Plymouth Marine Laboratory

A **DEEPER** UNDERSTANDING

The ocean makes the planet work

Marine **Science**

"The living ocean drives planetary chemistry, governs climate and weather, and otherwise provides the cornerstone of the life-support system for all creatures on our planet, from deep-sea starfish to desert sagebrush. That's why the ocean matters. If the sea is sick, we'll feel it. If it dies, we die. Our future and the state of the oceans are one."

(From Sea Change by Sylvia A Earle, 1995
{formerly Chief Scientist of NOAA, USA})

What is the great **challenge?**

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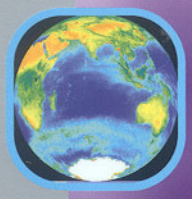
Did you know?



The oceans provide 95% of the living space occupied by organisms.

Over half of the world's population lives within 100 km of a coastline.

Many of the world's mountains are under the sea and are volcanic. Some are even taller than Everest.

The deepest hole in the ocean is the Marianas Trench in the Pacific which is 11,014 m deep.

At the deepest point in the ocean, the pressure is more than 12,400 tonnes per square metre, or the equivalent of one person trying to support 50 jumbo jets.

See if you can find out more...

So what is the great challenge?

We know more about the surface of the moon than our own oceans! Less than 1% of the seafloor has been studied in detail, with many unexplored areas some of which are shallow enough to paddle in. Estimates of the number of undescribed marine species range from 1-10 million.

Why does it matter?

The oceans sustain life on Earth: they drive our climate (through storing and transporting heat), they make up more than 95% of the biosphere and provide the main long-term control of atmospheric carbon dioxide. They support the livelihood of millions of people world-wide and their resources (food, minerals and their unique environment) provide the economic foundation of communities and countries.

What can I do?

Marine science and technology offers one of the most fascinating and challenging careers around. It doesn't provide the highest paid jobs and competition is tough, but the rewards are very different. For example, you could find yourself working on state of the art research ships, doing under ice research in polar regions, looking at biodiversity in tropical ecosystems, researching sustainable ways to harvest food from the sea, developing the latest technologies to research into hostile parts of the oceans or set up long term monitoring systems to feel the 'pulse' of Planet Ocean.

Marine **Science**

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