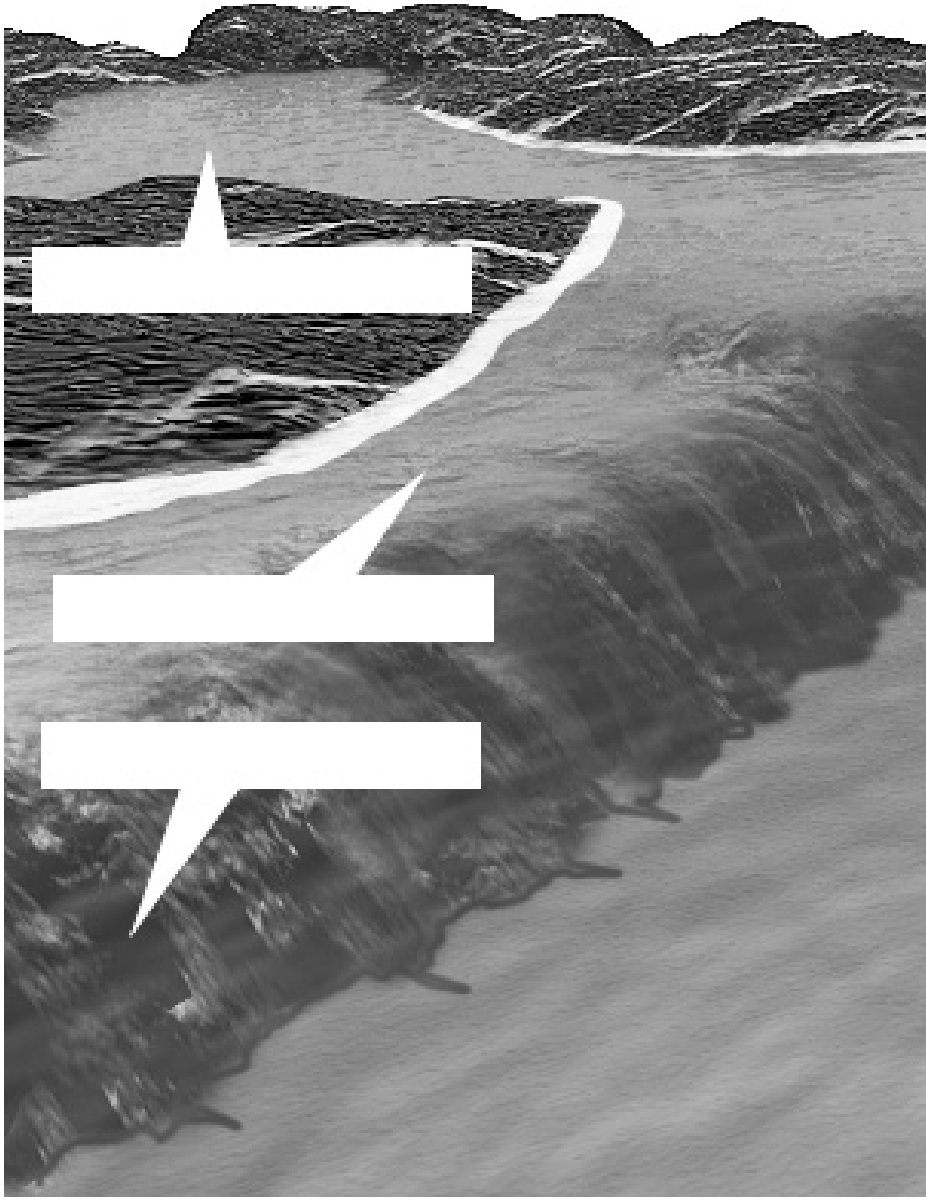
So You Want to Be an Oceanographer

The drawing to the right shows all of the distinct features of undersea topography that are described below. Read the descriptions and label the geographic features in the spaces provided.

Features of the Ocean Floor



Abyssal plain – The abyssal plain begins at the base of the continental slope, usually at least 2 miles (10,000 feet) deep. Much of the ocean floor is abyssal plain. These plains form the ocean basins of the world.

Continental shelf – The continental shelf is the gradually sloping shelf (less than 400 feet deep) that extends from shore. The distance that the shelf may extend from shore varies greatly (10–100 miles). Sealife is abundant in this area. In fact, many of the great fishing grounds of the world are on the continental shelf.

Continental slope – The continental slope is that area in which the ocean floor plunges from the continental shelf to the deep sea abyssal plain. The drop-off can be significant, often more than 10,000 feet.

Estuary – An estuary is a salt-water bay that has a river emptying into it. Estuaries are important nursery areas for fish, shorebirds, and other sea animals to lay their eggs.

Guyot (guy´-ot) – Guyots are flat-topped seamounts and also called tablemounts.

Island – Islands are the tops of ocean mountains that rise above the surface of the water. On the island of Hawaii, the twin peaks of Mauna Loa and Mauna Kea rise almost 14,000 feet above the sea. If you add in the depth of the adjacent sea floor (16,000 feet), these volcanic peaks, beginning at the ocean floor, are comparable in height to Mt. Everest.

Mid-ocean ridge – Mid-ocean ridges are undersea mountain ranges that extend approximately 42,000 miles and cover 23% of the Earth's surface. This is the largest geological feature on the Earth, yet it was not explored extensively until the 1970s. The ridges occur where

mantle material rises to the top of the Earth's crust and spreads out to create a new ocean floor.

Ocean trench – Ocean trenches form the deepest areas of the oceans. The Mariana Trench is more than 7 miles deep. Many of the trenches are several hundred miles long and several miles wide. The ocean floor is very slowly disappearing into the ocean trenches, moving at a rate of approximately three inches per year.

Seamount – Seamounts are undersea volcanic peaks that are not part of an undersea mountain range. The top of a seamount forms a cone.