

UNIT 5

THE SHAPE AND DIMENSIONS OF THE EARTH.

1- The shape:

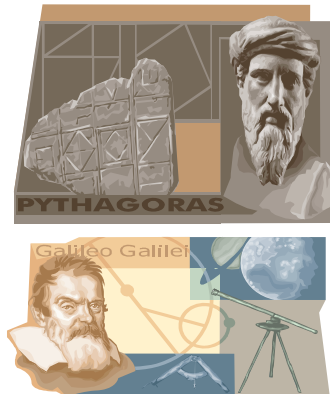


THE SHAPE: The earth is not a perfect sphere. Due to its rotation, the Earth has a slightly distorted shape.



In the Antiquity, the concept of a spherical Earth dates back to 6th century B.C. in Ancient Greece, displacing other beliefs in a flat Earth. In ancient Mesopotamia, people think that the Earth is a flat disk floating in the ocean.

PITÁGORAS suggested the spherical shape of the Earth, and other astronomers like GALILEO, observed also the sun. Watching a sailing ship at the sea, noted that the ship appears to be sinking when it moved away.



Nowadays, the true shape of the Earth is called a SPHEROID OR GEOID. It means that it's almost a sphere, but not quite. It is considered that the distorted shape is due to its rotation movement which tends to force the matter to bunch up in the middle. This middle is the EQUATOR.

2- The dimensions of the Earth:

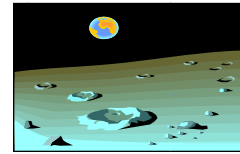
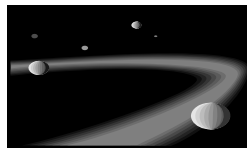
The diameter from the NORTH POLE to the SOUTH POLE (the shortest diameter) is approximately 12.714 Km.



The equatorial diameter (the longest diameter) is approximately 12.756 Km. This is not a big difference, but it makes the Earth not quite a sphere.

Speaking from the perspective of the solar system, the Earth is rather small. Even though, four of the other planets in our solar system are smaller (PLUTO, MERCURY,

MARS AND VENUS), the remaining four planets (NEPTUNUS, URANUS, SATURNUS AND JUPITER) are much larger.



On the other hand, the Earth can be represented by **GLOBES** and **MAPS**.
The globe represents the Earth accurately, because it has a similar shape (spherical), but the map is more common, easier to use and provides detailed and practical information



-a globe-



-a map-

3 - Meridians and parallels:

A series of imaginary lines divides the Earth. According to that, we can identify the exact location of a place on the Earth. They are:

-MERIDIANS: Semicircles which go from one pole to the other. The Prime Meridian ,or Greenwich, divides the Earth into two hemispheres:

- The Western hemisphere and
- The Eastern hemisphere.

-PARALLELS: Circles which are perpendicular to the meridians. The most important is the Equator, which divides the Earth into two hemispheres:

- The Northern hemisphere and
- The Southern hemisphere.

Other important parallels from North to South are:

- The Artic Circle
- The tropic of Cancer,
- The tropic of Capricorn
- The Antartic Circle