

Earth's Seasons on Geochron

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Time of visit: _____ pm

Where is the subsolar point at this moment?

List three places where it is currently close to noon.

List three places where it is currently close to midnight.

Find Boston on the Geochron map -- it is the nearest city to us that is labeled. According to the map, is it currently daytime, nighttime, or twilight in Boston?

Find San Francisco on the Geochron map -- it is nearly as far away from Bridgewater as one can be in the continental United States. The same question applies -- is it currently daytime, nighttime or twilight in San Francisco.

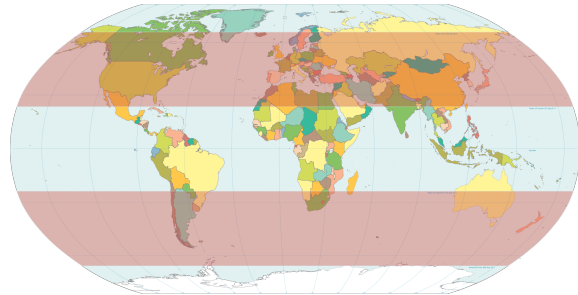
Name one city where it is currently daytime but where it will be nighttime very soon.

Name one city where it is currently nighttime but where it will be daytime very soon.

Every place on earth experiences seasons, but that experience is very different in different places. Geochron helps us to understand that the role of latitude is very important in seasons.

Latitude ranges from 0° to 90°N in the northern hemisphere and 0° to 90°S in the southern hemisphere. Geographers divide these into several categories that might seem a little strange at first. Low latitude means near the equator and high latitude means near either pole. Roughly speaking, geographers talk about latitudes as

Low latitudes 0° to 23.5° North & South
 Mid latitudes 23.5° to 66.5° North & South
 High latitudes 66.5° to 90° North & South



We can use Geochron to compare the length of daylight for cities in several of these zones. We start by converting distance on the map to hours of the day. This is possible because the map is a Mercator projection and it is made more convenient because time zones are clearly marked at the top.

How much distance (in centimeters) represents one hour on the map? _____

For each city below, calculate how much daylight it will have today, by measuring the length of daylight and dividing by that distance. Also calculate the amount of nighttime, by subtracting the answer from 24.

		November 8			
City	Distance (cm)	Hours of Daylight	Hours of Night	Hours of Daylight	Hours of Night
Point Barrow					
Boston					
Mexico City					
Quito					
Buenos Aires					
Tierra del Fuego					

What season are we in?

What will be the date six months from now?

What season will that be?