Unit focus: Space
Text focus: Information Text (850L)

STAGE 5

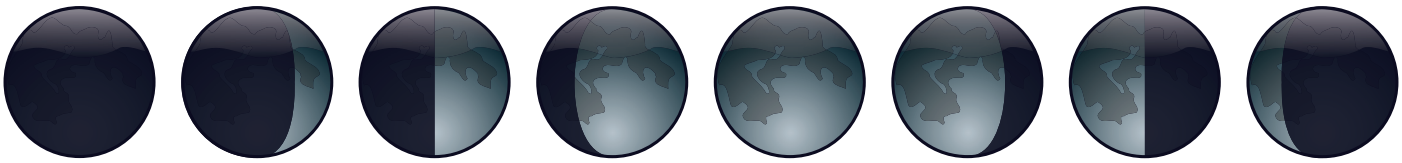
The Moon

The Moon has fascinated human beings since the dawn of time. The Ancient Egyptians believed that their god, Khonsu, was responsible for helping it travel across the sky each night. The link between a full moon and werewolves has been a staple of horror stories for centuries. Whatever civilisations have believed, they have always recognised the important role that the Moon plays on Earth.

You Spin Me Right Round

There are two different and equally important cycles of the Moon. The Moon has phases because it orbits the Earth once every 27.3 days. However, because the Earth is also orbiting the Sun at the same time, it takes the Moon 29.5 days to complete a cycle from new Moon to new Moon.

In each cycle, there are 8 phases of the Moon. Each complete cycle is called a "lunation".



Wave Hello

The Moon plays a vital role in creating the tides on Earth, along with the Sun. The gravitational pull of the Sun is about 178 times stronger than the pull of the Moon, but the Moon is a lot closer. This means that the Moon has a more significant effect on the tides.

Wherever the Moon is in its orbit, the tides will be high. This is because the pull of the Moon causes the tides to "bulge" towards the Moon, it also causes the tides to bulge on the exact opposite side of Earth. Therefore, two places at any one time will have a high tide. The sites in between these two high tides will be at low tide. Can you imagine a beach without any waves?

Fantastic Facts

Man first landed on the Moon in 1969, when the NASA Apollo 11 mission successfully touched down. Neil Armstrong and Buzz Aldrin became the first humans to set foot on a foreign planetary body. Michael Collins stayed aboard the shuttle and piloted it around the Moon during their moonwalk.

The Moon is the fifth-largest satellite (the technical term for a moon) in the solar system. There are more than 200 satellites in our solar system, and scientists are finding more all of the time.

On average, the Moon is roughly 384,000km from the Earth. This changes throughout its cycle. It is nearly 11,000km around at its equator. The temperature varies between -173c and 127c. Bring a coat and your suncream!

Due to the way it orbits Earth, we always see the same face of the Moon. It doesn't matter where you are on Earth, the Moon will look just the same as always. The surface of the Moon is actually very dark - similar in colour and reflectiveness to an old tarmac road. It is only the Sun shining on it and the darkness of the sky around it that makes it seem so bright.

Unfortunately, we are saying goodbye to the Moon, albeit very slowly. It is drifting away from Earth by about 4cm per year. Don't worry, though, this won't affect us for a very long time.

It is widely believed by scientists that the Moon was created roughly 4.5 billion years ago when a rock the size of Mars crashed into Earth. The impact caused many rocks to fly off into space. Many of them fell into orbit and compressed together to form the Moon. Scientists have named the giant rock that crashed into Earth, Theia.

RETRIEVAL FOCUS

1. What was Theia?
2. Which Apollo 11 astronaut didn't walk on the Moon?
3. How long does it take the Moon to complete a full cycle?
4. What is the scientific name for a complete cycle?
5. Which mythical creature is linked to the cycle of the Moon?

VIPERS QUESTIONS

S Describe how the Moon causes tides on Earth.

V Which word is used to describe the different stages of the Moon's cycle?

V Complete this sentence: The technical term for a moon is a _____

I Why does the author joke that you might need a coat and suncream on the Moon?

S Why would the Moon look the same for everyone on Earth?

Answers:

1. A giant rock that crashed into Earth, creating the moon
2. Michael Collins
3. 29.5 days
4. Lunation
5. Werewolves

S: The pull of the Moon pulls water towards it creating a bulge. This creates a high tide and causes a low tide on other sides of the Earth.

V: Phase

V: Satellite

I: The temperatures range from extremely cold to extremely hot

S: Due to the way it orbits, the same face is always facing Earth