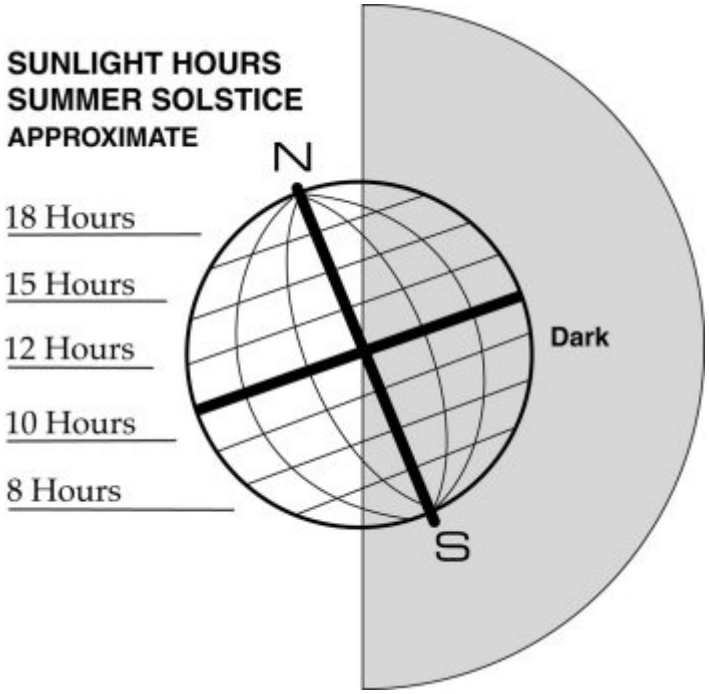
Globe Lesson 16 - Daylight Hours - Grade 6+

This picture shows the approximate hours of sunlight on the first day of summer in the Northern Hemisphere. This is called North Summer Solstice.

The first day of summer is June 22nd in the Northern Hemisphere. On that day the North Polar Region is tilted toward the sun. It is the first day of the winter in the Southern Hemisphere.

When the Sun shines on a place it heats that place. When it rotates around to nighttime, it cools. On June 22, the Northern Hemisphere spends more time in daylight and less time cooling at night.



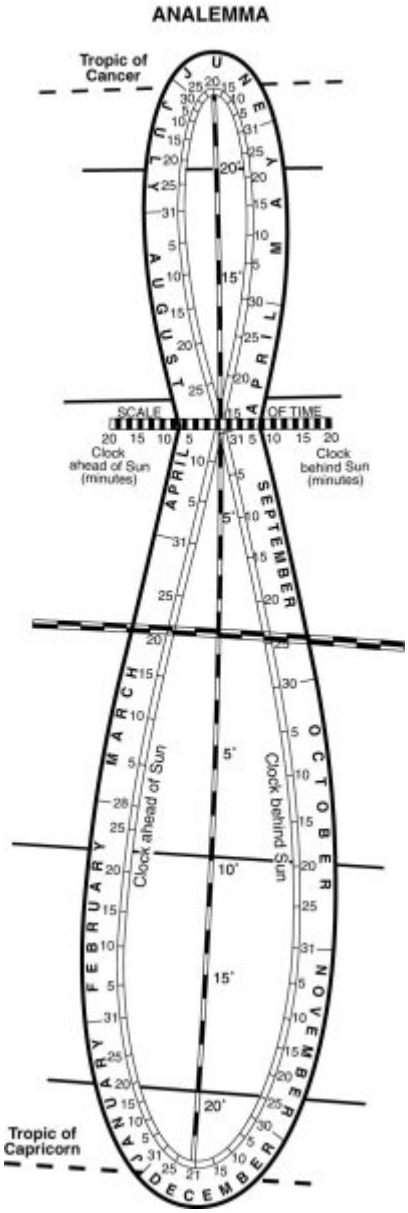
In the summer, direct Sun rays are providing more heat. As a result, it gets warmer as the summer continues.

Meanwhile, the people in the Southern Hemisphere are having shorter daylight hours. It is winter for them. The Earth's surface there is cooler.

Take your globe out of the Horizon Ring. Write the approximate number of daylight hours at these latitudes: between 50°N and 60°N - 18, between 40° N and 50° N - 15, on the Equator - 12, between 30° S and 40° S - 10 and, between 40° S and 30° S - 8.

Arrange the following places in the order of how much daylight they are receiving on June 22nd. Place the number 1 with the place having the longest daylight hours. Place a 2 with the place having the next longest daylight period. Continue on through 10, the place receiving the least daylight at this time.

_____ Antananarivo, Madagascar
_____ Houston, Texas
_____ Wellington, New Zealand
_____ Stockholm, Sweden
_____ Addis Abba, Ethiopia
_____ Newcastle, Australia
_____ Madrid, Spain
_____ Hanoi, Vietnam
_____ Vancouver, Canada
_____ Lima, Peru



The way to find the location of the direct Sun rays is to use the Analemma. On your globe you can find the Analemma in the Pacific Ocean.

The w ord Analemma is taken from the ancient Greek word for Sun Dial. You can say the Analemma is a kind of sundial. The Analemma tells us the position of the Sun's direct rays at different times of the year.

The Analemma has a calendar where months and days of the years are printed. This calendar tells us where the direct rays of the Sun are striking the Earth on any day of the year.

1. The analemma extends between what two important Sun lines on the globe? (lines of dashes)
   _____ &
   _____

2. Which months are the top and bottom ends of the Analemma?
   _____ &
   _____

Places located between the Tropic of Cancer and Tropic of Capricorn receive the Sun's direct rays twice a year. For example, find 20°N latitude line on the globe. Look at the Analemma calendar. The direct rays strike the Earth at 20°N on July 23 and May 22.

Find and write the two days that the Sun is directly overhead in the following locations.

	a.	b.
3. Havana, Cuba, 23° N?	_____	_____
4. Quito, Ecuador, 0° N?	_____	_____
5. Rio de Janeiro, Brazil, 23° S?	_____	_____