

人类可以住在水下城市中吗？ Could humans live in underwater cities?

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

大家好。这里是 BBC 学习英语栏目的六分钟英语。我是内尔。

And I'm Rob.

我是罗伯。

From the ancient Roman sea god, Neptune, to myths of mermaids, to modern Hollywood films like Finding Nemo, people throughout history have been fascinated by the idea of living underwater.

从古罗马的海神尼普顿到美人鱼的神话，再到像《海底总动员》这样的现代好莱坞电影，人类自古以来一直着迷于住在水底的想法。

In this programme, we'll be hearing about projects to create liveable underwater habitats and the challenges they face.

在本期节目中，我们将听到关于创造可居住的水底栖息地项目，以及它们面临的挑战。

We'll be finding out how realistic it is to believe that in a few years we could be eating breakfast **whilst** watching fish swim outside the kitchen window, before heading off to work in an office under the ocean...

我们会了解在未来几年里我们能够在去海底的办公室上班前边吃早餐边看鱼儿们从厨房的窗外游过的想法有多现实.....

...and we'll be learning some related vocabulary as well.

.....而且我们还会学习一些相关词汇。

But first it's time for our quiz question.

但是首先是我们的问题时间。

One of the first adventure stories to fire the public's imagination about the underwater world was the 1870 novel, Twenty Thousand Leagues Under the Sea.

点燃公众对海底世界想象的最早的探险故事是 1870 年的小说《海底两万里》。

But who wrote this underwater classic?

但是是谁写的这本海底经典故事呢？

Was it a) H·G·Wells, b) Arthur Conan Doyle, or c) Jules Verne?

是 A. H·G·威尔斯，B.亚瑟·柯南·道尔，还是 C. 儒勒·凡尔纳？

I think I know this one, Neil.

我想我知道这题的答案，内尔。

Wasn't it a) H·G·Wells?

应该是 A. H·G·威尔斯吧？

OK, Rob, we'll find out later if you're right.

好的，罗伯，我们稍后会揭晓你是否回答正确。

添加的词汇

whilst

英:/waɪlst/ 美:/waɪlst/

conj. 当...的时候；时时，有时；同时

tower

英:/'taʊə/ 美:/'taʊə/

n. 塔；高楼；堡垒 vi. 超越；高耸



扫码APP内查看
每日英语听力

Now, one of the most ambitious designs for an underwater city is Ocean Spiral, a huge transparent globe attached to the seabed-the solid ground which lies deep below the sea level.

最具有野心的水底城市设计是海洋螺旋，一个连接到海底——位于深海之下的坚硬地面——的巨型透明球体。

The top of the globe stands above the surface of the ocean and running through the centre is a **tower** to add strength, and to provide space for homes, offices and even an amusement park for five thousand underwater residents.

这个球体的顶部位于海平面之上，并且中间是一座塔，用来增加强度以及为五千名海底住户提供房屋、办公室甚至还有一个游乐场的空间。

Ocean Spiral has been dreamt up by the Japanese Shimizu Corporation.

海洋螺旋是日本清水集团的构想。

Here's Shimizu engineer, Maksudaki Takeuchi, explaining to BBC World Service programme, CrowdScience, the motivation behind the idea.

以下是清水集团的工程师竹内真崎向 BBC 世界服务节目《大众科学》解释这个想法背后的动机。

At the moment the world is facing a lot of serious problems regarding food, energy, water, natural resources...however we are trying to solve the issues just by using our land.

目前世界正面临着许多跟食物、能源、水、自然资源相关的严重的问题.....但是我们正在努力利用我们的土地解决这些问题。

Our idea is to connect the sea surface and the deep sea vertically and that way we believe that we can utilise the capability of the deep sea and that's the purpose of this whole project.

我们的想法是将海面 and 深海垂直连接，我们相信这样我们就能利用深海的能力，而这就是这个项目的目的。

The effects of human activity on the land have led some to look to the oceans for natural resources-naturally existing things such as minerals, oil, coal and other energy sources that can be used by people.

人类在陆地上的活动影响使得有些人将目光转向海洋来获取自然资源——自然存在的东西，例如矿物、石油、煤和其他能够为人所用的能源。

This search deep underwater is happening vertically-at a ninety degree angle straight up or down from the ground, as opposed to horizontally, or flat across the Earth's surface.

这个探索深海的项目是垂直的——跟地面成九十度夹角，跟水平或与地球表面平行相反。

But as yet, Shimizu Corporation's plans for an underwater city are still in the planning stages-no part of the project has yet been built and the total cost is thought to exceed 26 billion dollars.

但是清水集团的海底城市计划仍处于规划阶段——项目的各个部分都还没有建设，而且所有花费估计要超过260亿美元。

In fact, the longest anyone has spent living under the sea is only 73 days.

事实上在水下生活的最长时间是73天。

That record was set by Roger Garcia, ex-military diver and head of The Aquarius, currently the world's only underwater research station.

这个记录的缔造者是罗杰·加西亚，前军队潜水员兼水瓶座——目前世界上唯一的海底研究站——的负责人。

Here's Roger Garcia, explaining to BBC World Service programme, CrowdScience, what happens to the human body after living underwater for so long.

以下是罗杰·加西亚向 BBC 世界服务节目《大众科学》解释人类的身体在水下生活那么久时候会发生什么。

...perhaps a change in their voice, not much 'cos we're not very deep, that's because the air becomes denser.

.....也许他们的声音会发生变化，变化不会太大，因为我们不是很深，这是因为空气变得更浓稠。

Physiologically the most important thing though, is that since you are in this case at two and a half times atmospheric pressure, you do take on more inner gas, and in this case-inside The Aquarius we just breathe normal air-you're gonna take on more nitrogen and depending on how long you stay in The Aquarius, that's going to incur some sort of decompressed obligation.

不过从生理上来说最重要的事情是因为你在这种情况下承受的是2.5倍的大气压，你确实会承受更多的内部气体，而在这种情况下——在水瓶座里我们呼吸的是正常的空气——你要承受更多的氮气，而且根据你要在水瓶座里待的时间，这会产生某种程度的解压负担。

In addition to engineering challenges, living underwater for long periods of time also affects the human body.

除了工程挑战之外，长期在水底生存还会影响人类的身体。

One example is the bends, or decompression sickness, a serious medical disorder created by nitrogen bubbles in the muscles when returning to the surface of the sea too quickly.

一个例子就是蜷曲或减压病，当人快速回到海面时肌肉中的氮泡引起的严重疾病。

The bends, and changes to the voice, are examples of how underwater living changes the body physiologically-relating to how the bodies of living humans and animals function.

蜷曲，以及声音的改变都是生活在水下从生理上——跟人类和动物机能有关——改变身体的例子。

As divers descend deep below the ocean's surface, there is an increase in atmospheric pressure-the normal air pressure within the Earth's atmosphere.

随着潜水者下沉到海洋深处，大气压——地球大气层内的正常气压——会增加。

The deeper they dive, the higher the pressure.

他们潜得越深，压力就越大。

Physiological reactions like the bends are caused by divers incorrectly readjusting to normal atmospheric pressure.

像蜷曲这样的生理反应是由于潜水者不正确地重新适应正常大气压造成的。

Well, Neil, with so many difficulties, it's no surprise that H·G·Wells's fantasy of living under the sea is still science-fiction.

嗯，内尔，面对这么多困难，怪不得H·G·威尔斯对于生活在海底世界的幻想仍然还存在于科幻作品中。

Ah, but are you sure it was H·G·Wells, Rob?

啊，但是你确定是H·G·威尔斯吗，罗伯？

In my quiz question, I asked you who wrote the classic underwater adventure *Twenty Thousand Leagues Under the Sea*.

在我的问题里，我问你谁写了经典的海底探险故事《海底两万里》。

Yes, and I said a) H·G·Wells.

是的，我说的是 A. H·G·威尔斯。

Which was...the wrong answer!

这是.....错误的答案！

It was, in fact, c) Jules Verne, the French author who also wrote *Around the World in Eighty Days*.

事实上是 C. 儒勒·凡尔纳，这位法国作家还写了《80天环球世界》。

In this programme, we've been discussing the challenge of living underwater, going down vertically—at a 90 degree angle—to the seabed—the solid ground hundreds of metres under the sea.

在本期节目中，我们一直在谈论住在水底的挑战，垂直——以90度的角度——下到海底——海下面几百米的坚硬地面——去。

Ocean explorers search underwater for natural resources—useful materials like coal and oil.

海洋探索者们探索水下时间来获取自然资源——像煤和石油这样有用的材料。

But they face many physiological problems—problems relating to how the human body functions, such as the bends—a painful medical condition caused by returning too quickly to atmospheric pressure—the Earth's usual air pressure.

但是他们面临着很多生理问题——跟身体机能有关的问题，例如蜷曲——由过快返回大气压——地球的正常气压——引起的痛苦的病理状况。

That's all for this programme, but we hope you'll be diving back into 6 Minute English very soon.

这就是本期节目的所有内容，但是希望你们能够很快回到六分钟英语。

Bye for now!

再见！

Bye!

再见。