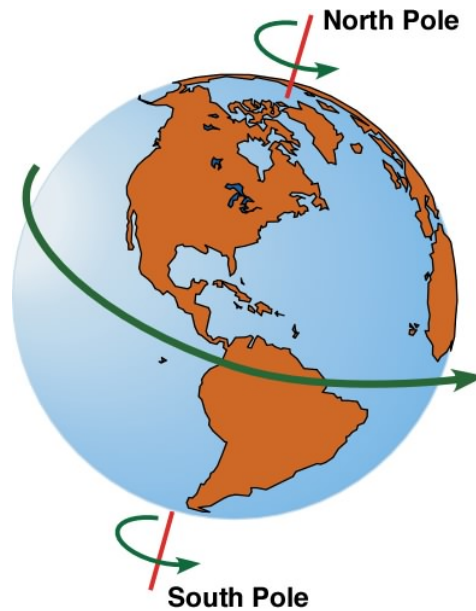


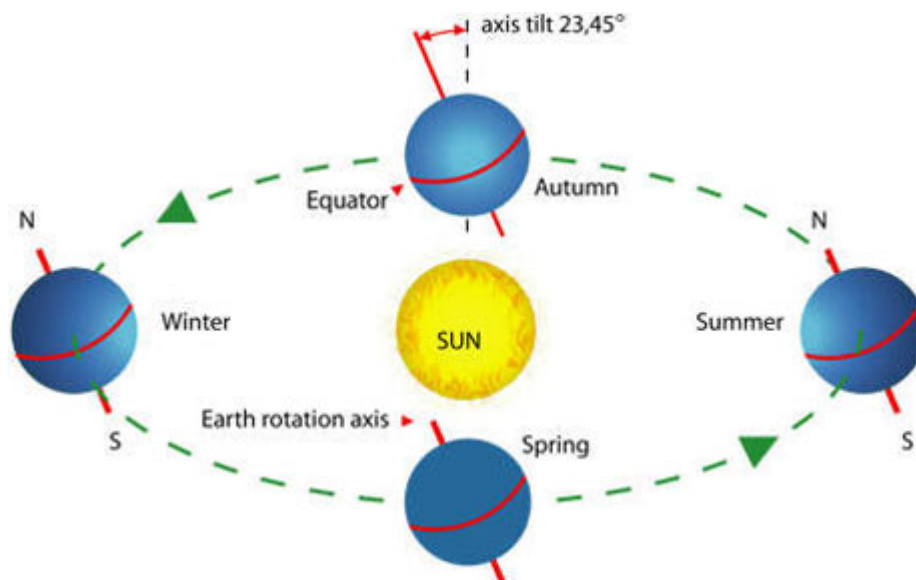
The Earth

The Earth makes permanently two movements:

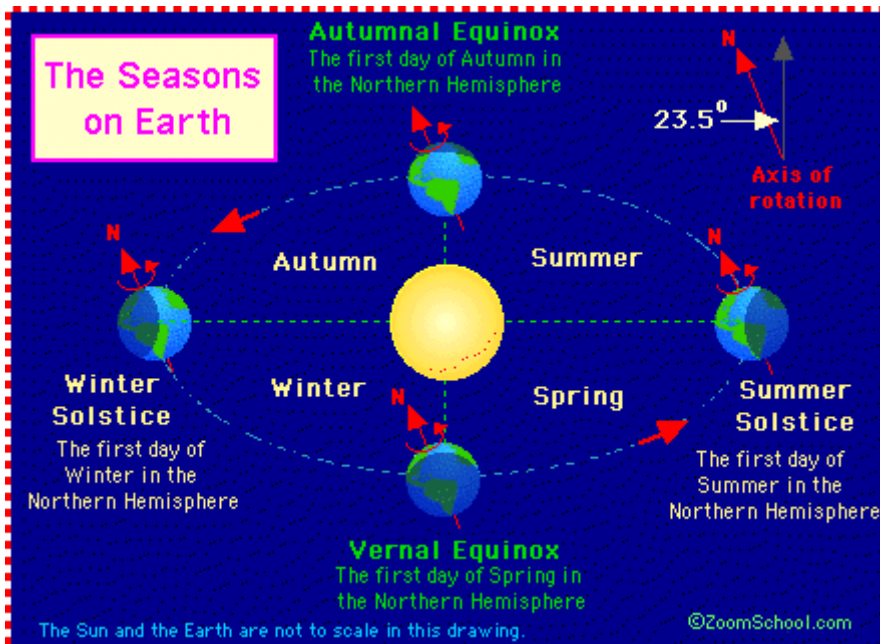
A) Rotation movement (24 hours) (the Earth rotates on its axis): Day and night



B) Revolution movement (365 days and 6 hours): Seasons (spring, summer, autumn and winter)



The tilt of the Earth causes the seasons. As the Earth orbits the Sun, the tilt of the Earth's axis does not change. The Earth always leans in the same direction.



The Autumn Equinox arrives on September 22 or 23.
The Winter Solstice arrives on December 21 or 22.
The Spring Equinox arrives on March 20 or 21.
The Summer Solstice arrives on June 20 or 21.

1.- Complete the following chart

Season	Date
Winter solstice	
Spring equinox	
Summer solstice	
Autumn equinox	

2. Name the two movements the earth makes.

3. What causes the seasons?

The seasons

The Earth's seasons are not caused by the differences in the distance from the Sun throughout the year (these differences are extremely small). The seasons are the result of the tilt of the Earth's axis.

The Earth's axis is tilted from perpendicular to the plane of the ecliptic by 23.45° . This tilting is what gives us the four seasons of the year - spring, summer, autumn (fall) and winter. Since the axis is tilted, different parts of the globe are oriented towards the Sun at different times of the year.

Summer is warmer than winter (in each hemisphere) because the Sun's rays hit the Earth at a more direct angle during summer than during winter and also because the days are much longer than the nights during the summer. During the winter, the Sun's rays hit the Earth at an extreme angle, and the days are very short. These effects are due to the tilt of the Earth's axis.

Solstices

The solstices are days when the Sun reaches its farthest northern and southern declinations. The winter solstice occurs on December 21 or 22 and marks the beginning of winter (this is the shortest day of the year). The summer solstice occurs on June 21 and marks the beginning of summer (this is the longest day of the year).

Equinoxes

Equinoxes are days in which day and night are of equal duration. The two yearly equinoxes occur when the Sun crosses the celestial equator.

The spring equinox occurs in late March (this is the beginning of spring in the Northern Hemisphere and the beginning of fall in the Southern Hemisphere); the autumn equinox occurs in late September (this is the beginning of fall in the Northern Hemisphere and the beginning of spring in the Southern Hemisphere).

Earth's Seasons Quiz

1. Name the four seasons.

2. Are the Earth's seasons caused by the differences in the distance from the Sun throughout the year or the tilt of the Earth's axis?

3. What is the tilt of the Earth's axis (in degrees)?

4. During which season do the Sun's rays hit the Earth at the most direct angle?

5. During which season are the days the shortest?

6. What is the name of the shortest day of the year (and the beginning of winter)? _____

7. What is the name of the longest day of the year (and the beginning of summer)? _____

8. What is the name of a day in which the day and night are of equal duration?

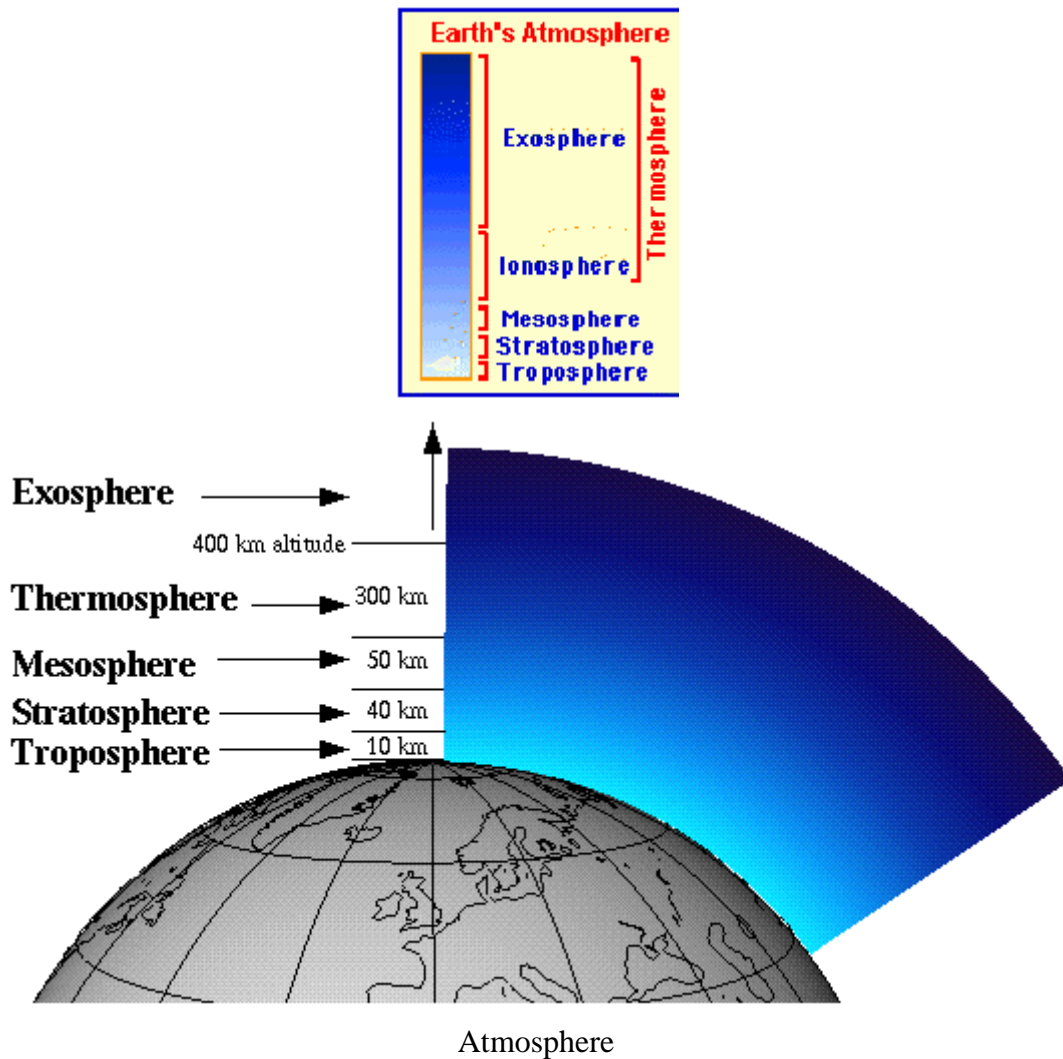
9. How many times each year do we have days in which the day and night are of equal duration? _____

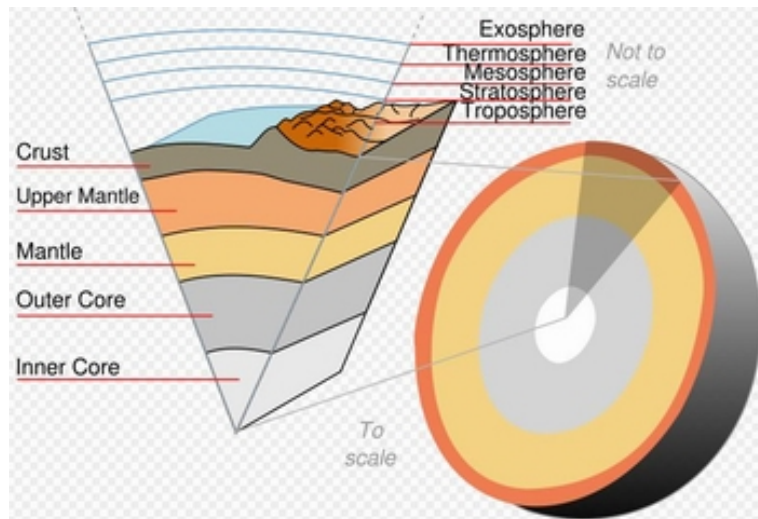
10. What are the names of each of these days?

The parts of the Earth

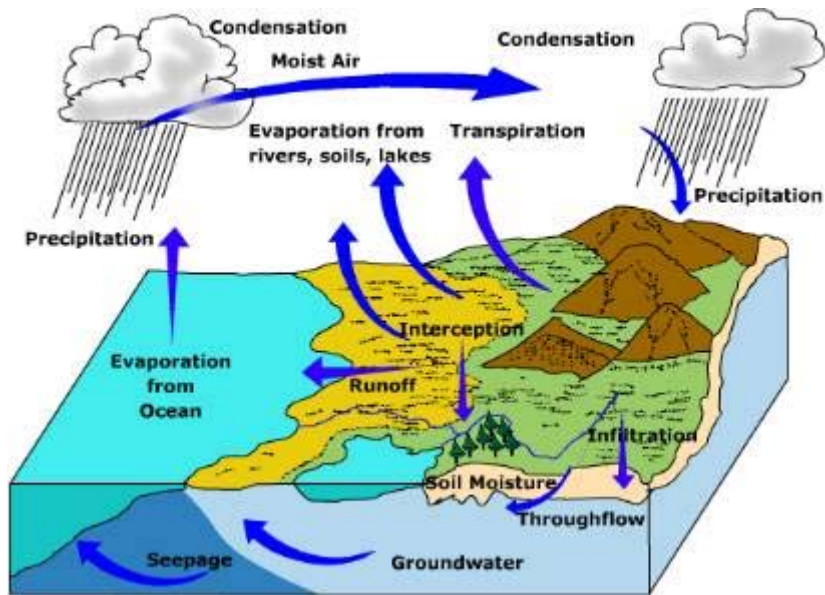
The Earth has three different parts:

1. The Atmosphere: there are Nitrogen (78%), Oxygen (21%), water vapour, nitrogen dioxide, hydrogen and other gases. The Atmosphere has five parts: Exosphere, Thermosphere, Mesosphere, Stratosphere and Troposphere.
2. The Lithosphere: continents and the bottoms of the seas and oceans. The lithosphere has five parts: crust, upper mantle, mantle, outer core and inner core.
3. The Hydrosphere: oceans, seas, rivers, lakes, groundwater, ices and water vapour.





Lithosphere



Hydrosphere

1. How many parts has the Earth? Name each one of them.
2. How many parts has the Atmosphere? Name them.
3. How many parts has the Lithosphere? Name them.
4. What is the Hydrosphere?

Label the Earth Diagram

Read the definitions, then label the diagram below.

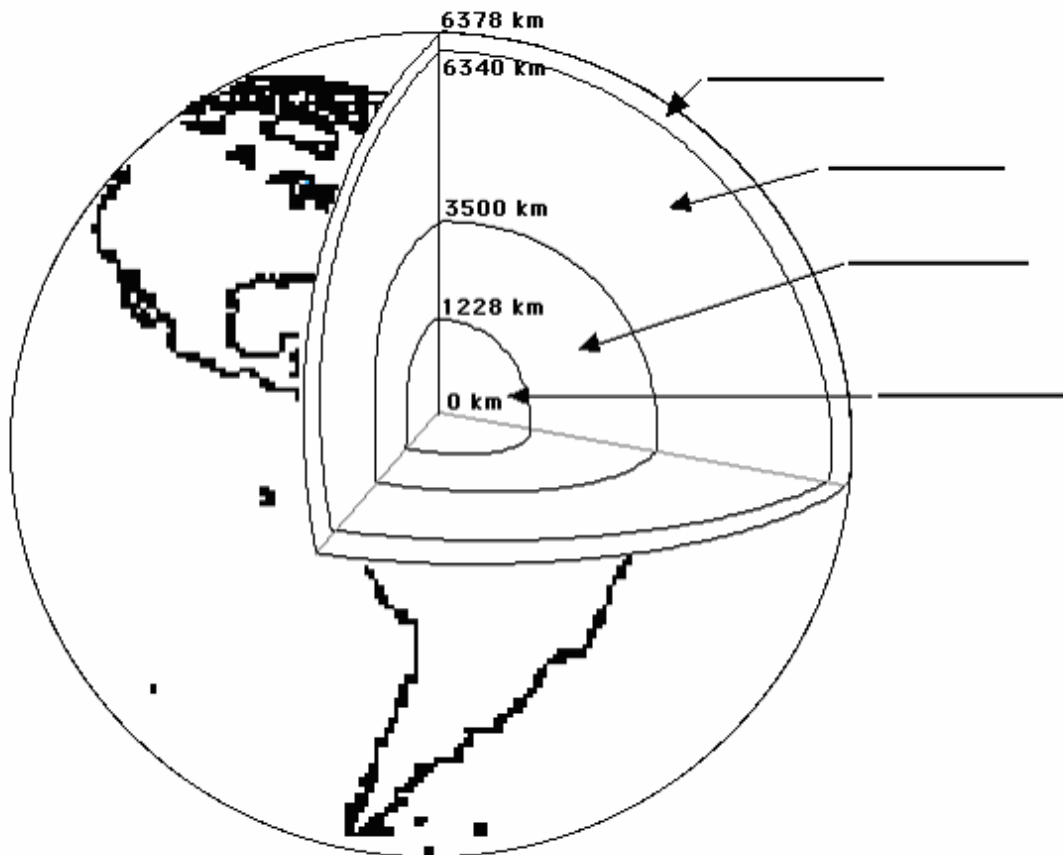
Definitions

crust – corteza. The rigid, rocky outer surface of the Earth, the crust is thinner under the oceans.

inner core – núcleo interior. The solid center of the Earth that is very hot and under great pressure.

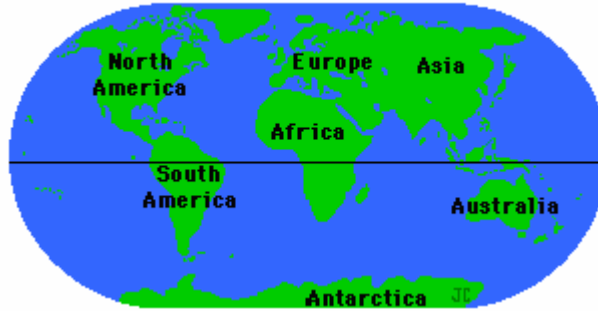
mantle – manto. A rocky layer located under the crust.

outer core – núcleo exterior. The molten layer that surrounds the inner core.



The Continents

The Continents



The continents are the great land masses of the earth. There are six continents on Earth now: Africa, Antarctica, Asia, Australia, Europe and America.

Definitions

Africa - a continent that crosses the equator. It is south of Europe and is bordered by the Atlantic and Indian Oceans.

Antarctica - the continent that surrounds the South Pole of the Earth.

Asia - a continent in the Northern Hemisphere. Asia is attached to Europe (and east of it).

Australia - a continent, an island, and a country in the Southern Hemisphere.

equator - an imaginary line that divides the Earth into Northern and Southern Hemispheres.

Europe - a continent in the Northern Hemisphere. Europe is attached to Asia (and west of it).

North America - a continent in the Northern Hemisphere; it is north of South America. It is bordered by the Atlantic and Pacific Oceans.

North Pole - the point that is the farthest north on Earth.

South America - a continent that is mostly in the Southern Hemisphere. It is bordered by the Atlantic and Pacific Oceans.

South Pole - the point that is the farthest south on Earth.

Label the map below.

