Campbell Creek Science Center

Sun Tracker

Chart the sunrise and sunset where you live to get a better sense of how the Earth travels around the sun and to discover how much your day length changes over time.

Directions

Choose a spot in your yard or looking out your window where you can make observations of the rising and setting sun over several weeks. Because the sun rises and sets in different directions, you may need to choose a different observation spot for sunrise and sunset.

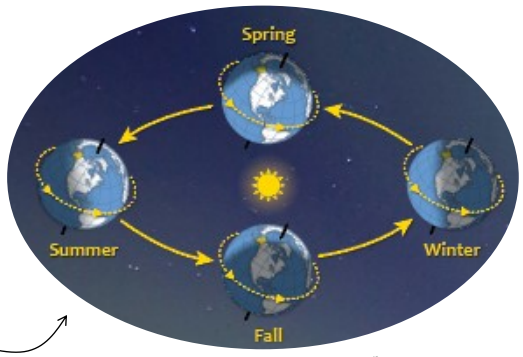
1. On a cloudless morning, visit your sunrise observation spot when it is starting to get light outside.
2. In the data table, record the direction you are looking to see the rising sun. Use a compass if you have one.
3. Record the time that the entire sun is up over your horizon. For example, your horizon might be the top of a fence, a house roof, or a mountain ridge.
4. Sketch where the sun rises from your observation spot.
5. Later in the day, visit your sunset observation spot when you notice the sun is getting close to the horizon. Record the direction of the sun and the exact time it completely disappears below the horizon. Sketch the setting sun.
6. Record the sunset and sunrise time once a week for at least four weeks. If it is cloudy, write this in the “Notes” column of your chart.

Materials

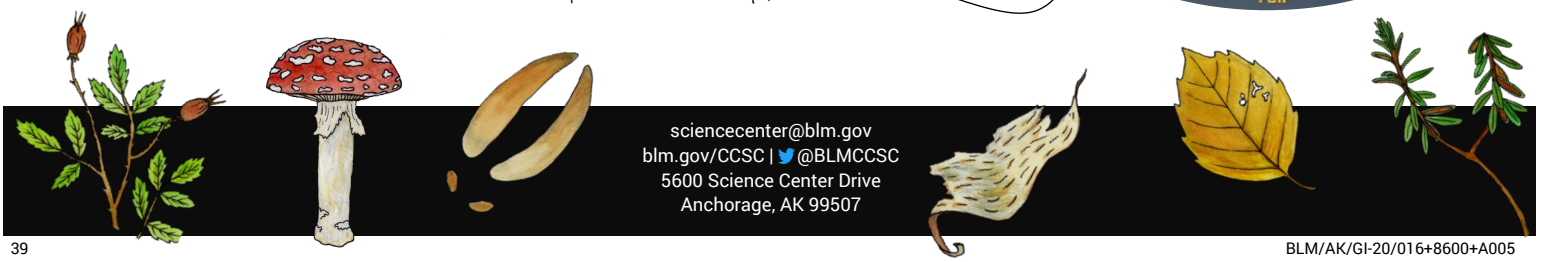
- Watch or portable clock
- Pen or pencil
- Printed data table, or copy the table onto your own paper
- Compass (optional)

Questions

1. What changes did you notice over the course of your observations?
2. How do your observations confirm what season you are in?



The Earth’s axis is tilted, which means the length of the day changes as Earth orbits the Sun. More sunlight reaches Alaska in the summer, when the northern hemisphere tilts toward the Sun. Alaska receives less sunlight in the winter, when the northern hemisphere tilts away from the Sun.



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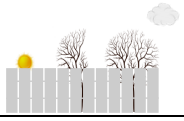
Data Sheet

Use this table to record sunrise and sunset times, other observations, and draw your sketch. Record the hour and minutes as exactly as you can. Use the sunrise and sunset times to calculate each day's length. How did the amount of daylight change over time?

Date	**Time of Sunrise** (00:00)	**Draw your Sunrise** *(include your horizon)*	**Time of Sunset** (00:00)	**Draw your Sunset** *(include your horizon)*	**Total Time from Sunrise to Sunset**	**Notes** *(direction of sun, weather, other observations)*
1/11/2021	09:57		04:13		6hr 12 min.	Sunrise: SW Sunset: SW Clear/ few clouds

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