

Year 9

Ocean Literacy Principle

Concepts

<p>Biological sciences: Ecosystems consist of communities of interdependent organisms and abiotic components of the; and energy flow through these systems (ACSSU176)</p>		<p>Ocean ecosystems are defined by environmental factors and the community of organisms living there. Ocean life is not evenly distributed through time or space due to differences in abiotic factors such as oxygen, salinity, temperature, pH, light, nutrients, pressure, substrate, and circulation. A few regions of the ocean support the most abundant life on Earth, while most of the ocean does not support much life.</p>
<p>Chemical sciences: Chemical reactions, including combustion and the reactions of acids, are important in both nonliving and living systems and involve energy transfer (ACSSU179)</p>	<p>The ocean supports a great diversity of life and ecosystems.</p>	<p>The ocean provides a vast living space with diverse and unique ecosystems from the surface through the water column and down to, and below, the seafloor. Most of the living space on Earth is in the ocean.</p> <p>Ocean ecosystems are defined by environmental factors and the community of organisms living there. Ocean life is not evenly distributed through time or space due to differences in abiotic factors such as oxygen, salinity, temperature, pH, light, nutrients, pressure, substrate, and circulation. A few regions of the ocean support the most abundant life on Earth, while most of the ocean does not support much life.</p> <p>There are deep ocean ecosystems that are independent of energy from sunlight and photosynthetic organisms. Hydrothermal vents, submarine hot springs, and methane cold seeps, rely only on chemical energy and chemosynthetic organisms to support life.</p>
<p>Earth and space sciences: The theory of plate tectonics explains global patterns of geological activity and continental movement (ACSSU180)</p>	<p>The ocean and life in the ocean shape the features of Earth.</p>	<p>Erosion—the wearing away of rock, soil and other biotic and abiotic earth materials—occurs in coastal areas as wind, waves, and currents in rivers and the ocean, and the processes associated with plate tectonics move sediments. Most beach sand (tiny bits of animals, plants, rocks, and minerals) is eroded from land sources and carried to the coast by rivers; sand is also eroded from coastal sources by surf. Sand is redistributed seasonally by waves and coastal currents.</p> <p>Tectonic activity, sea level changes, and the force of waves influence the physical structure and landforms of the coast.</p>
<p>Use and influence of science: Values and needs of contemporary society can influence the focus of scientific research (ACSHE228)</p>	<p>The ocean and humans are inextricably interconnected.</p>	<p>Everyone is responsible for caring for the ocean. The ocean sustains life on Earth and humans must live in ways that sustain the ocean. Individual and collective actions are needed to effectively manage ocean resources for all.</p>