

# Earthrise

## What is Earthrise?

Here on planet Earth, we know that in the morning, we'll see sunrise, and in the evening, we'll see sunset. When we go to bed at night, we know that we'll see daylight the next day. That's pretty much guaranteed for anyone on Earth, no matter where they live.

## But what if we weren't on planet Earth?

Imagine you are an astronaut. Your mission is to travel to the Moon and study its surface. You have to blast off in your rocket from the surface of Earth and travel up to the Moon, but not land on it – you just have to orbit it. About 70 miles from its surface, you zip round and around the Moon in your spacecraft multiple times, studying its craters from different angles. On your fourth orbit around, you see the Earth rising on the horizon, just like the Sun does every morning at home.

This is exactly what the crew of the Apollo 8 mission experienced in 1968. The three crew members – Bill Anders, Frank Borman and Jim Lovell – were the first people in history to witness it in person. Bill was the first to notice the Earth rising in the horizon, and called Frank and Jim over to check it out too. They all immediately knew they had to get it on film. Bill first took a black and white photo, but Jim had some colour film which he handed to Bill for him to take a colour photo too – the photo now known as 'Earthrise'.

The Earthrise image is so remarkable because it was the first to show the Earth appearing above the horizon of another celestial body. It was taken by a human being at a distance of roughly 230,000 miles.



*Earthrise: An iconic photo with a lasting legacy.  
Image credit: NASA*

## Thoughts from the crew

In 2018, Bill Anders said “We set out to explore the Moon and instead discovered the Earth.” You can read the article where he looks back on the experience of the Apollo 8 mission [here](#).

Interestingly, NASA didn’t suggest to the crew that they should make sure they take plenty of photos of Earth - they were more focused on taking photos of the Moon’s surface. One of the purposes of the Apollo 8 mission was to identify potential areas for future spacecraft to land, which Apollo 11 then did the following year, 1969 - the first time humans set foot on the Moon. These landing sites are all on the ‘near side’ of the Moon: the side that faces Earth.



*A photo taken by the Apollo 8 spacecraft of the far side of the Moon.  
Image credit: NASA*

However, the spacecraft also snapped some amazing shots of the ‘far side’ of the Moon: the side which faces away from Earth. Because it faces away from us, we can’t see it from down here. In fact, Bill, Frank and Jim were the first humans to see this in person too!

Each member of the crew was deeply affected by the beauty of what they saw on the mission. In the short film ‘Earthrise: The Story of the Photo that Changed the World’, Frank Borman said: “What they should have sent was poets because I don’t think we captured in its entirety the grandeur of what we had seen.”

You can watch the film [here](#). It was released in December 2018, fifty years after the mission took place, and features all three members of the crew discussing their memories of the trip.



## Earthrise at Dynamic Earth

In May 2021, Dynamic Earth launched its exciting new planetarium and its very first live show, You Are Here!

In the show, audiences blast off from Earth and take a trip through space to see what else is out there. As part of this, we get a little taste of what the Apollo 8 astronauts saw when they looked back at Earth while in orbit around the Moon.

We wanted to know what inspired our planetarium manager, Dr Alastair Bruce, to feature Earthrise in the show, and this is what he had to say:

**“It’s hard to understate just how important an image Earthrise is. Not only is it among the most distant of images of the Earth ever taken by a human, it perfectly captures just how isolated we are on planet Earth - swimming in the blackness of space (it’s hard to see stars near the glare of the Earth). The lovely blue tones of the Earth sit in stark contrast to the more barren and cratered Moon. There’s no place like home...”**

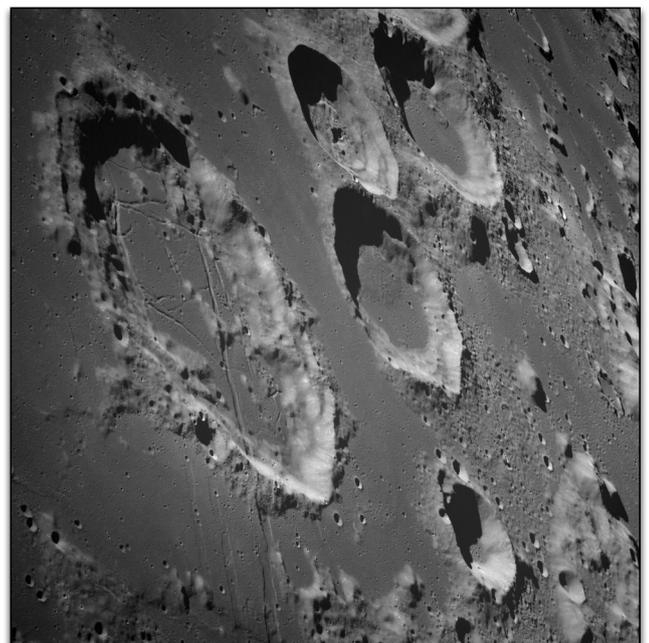
Alastair also recommends [this short video](#) from NASA which looks back at the mission and recreates the ‘Earthrise’ moment using photos and data obtained from the Lunar Reconnaissance Orbiter, a newer lunar spacecraft which has been orbiting the Moon since 2009.

## Feeling inspired?

If you want to learn a little more about the Moon, why not try out our [Google Moon Treasure Hunt](#)?

First you will need to download Google Earth to your computer. Then all you need to do is follow our instructions to explore the Moon’s surface like an Apollo mission astronaut!

You can also learn more about the myths and legends of the Moon and try creating your own crater impact using some ingredients you might have in your kitchen by visiting our [‘Exploring the Moon’](#) activity - we recommend trying flour and a sprinkle of cocoa powder!



*View of Goclenius and Other Craters on the Moon  
Image credit:NASA*