Principle 1:
Grades 3-5

Principle 1:
The Earth has one big ocean with many features.

The ocean, which covers 70% of Earth's surface, is the defining feature of the planet.

Properties of Ocean Water

A.
97% of all water on Earth is salt water in the ocean.

A.1.
Only 3% of all water on Earth is fresh water stored in lakes, rivers, underground aquifers, glaciers and other places.

A.2.
Most of all the fresh water in the world is stored in ice caps and glaciers.

A.3.
Fresh water melting from glaciers contributes to the ocean and can change its salinity and temperature and cause sea level to rise.

See Principle 3: B3

A.4.
Salinity and temperature vary throughout the ocean.

A.5.
The movement of ocean water as currents is partly driven by these differences in salinity and temperature.

Ocean Circulation

B.
The ocean is a single, huge, interconnected body of water that circulates through all the ocean basins and continents.

B.1.
The ocean, the largest reservoir of water on Earth, is integral to the water cycle.

B.2.
Water circulates from land to the ocean and back via watersheds and the water cycle.

See Principle 3: B
See Principle 6: A3

B.3.
Lakes and glaciers are connected to the ocean via watersheds that are made up of rivers, streams and groundwater.

B.4.
Watersheds drain water from inland to the ocean.

B.5.
Runoff from watersheds impacts the ocean.

See Principle 5: A3

B.6.
Water in the ocean is constantly moving and mixing vertically and horizontally.

B.7.
Wind- and density-driven currents move ocean water around Earth.

B.8.
Organisms travel on currents.

See Principles 5: B7

B.9.
Tides move ocean water higher and lower, covering and uncovering the shoreline.

B.10.
Waves crash on the shore, moving and mixing the water.

See Principle 2: B
See Principle 3: A3

Geographic and Geologic Features

C.
The ocean floor has a variety of geological and geographical features comparable to those on land.

C.1.
The ocean has many basins. They are called the Pacific, Atlantic, Indian, Arctic and Southern basins.

C.2.
The ocean floor has other features such as mountains, plains, valleys, volcanoes, canyons, trenches and ridges.

C.3.
The highest mountain on Earth is in the ocean. It is called Hawaii, an island in the Pacific Ocean.

See Principle 2: A5

C.4.
The lowest point on Earth is in the ocean. It is called the Mariana Trench, and is located in the Pacific Ocean.

C.5.
The features of the ocean floor influence ocean circulation patterns.