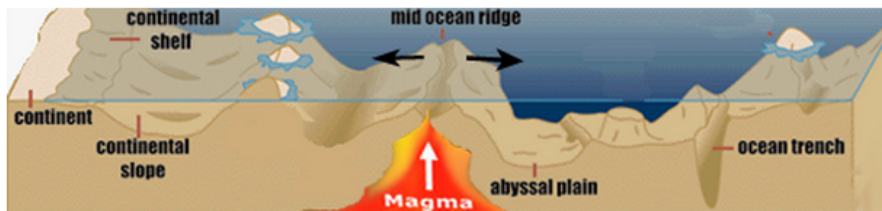


SOL 5.6 -- THE OCEAN ENVIRONMENT

OCEAN FEATURES

- Oceans cover about **70 percent** of the surface of Earth.



- Important features of the **ocean floor** near the continents are the **continental shelf**, the **continental slope**, and the **continental rise**.
- These areas are covered with thick layers of **sediments** (sand, mud, rocks).
- The **depth** of the ocean varies. **Ocean trenches** are very **deep**, and the **continental shelf** is relatively **shallow**.

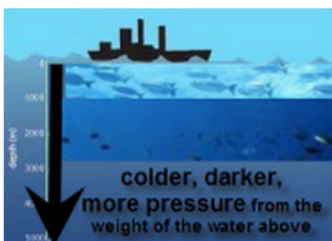
OCEAN WATER

- Ocean water** is a complex mixture of **gases** (air) and **dissolved solids** (salts, especially sodium chloride).
 - Marine organisms** are dependent on dissolved **gases** for survival.
 - The **salinity** of ocean water **varies** in some places depending on rates of **evaporation** and amount of **runoff** from nearby land.



OCEAN MOTION

- The basic **motions** of ocean water are the **waves**, **currents**, and **tides**.
 - Ocean currents, including the **Gulf Stream**, are caused by **wind patterns** and the differences in water **densities** (due to **salinity** and **temperature** differences).
 - Ocean **currents** affect the **mixing** of ocean waters. This can affect plant and animal **populations**. Currents also affect **navigation** routes.



OCEAN LIFE

- As the **depth** of ocean water increases, the **temperature** decreases, the **pressure** increases, and the amount of **light** decreases. These factors influence the **type of life** forms that are present at a given depth.
- Plankton** are tiny free-floating organisms that

live in water.

- Plankton may be animal-like or plant-like.
- Animal-like** plankton are called **zooplankton**.
- Plant-like** plankton (**phytoplankton**) carry out most of the **photosynthesis** on Earth. Therefore, they provide much of Earth's **oxygen**. Phytoplankton form the **base** of the **ocean food web**.
- Plankton** flourish in areas where nutrient-rich water **upwells** from the deep.

