

L.O. Understand how the Earth's orbit around the Sun affects hours of daylight and seasons.

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| I use data and graphs to describe simple patterns in the way Earth's day length changes * | | |
| I use data and graphs to describe patterns and trends in the way Earth's day length changes ** | | |
| I use data and graphs to describe changing patterns and trends in day length *** | | |

Quick recap: Why do we get day and night? Tell a talk partner everything you know - try to use scientific language.



axis

rotate

Earth

East

spin

West



1. Does the Sun always rise in the East and set in the West?
2. Does the Sun always rise and set in the same position?
3. Place the suns across the sky, in between the sunrise and sunset positions

Does the Sun always rise and set at the same times each day during the year? What have **you** noticed?

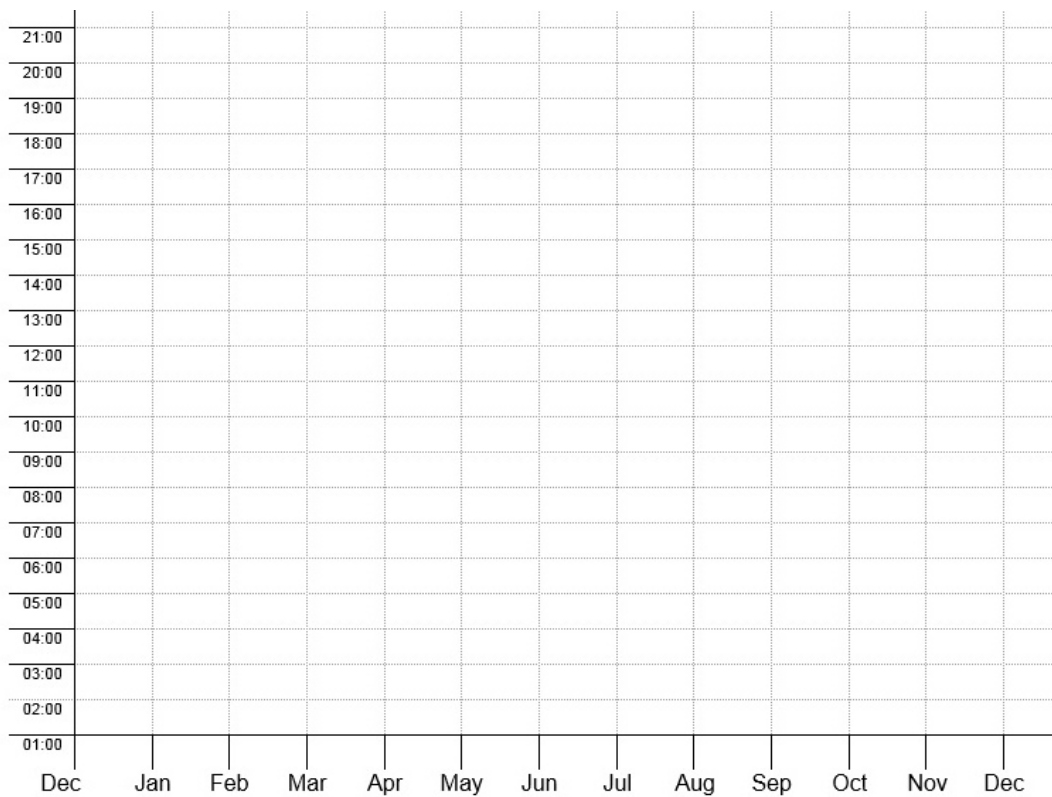
What do these changes in the way the sun appears to rise and set give us each year?

<http://www.childrensuniversity.manchester.ac.uk/learning-activities/science/the-earth-and-beyond/sunrise-and-sunset-and-day-length/>

Now return to the previous page and place a second arc of suns to show higher positions in the sky and wider sunrise and set positions. What time of year would you see the wider arc? And the narrower one?

Sunrise and Sunset Times for Northern England

| 21st day of... | sunrise GMT | sunset GMT | hours of daylight |
|----------------|-------------|------------|-------------------|
| Dec | 8:16 | 15:56 | |
| Jan | 8:06 | 16:33 | |
| Feb | 7:12 | 17:32 | |
| Mar | 6:08 | 18:23 | |
| Apr | 4:57 | 19:16 | |
| May | 4:04 | 20:06 | |
| Jun | 3:45 | 20:34 | |
| Jul | 4:11 | 20:17 | |
| Aug | 5:01 | 19:20 | |
| Sep | 5:52 | 18:08 | |
| Oct | 6:44 | 17:00 | |
| Nov | 7:40 | 16:07 | |
| Dec | 8:16 | 15:56 | |



Now write a short paragraph to use the data and the graph you have drawn to describe the changes in Earth's day length over a year.