the environment to ensure he was following the correct course. He would look at the position of the sun and the stars; the direction of the wind; the angle and colour of the waves; the clouds and sea birds. He would taste the water and could smell if he was approaching land. In a society which made few written records, memory played a crucial role in the accumulation of navigational knowledge and skill acquired from individual journeys.

Sun-shadow board or bearing dial
Scandinavian archaeologists found the remains of a circular wooden board, notched at the edge and with lines carefully scored into it. A similar device of soapstone was also discovered. Experiments on land and sea have shown that these are the fragments of an instrument of navigation. It allowed ships to be steered accurately along an east-west line.



A sun shadow board – curve not marked

While on shore the circle of wood, or stone, would have been placed where the sun would have shone on it all day. A small post in the centre of the circle would have cast a shadow. The length of the shadow cast by the post would be marked on the board regularly throughout the day. The marks would then be connected to form a curve.



The position of north and south can be deduced from the shadows. The sun is at its highest point at midday and the shortest shadow will appear at this point; i.e., halfway between east and west. A north / south line can be marked by drawing across the board at the point where the curve is nearest the centre.

Once at sea the sailors would align the board according to the sun's position, in order to hold their course. If the shadow fell over the line the ship was too far north. When the shadow fell inside the line the ship was too far south.

Each bearing dial would only have been accurate for a few days each year because of the changed angle of the sun. Navigators may have had a series of boards for particular journeys and for particular times of the year. It is not possible to say how much such dials were used.

Modern sailors have tested replica dials and found them very accurate.