

Length of Day and Latitude - Use [Google Earth](https://www.google.com/earth/) to determine the relationship between latitude, the time of year, and the length of daylight.

1. Find and record the dates for:

March equinox _____ June solstice _____

Sept. equinox _____ Dec. solstice _____

2. Open Google Earth, go to the menu, choose *Map Style*, choose *Turn on Gridlines*. That will show the latitude and longitude. Pick a path across the globe from the South Pole to North Pole. Be sure to choose an area that covers a lot of land, your path can cover up to about 30° of longitude.

3. Pick 5 cities in your 30° path that are found at different latitudes. Include arctic, antarctic, tropical, and equatorial locations.

4. Record the city name and latitude in the table below.

5. Go to <https://www.timeanddate.com/sun/>, type your first city name into the search bar to find the number of daylight hours for today. Look at all the information provided on that page. Scroll past the *Sun Graph* to find the total hours of daylight and record in the table.

6. Move the slider on the *Sun Graph* to find the total hours of daylight for your location on the March equinox, June solstice, Sept. equinox, and the Dec. solstice. Record your data in the table.

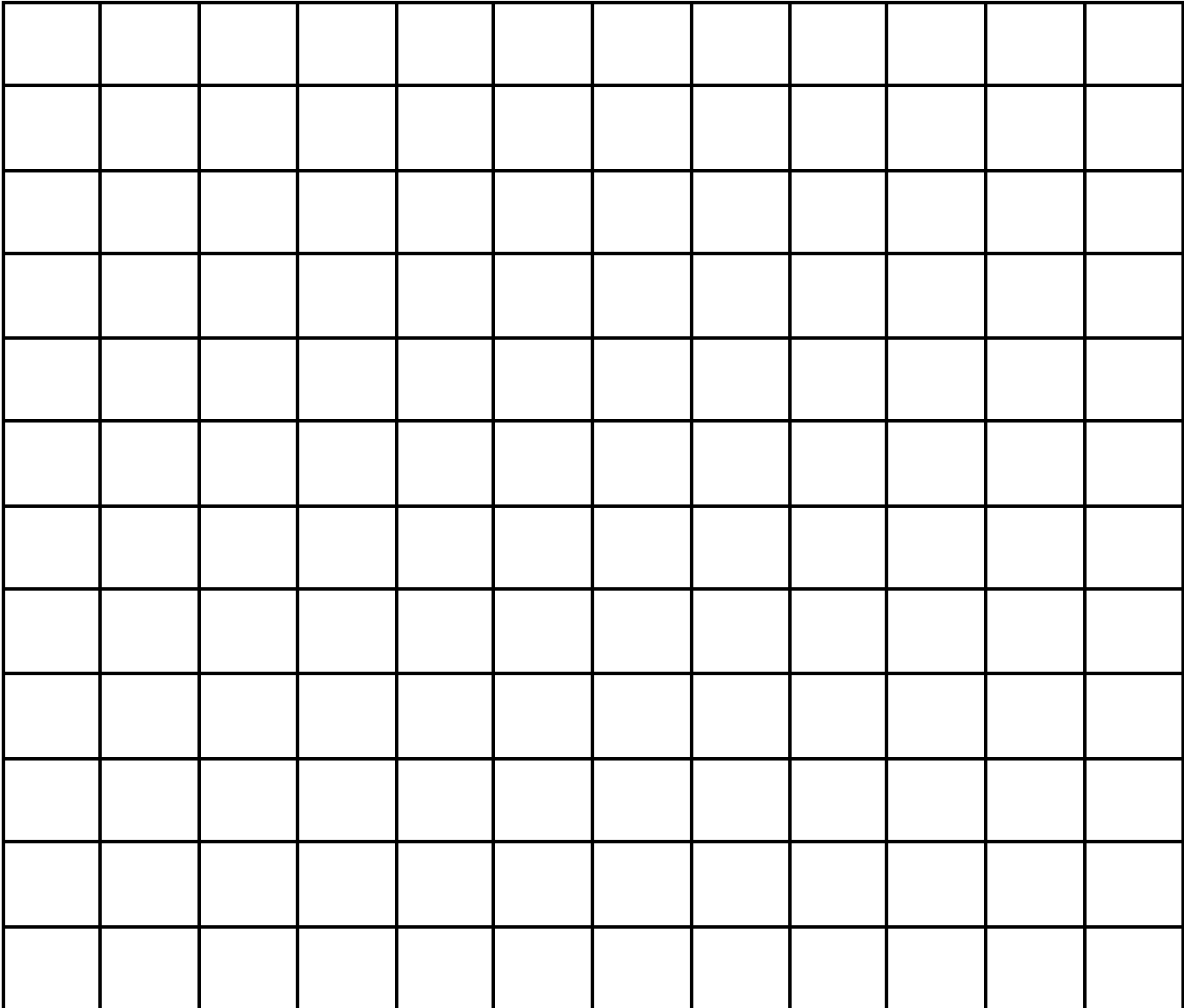
7. Repeat for the other 4 cities.

Hours of Daylight

City	Latitude	Hours of Daylight March Equinox	Hours of Daylight June Solstice	Hours of Daylight Sept. Equinox	Hours of Daylight Dec. Solstice

8. Use the graph to plot the information from your data table. Label the graph with Daylight (hours) and Date. Since you are plotting data for several locations, be sure to include a key. Estimate the hours of daylight for March 2022.

Graph



March '21 June '21 Sept '21 Dec '21 March '22

Key

Conclusions:

Which of your locations showed the least difference in the number of daylight hours? Answer with the city name and the latitude.

Which of your locations showed the most differences in daylight hours? Answer with the city name and the latitude.

What do you think accounts for the differences? Create a diagram to include in your explanation.

How do the northern and southern hemispheres differ in their lengths of daylight?

Pick some new locations and predict the number of daylight hours on different days. Use timeanddate.com to check your predictions.

You know how many hours of daylight each location has, how would you figure out the number of hours of night?

More fun stuff - <https://www.timeanddate.com/worldclock/sunearth.html>