

Ocean trench: Take a dive 11,000m down

- OCEAN TRENCH** See the deep
- SCIENCE** Why go down?
- RACE** To the bottom
- TRITON SUB** Adventure tourism
- VIRGIN SUB** One-man mission
- DOER SUB** Science explorers
- CAMERON'S SUB** Film adventure

Icy cold, pitch black and with crushing pressures - the deepest part of the ocean is one of the most hostile places on the planet. Only three explorers have made the epic journey there: 11km (seven miles) down to the bottom of the Pacific Ocean's Mariana Trench. As a new wave of deep-sea exploration begins, take a look at the mysterious world that they will be plunging into.

Scroll to see the ocean's deepest depths

40-50m (130-165ft)
Limit for recreational scuba divers on air

Sunlight Zone
Sunlight or Epipelagic zone, (0-200m). Most of the life in the ocean occurs here, in the warmer surface waters. Approx temp: 12-20C

DEPTH	PRESSURE
0 (m)	1 (atmospheres)
	PRESSURE EQUAL TO 1kg on a single fingernail

1,000m (3,281ft)
Maximum depth sunlight penetrates

Twilight Zone
Twilight or Mesopelagic zone (200-1,000m). With depth, sunlight fades to pitch-darkness and temperatures plunge. Approx temp: 4-13C.

DEPTH	PRESSURE
896 (m)	90 (atmospheres)
	PRESSURE EQUAL TO 90kg on a single fingernail

2,438m (8,000ft)
Operating depth of the oil rig Deepwater Horizon

Midnight Zone
Midnight or Bathypelagic zone (1,000-4,000m). Bioluminescence produced by the animals here is the only light. Approx temp: 4C

DEPTH	PRESSURE
3,290 (m)	327 (atmospheres)
	PRESSURE EQUAL TO 327kg on a single fingernail

3,800m (12,467ft)
Wreck of the RMS Titanic found at this depth

Lower Midnight
Lower Midnight or Abyssal zone (4,000-6,000m). Most of the ocean floor is found in this range. Approx temp: Near freezing

DEPTH	PRESSURE
5,884 (m)	584 (atmospheres)
	PRESSURE EQUAL TO 584kg on a single fingernail

4,267m (14,000ft)
Average ocean depth

The Trenches
The Trenches or Hadal zone, 6,000m plus. Food is scarce, but new life is still found in this harsh environment. Approx temp: Just above freezing

DEPTH	PRESSURE
8,079 (m)	802 (atmospheres)
	PRESSURE EQUAL TO 802kg on a single fingernail

5,057m (16,591ft)
Chinese sub Jiaolong's dive, 2011

South Sandwich Trench
Southern Ocean's deepest point

5,607m (18,396ft)
Molloy Deep - Arctic Ocean's deepest point

7,235m (23,737ft)
Diamantina Trench
Indian Ocean's deepest point

6,000m (19,685ft)
Maximum depth of Russia's two MIR subs

8,047m (26,411ft)
Puerto Rico Trench
Deepest point in the Atlantic Ocean

7,235m (23,737ft)
South Sandwich Trench
Southern Ocean's deepest point

8,400m (27,560ft)
Puerto Rico Trench
Deepest point in the Atlantic Ocean

8,047m (26,411ft)
Diamantina Trench
Indian Ocean's deepest point

10,898m (35,756ft)
Depth reached by film director James Cameron

10,994m (36,069ft)
Challenger Deep is the deepest place on Earth. Don Walsh was in the first sub to reach the ocean's darkest depth.

The Trenches
The Trenches or Hadal zone, 6,000m plus. Food is scarce, but new life is still found in this harsh environment. Approx temp: Just above freezing

DEPTH	PRESSURE
10,475 (m)	1,040 (atmospheres)
	PRESSURE EQUAL TO 1,040kg on a single fingernail