

An Eclipse

What is an eclipse?

An eclipse happens when one object in space blocks us from seeing another. There are two kinds that we can see from Earth: a solar eclipse and a lunar eclipse.

In this lesson we will just look at a solar eclipse.

In a solar eclipse, the moon passes in front of the sun and this makes a shadow to fall on certain places on the earth. We get shadows when light cannot pass through an object.

Not every one in the world will be able to see the eclipse at the same time, only those who are in the shadow that is made. When this kind of eclipse happens, it can seem as if it is night time in the middle of the day, so it can be a rather strange experience. Sometimes we have an eclipse but the moon only partly blocks the sun so it does not go very dark. Other times it is what is called a 'total eclipse' and then it goes dark, like at night time. Total eclipses do not happen very often.

God created eclipses as he made the moon 400 times smaller than the sun and added to which the moon is 400 times nearer the earth than the sun. This means that when the moon eclipses the sun, passing in front of it, it seems to us on earth that they are the same size.

If you wonder how something smaller can seem the same size as something bigger, try this:

Look out of your window for something big - maybe a house, or a tree. Hold your finger up next to the object and close one eye. Can you see how your small finger can be made to be bigger, smaller and even the same size as the big object outside?

If you like, you could try and act out an eclipse with a torch, a ball and a cardboard disc. You would need a dark room though, which might be a bit hard at the moment, but you could try later in the year. Parents can find out how here:

<https://www.livescience.com/60167-how-to-explain-total-solar-eclipse-to-kids.html>

You could also have fun making shadows, blocking the sun's light from passing through objects, in your garden and watching them get longer and shorter at different times of the day.

The earliest record we have of an eclipse is from the 4th June 781 years before Christ was born (BC), in the reign of the Chinese Emperor Yew-Wang. At about 9 o' clock in the morning the sun was plunged into darkness for 5 minutes. As the moon passed in front of the sun, blacking it out from sight, a halo with ribbons of light streaming from it became visible. Birds stopped singing. The land darkened as if it were a moon lit night. The writer said that for all they knew, it might have been the end of the world!

The next total eclipse will be on the 12th August 2026 around sunset. How old will you be then?

