

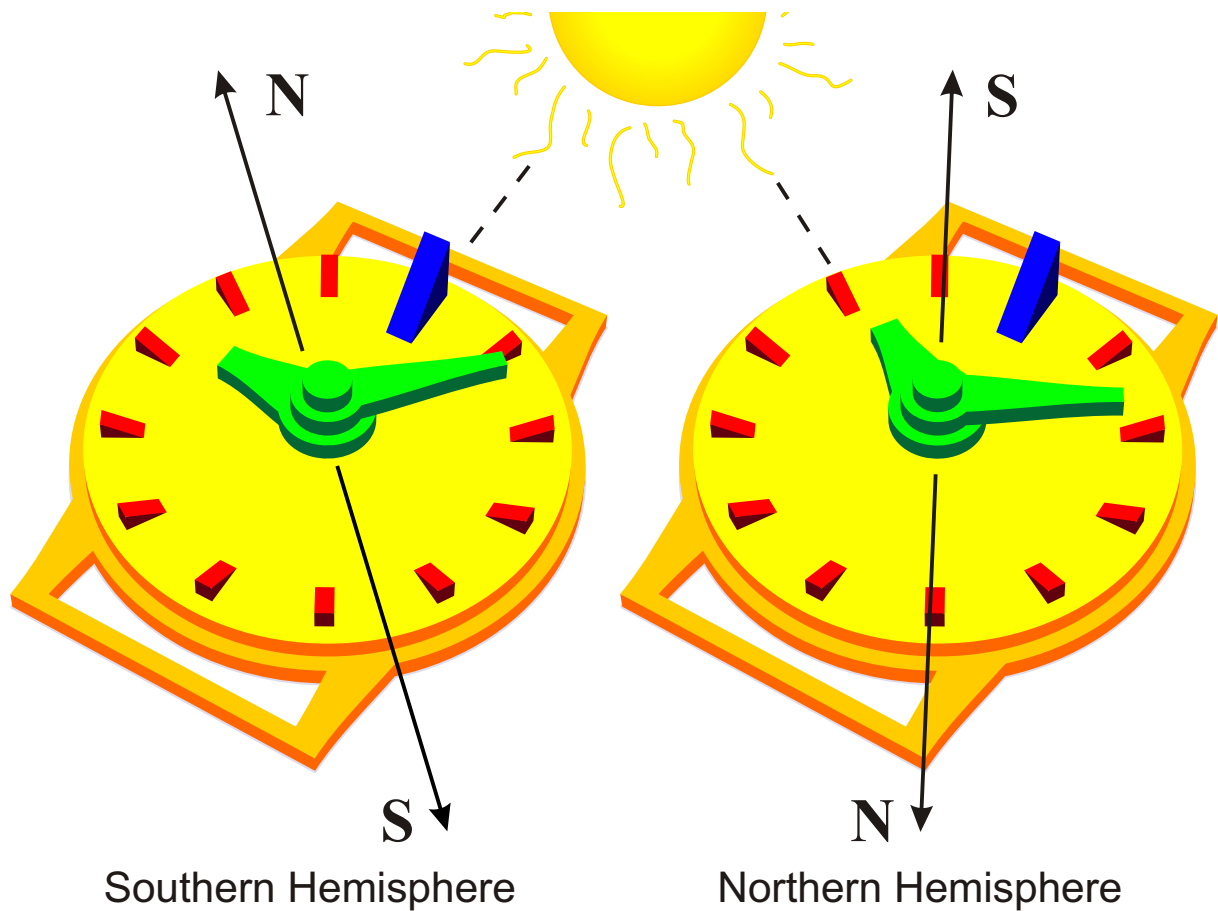
Northern Hemisphere

Do you know that you can use your analog watch as a compass on a sunny day? Look at your watch and point the hour-hand in the direction of the sun, as it is shown in the illustration. Imagine a line which runs from the center of the watch through a point half-way between the hour-hand and number 12. This line will point south.

The method works for the northern hemisphere. Will it work for the southern hemisphere as well?

Compass in a Watch

Explanation



The principle of this toy is based on astronomy. In the northern hemisphere the sun is in the south at noon. If at that time we point the hour-hand at the sun, the hour-hand and number 12 will point south. Before the noon the sun is more to the east, while after the noon - to the west. That's why when it is not noon, the angle between the point at which the sun is in the south (i.e. number 12), and the point at which the sun is at the moment (i.e. hour-hand) entirely shows south. In order to define the direction more precisely we have to imagine the bisecting line of the angle, or in other words the line which runs from the center of the watch through a point half-way between the hour-hand and number 12. It will point south - as shown in the right part of the illustration.

In the southern hemisphere in order to make your watch working as a compass you have to point number 12 at the sun. The angle between this number and the hour-hand, shows north, instead of south. Therefore the line which you can imagine between number 12 and the hour-hand will then show north - as shown in the left part of the illustration.