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

Properties of Ocean Water

Geographic Features

Ocean Circulation

Geologic Features

A.
Ocean water has unique properties.

B.
There is one big ocean that covers most of Earth's surface.

C.
Water in the ocean moves from place to place.

D.
The ocean floor has many features similar to those on land.

A.1.
The ocean is salty.

B.1.
Different parts of the world ocean have different names, and all these different parts are connected to each other.

C.1.
Water travels between the ocean, the sky and the land, (e.g., most rivers flow into the ocean and most rain that falls on land comes from the ocean).

C.2.
Tides move water higher and lower, covering and uncovering the shoreline.

C.3.
Wind moves huge amounts of surface water from one place to another around Earth.

C.4.
Moving ocean water transports living things around the world.

D.1.
The ocean floor has plains, valleys, mountains, and volcanoes.

See Principle 3: A1
See Principle 6: A3

See Principle 2: A

See Principle 6: A5

Principle 2:
The ocean and life in the ocean shape the features of Earth.

Erosion and Changing Coastlines

A.
Moving water can cause coastal build up and erosion, carrying earth materials from one place to another and shaping the shoreline.

A.1.
Shorelines are built up by earth materials brought to the shore by rivers and waves.

A.4.
Erosion is the wearing away of rocks, soil, shells, and other earth materials and features.

A.2.
Some earth materials from the ocean, such as sand, shells, corals, and rocks, are carried to the shore by waves.

A.3.
Some earth materials from the land, such as rocks, sand, and soils, are carried to the shore by rivers.

A.5.
Waves can break down and wear away cliffs, beaches, and materials brought to the shore, changing the shape of the shoreline.

A.6.
Rocks, shells, corals, plants, and other materials can be broken down into sand.

See Principle 6: C2

See Principle 1: C

Principle 3:
The ocean is a major influence on weather and climate.

Weather and Water Cycle

A.
Local weather, including precipitation, fog, and wind, can be caused by the ocean—no matter where you live.

A.1.
Most precipitation on Earth comes from water that evaporated from the ocean.

A.2.
When water evaporates and condenses, clouds form, which can lead to precipitation.

A.3.
Most of the water in lakes, ponds, rivers, and the ground comes from water that evaporated from the ocean and fell to the land as precipitation.

A.4.
Most of the water from land and in the atmosphere eventually returns to the ocean as runoff from rivers or precipitation.

See Principle 1: C1
See Principle 6: A6

See Principle 6: A3

Principle 4:
The ocean makes Earth habitable.

A.
Life as we know it does not exist without water.

B.
Almost all the water on Earth is in the ocean.

See Principle 3: A1

See Principle 1: B

Principle 5:
The ocean supports a great
diversity of life and ecosystems.

Diversity of Life

Diversity of Ecosystems

A.
There is a great diversity
of organisms in the ocean.

B.
The ocean holds a great diversity
of unique environments and
habitats where organisms live.

A.1.
More different kinds of
organisms are found in
the ocean than on land.

A.4.
Ocean organisms have a variety
of different structures and
behaviors that help them to
survive in the ocean.

B.1
There are distinct and unique ocean
habitats throughout the ocean and
on the coast, offshore, in the deep
ocean, and at the surface.

A.2.
Many groups of
organisms exist
only in the ocean.

A.3.
Ocean life ranges in size from
the tiniest organisms to the
largest animal on Earth.

B.2.
Organisms living in different kinds
of places in the ocean have different
adaptations in structure and behavior,
which help them to survive in their
habitat, (e.g., to find and capture prey).

Principle 6:
The ocean and humans are inextricably interconnected.

Uses of the Ocean

Where People Live

Human Impact on the Ocean

A.
Humans benefit from the ocean.

B.
People inhabit many different areas of Earth, but most live near the coast.

C.
Humans impact the ocean.

A.1.
The ocean is a place where people go for recreation.

A.2.
The ocean provides much of the food we eat.

A.3.
The ocean is a major source of the water in the water cycle, which provides precipitation for plants and animals, including people.

A.4.
The ocean is a place where people work.

A.5.
People use the ocean for transportation.

B.1.
Living near the coast has benefits, but also risks from storms.

C.1.
Human activities, both inland and on the coast, can change the shape of beaches and other shorelines.

C.3.
Human activities sometimes pollute the ocean.

C.5.
People can keep the ocean healthy.

C.2.
Beaches may be made bigger or smaller by activities, such as the construction of river dams, harbors, and houses.

C.4.
Storm drains and rivers carry pollutants, trash, and sediments from inland and coastal areas to the ocean.

C.6.
People can keep the shoreline clean by not littering, by picking up litter and recycling.

C.7.
People can protect ocean animals and seaweeds by not collecting them, and by keeping their habitats safe and healthy.

C.8.
Ocean resources are limited, so people need to use these resources wisely.

See Principle 1: C1
See Principle 3: A1

See Principle 7: B3

See Principle 4: C4

See Principle 2: A1

See Principle 1: C1

See Principle 7: A1

Principle 7:
The ocean is largely unexplored.

Life on Earth Depends on the Ocean

People Explore the Ocean

A.
All living things depend on resources from the ocean, such as oxygen, food, water, energy, etc.

B.
People have always been interested in the ocean. People explore the ocean to answer questions they have about it.

A.1.
Ocean resources are limited. People need to learn about these resources through exploration and scientific investigation.

B.1.
People are still discovering new things about the ocean all the time.

B.3.
People explore the ocean through many different hobbies and careers: scientists, fishers, engineers, surfers, swimmers, photographers, filmmakers, artists, and explorers all spend time exploring the ocean.

B.4.
People use creativity, curiosity, tools, and technology to make better observations of the ocean.

B.2.
Ocean exploration helps us understand the health of the ocean and find new medicines, food for humans, and new sources of energy (e.g., oil, gas and wind).

See Principle 6: C8

See Principle 6: A4