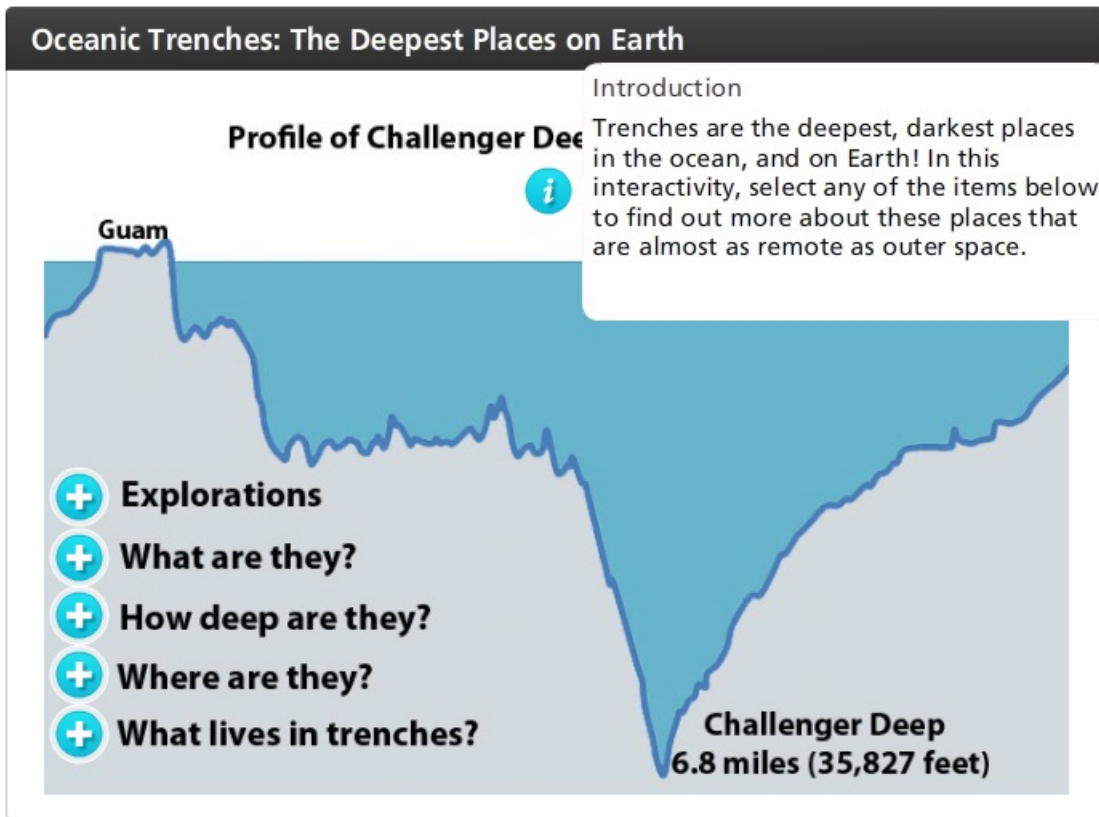


## Module 4: Bathymetry

### Topic 5 Content: Oceanic Trenches: The Deepest Places on Earth



Trenches are the deepest, darkest places in the ocean, and on Earth! In this interactivity, select any of the items below to find out more about these places that are almost as remote as outer space.

## Module 4: Bathymetry

### Topic 5 Content: Oceanic Trenches: The Deepest Places on Earth

**Ocean Explorations**

Trenches were first discovered in 1951. In 1960, the United States Navy used the Trieste submersible to travel to the Challenger Deep, the deepest place on the Earth's surface. Located in the Mariana Trench off the coast of Guam, Challenger Deep got its name from Challenger II ship which discovered it.

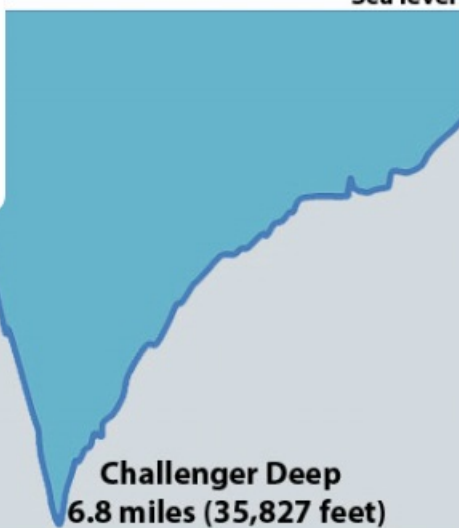
On March 26, 2012, James Cameron, the director of such films as "Avatar" and "Titanic" piloted the second submersible to ever visit the Challenger Deep.

- + Explorations
- + What are they?
- + How deep are they?
- + Where are they?
- + What lives in trenches?

**Earth**

**Off the Coast of Guam**

Sea level



**Challenger Deep**  
6.8 miles (35,827 feet)

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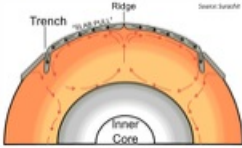
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## Module 4: Bathymetry

### Topic 5 Content: Oceanic Trenches: The Deepest Places on Earth


**Oceanic Trenches: The Deepest Places on Earth**

What are trenches?



Trenches are very deep v-shaped depressions in the ocean crust. Trenches form along convergent plate boundaries when one plate is forced under another creating a subduction zone.

**Off the Coast of Guam**



Sea level

**Challenger Deep**  
6.8 miles (35,827 feet)

- + What are they?
- + How deep are they?
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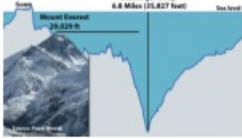
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## Module 4: Bathymetry

### Topic 5 Content: Oceanic Trenches: The Deepest Places on Earth

#### Oceanic Trenches: The Deepest Places on Earth

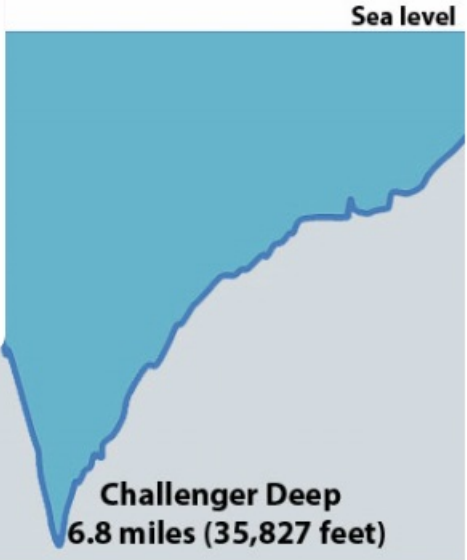
How deep are trenches?



Challenger Deep is located 35,827 feet below sea level. That is roughly 7 miles of ocean water directly above its deepest part! If it is difficult for you to imagine how tall this is, look at this image showing how much deeper Challenger Deep is than Mount Everest is tall -- over one mile deeper!

- + How deep are they?
- + Where are they?
- + What lives in trenches?

#### Off the Coast of Guam



Sea level

Challenger Deep  
6.8 miles (35,827 feet)

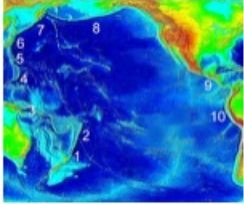
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## Module 4: Bathymetry

### Topic 5 Content: Oceanic Trenches: The Deepest Places on Earth


**Oceanic Trenches: The Deepest Places on Earth**

Where are they?



There are 22 trenches in the world's oceans, 18 in the Pacific Ocean, 3 in the Atlantic, and 1 in the Indian Ocean. All of them form in close proximity with subducting tectonic plates. This image shows the location of ten major trenches in the Pacific Ocean.

**Off the Coast of Guam**



Sea level

**Challenger Deep**  
6.8 miles (35,827 feet)

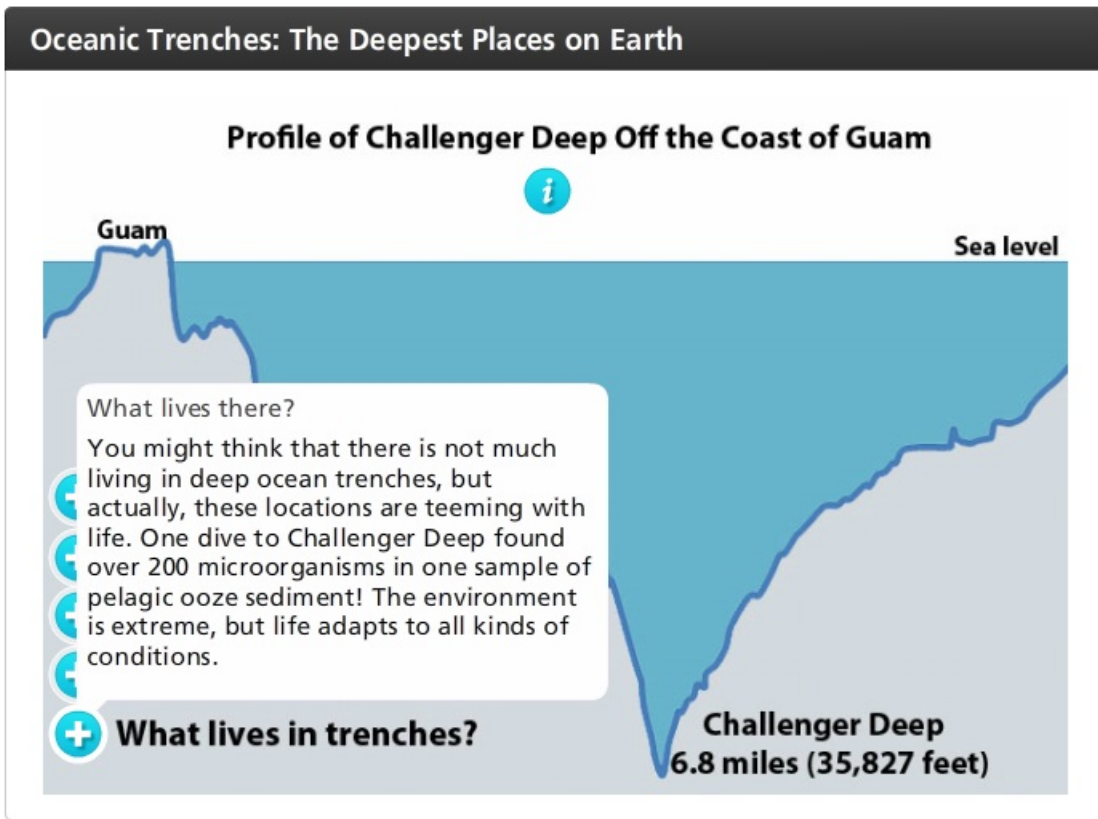
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## Module 4: Bathymetry

### Topic 5 Content: Oceanic Trenches: The Deepest Places on Earth



You might think that there is not much living in deep ocean trenches, but actually, these locations are teeming with life. One dive to Challenger Deep found over 200 microorganisms in one sample of pelagic ooze sediment! The environment is extreme, but life adapts to all kinds of conditions.