

Ocean Basics

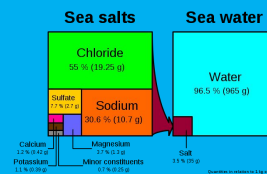
OCEANS

- The oceans contain 97% of the water on Earth.
- The remaining 3% is freshwater.



Ocean Water Composition

- Dissolved salts, gases, and nutrients are present in seawater in the form of ions (charged particles).
- As marine organisms die, their solid parts drift to the bottom of the ocean and decay, releasing salts into the seawater.



Source of Earth's Oceans

1. Comets containing ice.
2. Volcanoes (volcanism):
 - Water deep within Earth's interior is brought to the surface.
 - After volcanoes spewed water vapor, the crust cooled and the water vapor condensed to form oceans.



Temperature Layers

- Surface Layer: warm, light, up to 100 m deep
 - Thermocline: rapidly decreasing temperature with depth.
 - The warm surface layer and thermocline are absent in the polar regions.
- **IT IS ALL COLD!!**

