

Natural Cycles: Sun/Earth/Moon Study Guide

Vocabulary

Axis: An imaginary line running through Earth's north and south poles.

Rotation: The spinning of an object on its axis.

Revolution: The movement of an object around another object.

Cycle: a series of events that happen again and again in the same sequence.

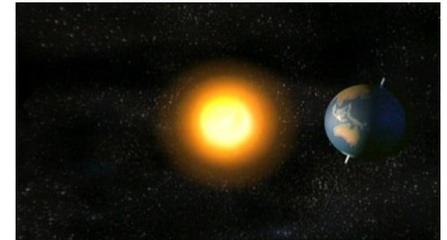
Sequence: pattern, or order that things happen in



Examples of Natural Cycles		
Day and night	Phases of the moon	Time
Water cycle	Seasons	Days of the week
Tides	Months of the year	Plant and animal life cycles

Day and Night

The Earth rotates around its axis. It takes 24 hours or 1 day for the Earth to complete its rotation. The Earth's axis is an imaginary line through the center of the Earth from the North Pole to the South Pole. The Earth's axis has a 23 degree tilt. This means that it slightly leans on one side.

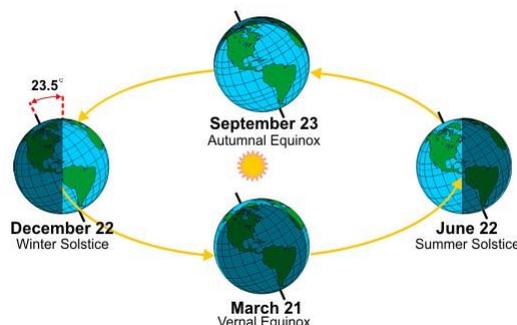


It is the movement of the Earth that causes night and day. The sun rises in the east and sets in the west. When it is day in the western hemisphere it is night in the eastern hemisphere. When it is day in the eastern hemisphere it is night in the western hemisphere.

Seasons

The Earth revolves around the sun. It takes $365 \frac{1}{4}$ days for the Earth to revolve around the sun. The Earth takes 1 year to make a complete revolution around the sun.

Having a tilted Earth means that the Earth has seasons. As the Earth travels around the sun, the part of the Earth tilted toward the sun changes. For part of the year the North Pole tilts towards the sun (which means it is summer in the Northern Hemisphere). During the other part of the year the North Pole tilts away from the sun (which means it is winter in the Northern Hemisphere).



Natural Cycles: Sun/Earth/Moon Study Guide

Tides

The moon's gravity causes the oceans to rise in some places and fall in other places. Because the Earth and the moon are always moving, tides rise and fall each day on different parts of the Earth at different times.

There are two high tides and two low tides a day. High tide means the water level is high and water comes more on land. Low tide means the water level is low and the edge of the ocean is more out to sea.

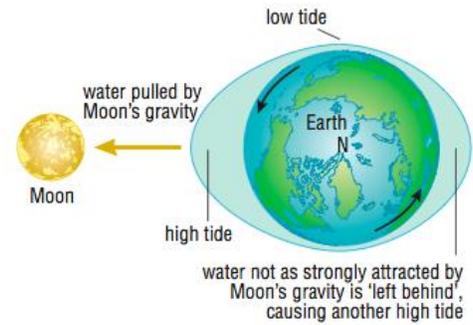


Fig 8.2.6 Tides are caused by the gravitational pull of the Moon.

Moon Cycle

The moon is a sphere. The moon does not change shape AND it does NOT make its own light. The light we see is a reflection of the sun.

The position of the sun and the moon make it seem to change shape. As the moon orbits the Earth, our view of it changes. The different views we see are called the moon phases.

The moon revolves around the Earth. It takes 29 days for the moon to revolve around the Earth. The moon takes 29 days or 1 month to complete its revolution. It also takes 29 days for the moon to rotate on its axis.

**Be sure to study your moon phases in your science interactive notebook.

You need to know: full moon, new moon, first quarter, last quarter, waxing, and waning.

