

Earth Cycles Study Guide

SOL 3.8

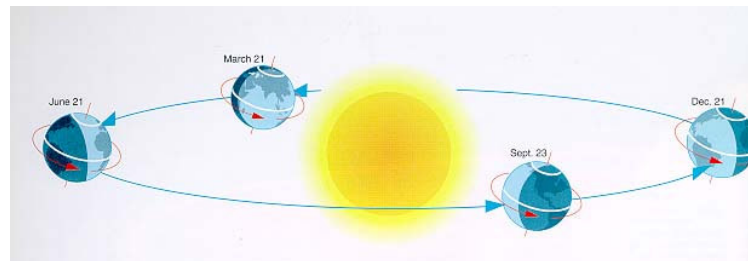
Vocabulary

1. Cycle - a repeated pattern
2. Sequence - a series of events that occur in a natural order
3. Sphere - a body that has the shape of a ball or globe
4. Rotate - to turn
5. Axis - the imaginary line through the center of the earth
6. Revolution - the movement of an object around another object
7. Orbit - the path that an object follows as it revolves around another object
8. Phases - different shapes of the moon



Facts

- The seasons change because the Earth's axis is tilted toward or away from the sun during its revolution around the sun.
- The Earth takes 365 1/4 days (1 year) to make one revolution around the sun.



- Day and night is caused by the earth's rotation. When the earth rotates, it turns on its axis.
- One complete rotation occurs every 24 hours.
- The part of the earth is facing the sun has daylight, while the part of the earth facing away from the sun has night.



- The main cause of the tides is the gravitational attraction between the earth and the moon.
- There are four tides in a day; the tides follow a pattern of high, low and then repeats.
- The cycle of the phases of the moon occurs as the moon makes one revolution on its orbit around the earth.
- The shapes that we see follow a pattern. The moon goes through all of its phases every $29\frac{1}{2}$ days.
- The light reflecting from the sun makes the moon appear illuminated.
- Between the new moon and a full moon, the moon is waxing. The lit area of the moon is increasing.
- From the full moon back to the new moon, the moon is waning. The lit area of the moon is decreasing.

Be able to recognize the 4 main phases of the moon as shown in the pictures below:



New Moon

In a new moon, the lit side is away from the Earth.



Last Quarter



Full Moon

In a full moon, we can see the entire lit side of the moon.



First Quarter



A gibbous moon is between a full moon and a half moon.



A crescent moon is part way between a half moon and a new moon.