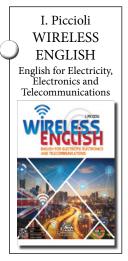# The invention of the compass

As early as 1000 BC, Chinese scientists had studied and learned a lot about magnetism in nature. Later, they learned how to make magnets by heating pieces of ore[1] to hot temperatures and then cooling the pieces in a north-south position. The magnets were then placed on bronze plates marked with directional lines.

Early compasses were built using lodestone,[2] a special form of the mineral magnetite that, as a natural permanent magnet, aligns itself with the Earth's magnetic field.

Before the invention of the compass people knew the directions of south and north by observing the path of stars and the Sun. The stars, however, can only be seen when the sky is clear, while the compass works in any weather. That's the reason why the compass was a revolutionary invention for navigation and international trade. The compass changed human history, allowing travelers to go around the world, exploring places that were unknown to their cultures.

In the 17th century, William Gilbert discovered that the Earth itself behaves as a gigantic magnet with a north and a south pole. This explained why a lodestone needle would point to north. In 1745 Gowin Knight, an English inventor, developed a method for magnetizing steel for long periods of time. His improved compass needle was bar-shaped and large enough to be mounted on a pivot.[3] The Knight compass was widely used.

Nowadays, ships use more sophisticated navigational equipment including satellite systems, radio direction finders, and digital computer charts, but the magnetic compass still remains an essential navigational tool.

GLOSSARY
1 mineral from which a metal can be extracted
2 magnetite
3 a shaft or pin on which something turn

ACTIVITIES

1 *Answer the following questions.*
1 Why was the invention of the compass so important for navigation?
2 Who was Gowin Knight?
3 Which navigational equipment is generally employed today?

2 *Scan the text and find the English equivalents of the following Italian words.*
1 Raffreddare ....
2 Bronzo ....
3 Allineare ....
4 Commercio ....
5 Acciaio ....