

Study Guide

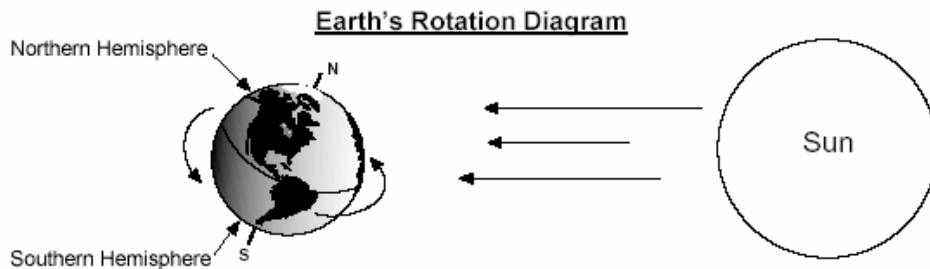
Natural Cycles: Day/Night, Seasons, Phases of the Moon, Tides SOL 3.8

Earth and Sun

Cycle – something that repeats over and over again

rotation – spinning of an object on its axis

- Day and night are caused by the **rotation** of the earth.
 - When we are facing the sun, it is daytime. When we are facing away from the sun, it is night.
 - How long does it take the earth to complete 1 rotation?



axis – imaginary line that goes through the North Pole and South Pole

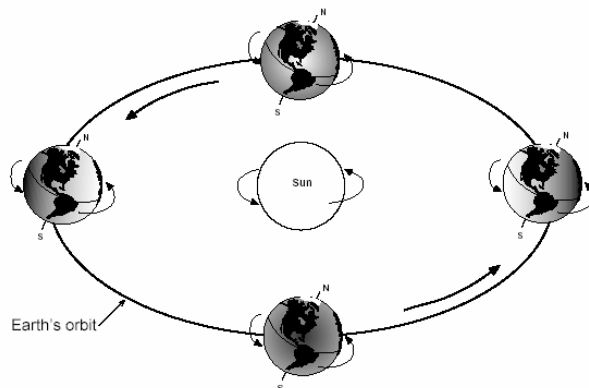
revolution – movement of one object around another object

- The earth revolves around the sun.
- How long does it take the Earth to complete one revolution around the sun?

We have **changing seasons** because of the combination of two factors:

1. The tilt of the Earth's axis, and
2. The Earth revolving around the sun

When it is summer in North America, we are tilted **towards** the rays of the hot, bright sun.



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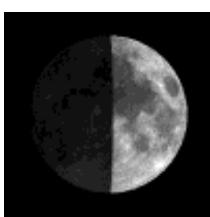
Moon

- The moon gets its light from the sun. It does not make its own light.
- The moon revolves around the earth. The shapes, or phases, that we see follow a pattern. The moon goes through all of its phases every 29 ½ days.
- Be able to identify the following moon phases:

New Moon



Quarter Moon



Full Moon

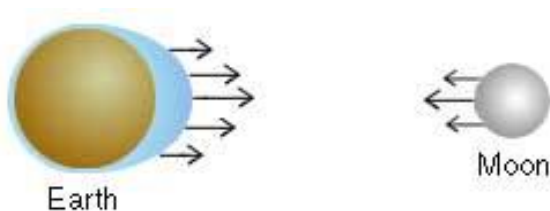


Crescent Moon



Tides

- The gravitational pull of the moon creates two types of **tides**: high and low.
- Usually two high and two low tides occur each 24 hours and 50 minutes (or day). The tides follow a pattern of high, low and then repeats.



Moon pulls the Earth towards it (gravity),
but Water alone moves towards the Moon