



## Fun Fact Sheet - Diving off the Wall

1. Approximately 75% of the earth's surface is covered by oceans which account for 97% of the water on earth. Less than 1% of the Earth's water is freshwater (Laymon 2003)
2. 95% of the oceans are still unexplored, mostly the deep ocean. Scientists currently know more about the surface of the moon and mars than they do about our oceans (Copley et al. 2008).
3. 90% of the world's volcanic activity occurs underwater in the oceans (NOAA 2006)
4. The Mid-Ocean Ridge is the longest mountain range in the world at more than 72,000 kilometres long and it is located underwater (NOAA 2006).
5. The world's deepest place is the Mariana Trench at 11,034 metres deep in the western region of the Pacific Ocean (NOAA 2006).
6. The Cayman Trench, also known as Bartlett Trench, was first explored for research in 2008 by Dr. Jon Copley, who wanted to identify hydrothermal vents located within the trench using 'whale-friendly' sonar (Copley et al. 2008).
7. The Cayman Islands are outcrops of a submarine mountain range, which leads to large underwater vertical relief (Unruh 2008).
8. The Cayman Trough, greater than 5000 metres deep, is formed by the plate boundary of the Caribbean plate (South) and the North American Plate (North) (Dillon et al. 1993).
9. These plates are slipping past each other at a rate of 19 millimetres per year (DeMets et al. 2007).
10. The Cayman Trough is home to some of the deepest and hottest hydrothermal vents in the world, some up to 450 °C - hot enough to melt lead (McGrath 2012).
11. The Cayman Trough began forming in the Eocene epoch, between 56 to 33.9 million years ago (Brunt et al. 1994).
12. Wall diving is a unique experience where divers can find the smaller reef dwelling organisms and the larger pelagic (aka oceanic) species in the same location (Laymon 2003).
13. Unlike many other underwater trenches, the Cayman Trough is likely a result of tectonic plate tension, rather than mantle circulation (Bowen 1968).
14. The Cayman Trough could hold many answers to global deep-sea life, as it lays where an Atlantic and Pacific deep-sea connection used to be before North and South America joined, 3 million years ago (National Oceanography Centre 2008).