BBC LEARNING ENGLISH

6 Minute English

Discoveries of the Deep Sea

This is not a word-for-word transcript

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

Neil
And I'm Neil. The 20th of July 1969 was a big day in history. Do you know why, Sam?

Sam
Wasn't that when Neil Armstrong first set foot on the moon?

Neil
Right. But it's often forgotten that some of the most dramatic photographs taken on the Apollo space mission weren't of the moon at all – they were of Earth. It wasn't until we went to the moon that we really saw the size of Earth's oceans and named ourselves, the Blue Planet.

Sam
Despite most of our planet being covered by water, the ocean remains of place of unexplored mystery, of sea monsters like Moby Dick, and the Kraken. In this programme, we'll be diving into the deep seas, seeing some of its strange sights, and as usual, learning some related vocabulary too.

Neil
But before that I have a question for you, Sam. You were right when you said that most of the Earth is covered by water. But do you know exactly how much of the Earth's surface is ocean? Is it:

a) 50 percent?
b) 60 percent? or,
c) 70 percent?

Sam
Well, it is called the Blue Planet, so I'll say c) 70 percent.

Neil
OK. I'll reveal the answer later in the programme. The first thing to say about the deep ocean is that the rules of life down there are very different from the rules on land. Sunlight cannot reach the very bottom of the ocean, a place between two and three kilometres down known as the 'deep abyss', so it totally dark and extremely cold. And the weight of water creates massive amounts of pressure.

Sam
This extreme environment is stranger than fiction, and home to things which seem to be from another planet; things like hydrothermal vents - volcanic hot springs which break through the ocean floor. Oceanographer, Alex Rogers, joined an expedition which discovered a hydrothermal vent in the ocean near Antarctica. He told his story to BBC World Service programme, Discovery:

Alex Rogers
Well, the first problem is actually finding them because they cover a very small area so it's literally like trying to find **a needle in a haystack**, but when you do come across them, I mean, the deep ocean is food limited, so life is quite **thin on the ground**, and then suddenly your camera just stumbles into this area where there is just **abundant** life all over the sea floor and around these vents.

Neil
Alex says that finding these small thermal vents at the bottom of the ocean is like **finding a needle in a haystack**, an idiom meaning almost impossible to find because the area you have to search is so large.

Sam
Because there's no sunlight on the ocean floor, it's hard for plants and creatures to survive, so forms of life are **thin on the ground** – there are only a few of them. Alex cannot find anything to film with his camera, until suddenly he nears the vent and sees plants and animals everywhere. Here, there is more than enough, or **abundant** life.

Neil
To picture a hydrothermal vent, imagine an underwater volcano. Billowing clouds of what looks like smoke heat the seawater to a temperature of 386 degrees C. This creates a warm environment of all kinds of weird and wonderful creatures, including vent mussels, tube worms and blind 'yeti crabs', so called because of their hairy claws, some of which get cooked because the water is so hot.

Sam
What's amazing is that while these vents may be as old as Earth itself, they were only discovered in the 1970s. So, are there more mysteries hiding in the deep ocean? That's the question BBC World Service's, Discovery, asked marine biologist, Kerry Howell. Here's what she said.

Kerry Howell
I have absolutely no doubt that there is plenty more to discover down there. It's really **vast**, I mean it's quite **hard to get your head around** how vast the deep sea is, and it is most of our planet. So… and we've **barely scratched the surface** of exploration of this unique environment, and if you think that vents were only discovered in the 70s, you know, there's great potential for a lot else to come, I think. We've only been exploring this environment for the last 150 years, I mean. Before that we didn't think there was any life down there at all. So, it's a very young science is Deep Sea biology. And so, there's … yeah, there's a lot more to discover. I have no doubt.

Neil
In terms of ocean exploration Kerry thinks we've only **scratched the surface** – found out a little bit about something, but not enough to fully understand it.

Sam
That's because the ocean is **vast** – extremely big. So vast, in fact, that it's **hard to get your head around it**, or difficult to really understand.

Neil
But how vast, exactly, Sam? In my question I asked how much of the Earth's surface is covered by water.

Sam
And I said it was c) 70 percent.

Neil
Which was the correct answer! Well, 71 percent to be precise, but either way it's **hard to get your head around** or difficult to fully understand.

Sam
OK, we'd better recap the other vocabulary too, starting with the idiom, **finding a needle in a haystack** meaning that something is almost impossible to find because you have to search so widely for it.

Neil
If something is **thin on the ground**, there's very little of it, but if it's **abundant**, there's plenty or more than enough.

Sam
When you only **scratch the surface**, you find out a little about something, but not enough to fully understand it.

Neil
And finally, **vast** is another way of saying extremely large, huge or enormous.

Sam
Unlike the vast oceans, our time is limited to just six minutes and it's up. So, join us again soon for more amazing adventures and, of course, useful vocabulary, here at 6 Minute English. Goodbye for now!

Neil
Goodbye!

VOCABULARY

like finding a needle in a haystack
something that is impossible or very difficult to find because the area you have to search is so large

thin on the ground
there are very few of something

abundant
there is more than enough of something

scratch the surface
find out (or do) a small amount about something, but not enough to fully understand (or deal with) it

vast
extremely large; huge

hard to get your head around
difficult to fully understand or comprehend