BBC LEARNING ENGLISH

6 Minute English
Life on Mars

NB: This is not a word-for-word transcript

Sophie
Hello and welcome to 6 Minute English. I'm Sophie…

Neil
And I'm Neil. Sophie – did you see the beautiful sky last night?

Sophie
No, I went to bed early. Why?

Neil
I was wondering if there was life out there.

Sophie
You mean life on other planets? That's just science fiction, Neil.

Neil
It isn't! People are fascinated by life on other planets for a good reason.

Sophie
You believe in little green men?

Neil
Not necessarily… but possibly.

Sophie
Well, Mars is our closest neighbour in the solar system and the subject of today's show. And that brings me on to our usual quiz question. How long is a day on Mars? Is it about…
a) 5 hours?
b) 25 hours?
Or c) 45 hours?

Neil
And I think it must be c) 45 hours. Things are weird on other planets. And Mars is further

from the sun than us… Mars may be our closest neighbour, but it's hardly in our backyard, is it?

Sophie
It is in astronomical terms, Neil – it's visible to **the naked eye** – meaning without using instruments – and it's reachable by spacecraft. Well, we'll find out later on in the show whether you got the answer right or not. Now can you tell me Neil why people like you get excited about the possibility of life on Mars?

Neil
Well, Mars is similar to the Earth in some important ways which means if life developed on our planet, why not Mars?

Sophie
That's true. Its temperature is in the right zone – not too hot and not too cold. But actually we could find Mars pretty cold – an average temperature would be around minus 63 degrees Celsius compared to Earth's 14 degrees Celsius. It's also very **arid** – or dry.

Neil
And it needs to be wet for life to develop, doesn't it?

Sophie
That's right. Many scientists think that liquid water is essential for life! But there may have been water on the surface of Mars in the past. And recent research suggests that there may be water underground. Let's hear some more about this from Professor John Zarnecki, who teaches Space Science at The Open University.

INSERT
John Zarnecki, Professor of Space Science, The Open University
We are now seeing that in fact Mars probably does have water – not liquid water – that there is ice just below the surface and there's even just recently tantalizing evidence that perhaps water does flow periodically... Now, and also coupled with the fact that here on Earth we're finding that life in very primitive form exists in the most extreme environments, these are the so called 'extremophiles' that exist at the bottom of the oceans… So life is much, much tougher.

Neil
What does **tantalizing** mean, Sophie?

Sophie
It means something you want that's almost, but not quite, within reach. So, scientists would love to think water flows on Mars but the evidence isn't strong enough for this to be certain. The other interesting point the professor makes is that life may exist in the very harsh Martian environment – because primitive life exists in extreme places on Earth.

Neil
Extremophiles are **organisms** – or small creatures – that live in very extreme environments and can survive conditions that would kill most other organisms. But on Mars they would be living underground because the **radiation** – or light and heat – from the Sun would kill any organisms living on the surface of the planet. So why doesn't the Sun's radiation kill us then, Sophie?

Sophie
The Earth has a strong magnetic field created by its hot molten **core** – or centre – and this protects us from the Sun's harmful solar winds.

Neil
And what about Mars - why doesn't it have a magnetic field?

Sophie
It used to – 4 billion years ago. It's possible that a massive **collision** with an asteroid might have heated up Mars's core, disrupting the magnetic fields.

Neil
And if you **disrupt** a process you stop it from continuing normally. Now, to return to the subject of collisions, Sophie, I have something very interesting to tell you.

Sophie
Yes?

Neil
A **meteorite** – or a piece of rock from outer space – might've crashed into the Earth millions of years ago. That meteorite might have contained Martian life forms. So we might be descended from Martians!

Sophie
That's actually an interesting idea, Neil. But let's listen to Professor John Zarnecki talking about interplanetary life.

INSERT
John Zarnecki, Professor of Space Science, The Open University
If we do find traces of life on Mars we don't know, do we - whether it evolved independently or was it perhaps seeded from Earth. It is possible that life forms from Earth travelled to Mars and perhaps existed there – or the other way round.

Neil
So life on Mars may have **evolved** – or developed – on its own. Or it might have arrived from Earth in a lump of rock… Or the other way round! So Martians might be humans or we might be Martians! One big interplanetary happy family, Sophie!

Sophie
Well Neil, let's hope you stay happy after you hear the answer to today's quiz question. I asked: How long is a day on Mars? Is it … a) 5 hours? b) 25 hours? Or c) 45 hours?

Neil
And I said c) 45 hours – they must have a long day over there.

Sophie
And you were … wrong! The correct answer is b) because a day on Mars is slightly longer than here on Earth – it's 25 hours. Anyway, can we at least hear the words we learned today?

Neil
They are:
the naked eye
arid
tantalizing
extremophiles
organisms
radiation
core
disrupt
meteorite
evolved

Sophie
Well, that's the end of today's 6 Minute English. Join us again soon!

Both
Bye.

Vocabulary

the naked eye
(seen) without using instruments

arid
dry

tantalising
something you want that's almost, but not quite, within reach

extremphiles
things that live in very extreme environments and can survive conditions that would kill most other living things

organisms
small living things

radiation
energy from heat or light

core
centre

disrupt
stop something from working normally

meteorite
a piece of rock from outer space

evolved
(in this context) developed