**Principle 7: The ocean is largely unexplored.**

**A.1.** There are many opportunities for ocean exploration, which can lead to scientific investigations.

**A.2.** Ocean explorers are discovering geographic areas, both on the surface and underwater, as well as new physical, biological, and geochemical features of the ocean.

**A.3.** Data gathered from advanced technology provides scientists to make better predictions and predictions of physical and biological phenomena.

**A.4.** Looking at data over time allows us to better understand the complexity and changing patterns in the ocean (e.g., noise pollution, weather, sea surface temperatures, and dead zones).

**A.5.** New methods and technologies are being developed to utilize the ocean for mineral and biological resources, and as a source of power, wave power, and ocean thermal energy conversion.

**A.6.** New habitats and species continue to be discovered throughout the ocean.

**A.7.** The current exploration of ocean organisms is leading to new discoveries for human health and about our interconnectedness to the ocean.

**B.1.** There are many ways that human activities negatively impact the ocean that are not fully understood.

**B.2.** There are many ways that humans benefit from discoveries about the ocean (e.g., cancer research, new medicines, energy).

**B.3.** The communication of accurate and timely information about new discoveries allows us to make informed decisions that promote sustainability of the ocean.

**B.4.** Young people can influence and even participate in ocean exploration by communicating with scientists and environmental and community groups, by joining marine expeditions, and through communication with government officials.

**B.5.** Special equipment has been developed to enable humans to remain below the surface of the ocean for longer periods of time and at greater depths (e.g., websites, SCUBA gear, and human-occupied submarines).

**B.6.** Submersibles, Remotely Operated Vehicles (ROVs), and Autonomous Underwater Vehicles (AUVs) are used for prolonged exploration of the ocean.

**B.7.** Acoustic technology, such as sonar, can be used to measure across large distances and to locate unique underwater features.

**B.8.** Ocean observing systems use tools such as satellites, sensors, Geographic Information System (GIS), buoys, and acoustic equipment to study large areas of the ocean.

**B.9.** The data from these systems can be accessed over the internet, which allows for remote, real-time exploration of the ocean.