BBC LEARNING ENGLISH

6 Minute English

Learning lessons from the moon

This is not a word-for-word transcript.

Neil
Hello. This is 6 Minute English from BBC Learning English. I'm Neil.

Georgie
And I'm Georgie. "That's one small step for man, one giant leap for mankind" – famous words, but do you know who said them?

Neil
Of course - that was Neil Armstrong, the first person to land on the Moon.

Georgie
Right, the Apollo 11 spacecraft landed Neil Armstrong on the Moon on the 20th of July 1969. But in decades after that famous event, interest in returning to the Moon faded away... until now.

Neil
Summer 2023 saw the start of a new race for the Moon between Russia's Luna-25 spacecraft and India's Chandrayaan-3. Russia's rocket crashed on landing, but Chandrayaan-3 successfully touched down on the 23rd of August, making India only the fourth country to successfully land on the Moon.

Georgie
But why this sudden interest in going back to the Moon? That's what we'll be discussing in this programme and, as usual, we'll be learning some useful new vocabulary too.

Neil
But before we blast off, I have a question for you, Georgie. Everyone knows that Neil Armstrong was the first man on the Moon, and was followed by a second astronaut, Buzz Aldrin. But who was the third Apollo astronaut who flew the command module while his crewmates walked on the Moon? Was it:

a) Yuri Gagarin?
b) Michael Collins? or,
c) Alan Shepard?

Georgie
Hmm, I think it was Michael Collins.

Neil
Okay, Georgie, we'll find out the answer at the end of the programme. In some ways, the current interest in the Moon is really more about the origins of Earth. One theory is that during the early days of the solar system, around 4 billion years ago, another planet crashed into Earth breaking off a part which then formed the Moon. Unlike the Earth's surface, which is constantly moving, the Moon is completely still, frozen in time to create a perfectly preserved record of what happened at the birth of the solar system. Here's astronomer, Dr Becky Smethurst, explaining more to BBC Radio 4 programme, Inside Science:

Dr Becky Smethurst
…Whereas on the Moon, it's just this **inert** rock, there's no atmosphere so every single thing that's happened to the Moon in its four-and-a-half billion years' worth history is still recorded there on it. And so, if anyone's ever seen an image of the far side of the Moon, the side of the Moon that we cannot see from Earth is incredibly **pockmarked**. There are **craters** all over that thing, and so this is **a** really **big deal** when we're thinking about what happened to the early Earth as well, because we think all of the Earth's water came from impacts with comets and asteroids in the very early days of the solar system.

Georgie
The rock which makes up the Moon is **inert** – it doesn't move. It's also full of **craters** - large holes in the ground caused by something hitting it. The Moon has so many

of these craters, it's described as **pockmarked** – having a surface that's covered in small marks and scars.

Neil
These craters play an important part in the story. Because the Moon's surface does not change, finding water there would explain a lot about how water, and therefore life, started on Earth. That's why Dr Smethurst calls the Moon mission a **big deal**, meaning important or significant.

Georgie
That's right. Astronomers know that comets are full of ice, and think comets brought water to Earth when they crashed into it. Evidence of those crashes has been erased by the constantly moving surfaces on Earth, but not on the Moon. So, comparing water from the Moon with water on Earth could provide scientists with vital information, as Dr Smethurst explained to BBC Radio 4's, Inside Science:

Dr Becky Smethurst
So they'll be looking essentially to see if it has the same characteristics as water here on Earth, and then we can sort of **trace that back** from sort of the crater history as well to working out what actually happened. How long has it been there for as well. Also, various other minerals that might be there, these very heavy minerals that we know come from comets and asteroids. Again, that would be this sort of **smoking gun** to be like, yes this that's where this water came from and it's likely that Earth's water came from there as well.

Neil
Scientists can **trace** the existence of water on the Moon **back** to find out what happened on Earth. If you **trace** something **back,** you discover the causes of something by investigating how it developed.

Georgie
For this reason, Dr Smethurst says finding water on the Moon would be finding a **smoking gun**, a modern idiom meaning indisputable evidence or proof. We've learned a lot about the Moon, but we still don't know the answer to your question, Neil - who was the third Apollo astronaut on that famous first landing in 1969? I said it was Michael Collins…

Neil
Which was… the correct answer! Michael Collins never set foot on the Moon himself, but afterwards said the experience of looking back at Earth from the Apollo spacecraft changed his life forever. OK, let's recap the vocabulary we've learned from our trip to the Moon, starting with **inert**, not moving or unable to move.

Georgie
A **crater** is a very large hole in the ground.

Neil
Pockmarked means marked by small holes and scars.

Georgie
If you say something is a **big deal**, it's important or significant in some way.

Neil
To trace something back means to discover its causes by examining how it developed.

Georgie
And finally, the idiom **a smoking gun** refers to indisputable evidence or conclusive proof of something. Once again, our six minutes are up. Join us next time for more scintillating science and useful vocabulary here at 6 Minute English. Goodbye for now!

Neil
Goodbye!

VOCABULARY

inert
not moving; unable to move

crater
very large hole in the ground, which has been caused by something hitting it or by an explosion; the round hole at the top of a volcano

pockmarked
marked by small holes and scars

a big deal
important or significant

trace (something) back
discover the causes of something by investigating how it developed

a smoking gun
indisputable incriminating evidence; conclusive proof of something