

# Principle 6: Grades 6-8

## Principle 6: The ocean and humans are inextricably interconnected.

### Ocean Affects Weather and Climate

**A.** The ocean absorbs and releases heat from the sun, as well as distributes heat around the globe, thus moderating the temperature on Earth so life, including human life, can exist.

**A.1.** During the day, the ocean absorbs heat from the sun and, at night, releases the heat into the atmosphere, resulting in a relatively narrow temperature range suitable for life on Earth.

**A.2.** The circulation of warmer water from the equator toward the poles distributes heat around Earth.

See Principle 3: A

See Principle 1

See Principle 3: A4

### Uses of the Ocean

**B.** The ocean is essential to the existence of human life on Earth.

**B.1.** Humans obtain food from the ocean through marine fisheries and aquaculture.

**B.2.** Some food from the ocean is consumed directly by humans, while others are used as pet food, food additives, animal feed, and fertilizer.

**B.4.** Most of Earth's fresh water is water that has evaporated from the ocean and has returned in the form of rain.

**B.3.** Humans need fresh water in order to survive.

**B.6.** Photosynthetic organisms include cyanobacteria, algae and seagrass.

**B.5.** Photosynthetic organisms in the ocean produce most of the oxygen consumed by humans.

**B.7.** The process of photosynthesis produces oxygen gas, while respiration and decay use oxygen.

**B.9.** Humans use biotic resources from the ocean to make products, such as medicines and consumer goods.

**B.8.** Humans use resources from the ocean.

**B.10.** Humans obtain energy from the ocean via wind, wave, oil and natural gas.

**B.11.** Humans extract salt from the ocean.

### Ocean Affects Where People Live

**C.** The ocean influences the population and population distribution of humans.

**C.1.** The vastness of the ocean has resulted in the isolation of civilizations; however, people have also used it to travel large distances and settle around the world.

**C.2.** Humans have historically used, and continue to use, the ocean for transportation, commerce, exploration, recreation and inspiration.

**C.3.** Most human population centers developed and thrived due to their access and/or proximity to the ocean.

**C.4.** The ocean influences many aspects of every coastal culture around the world.

**C.5.** Hurricanes, typhoons, and tsunamis may adversely affect humans living along or near the coastline.

**C.6.** Learning about and preparing for natural hazards can increase survival and minimize the adverse effects of these events.