

BEACHWALK

Alabama Course of Study:

5th:

9.) Describe the relationship of populations within a habitat to various communities and ecosystems.

- Describing the relationship between food chains and food webs
- Describing symbiotic relationships

6th:

2.) Describe factors that cause changes to Earth's surface over time.

Examples: earthquakes, volcanoes, weathering, erosion, glacial erosion or scouring, deposition, water flow, tornadoes, hurricanes, farming and conservation, mining and reclamation, deforestation and reforestation, waste disposal, global climate changes, greenhouse gases

- Comparing constructive and destructive natural processes and their effects on land formations
- destructive-erosion by wind, water, and ice

7.) Describe Earth's biomes.

7th:

1.) Describe characteristics common to living things, including growth and development, reproduction, cellular organization, use of energy, exchange of gases, and response to the environment.

7.) Describe biotic and abiotic factors in the environment.

9-12th:

Marine Biology:

4.) Recognize interactions between the atmosphere and the ocean.

- Describing how waves, ocean currents, and tides are generated

6.) Describe components of major marine ecosystems, including estuaries, coral reefs, benthic communities, and open-ocean communities.

7.) Identify patterns and interrelationships among producers, consumers, scavengers, and decomposers in a marine ecosystem.

11.) Describe positive and negative effects of human influence on marine environments.

- positive-reef restoration, protection of endangered species;
- negative-pollution, overfishing

Environmental:

7.) Identify reasons coastal waters serve as an important resource.

Geology:

9.) Describe the movement and storage of water in terms of watersheds, rainfall, surface runoff, aquifers, and surface water reservoirs.

- Identifying major regional and national watersheds

14.) Explain the interaction of the continuous processes of waves, tides, and winds with the coastal environment.

- Identifying the impact of periodic weather phenomena on coastal regions

Examples: hurricanes destroying sand dunes, El Niño or La Niña redefining shorelines

- Identifying the positive and negative impact of humans on coastal regions

Examples:

- positive-shoreline protection,

- negative-buildings replacing protective dunes and barriers

OCEAN LITERACY: ESSENTIAL PRINCIPLES AND FUNDAMENTAL CONCEPTS:**1 The Earth has one big ocean with many features.**

a The ocean is the dominant physical feature on our planet Earth – covering approximately 70% of the planet's surface.

e Most of Earth's water (97%) is in the ocean.

f The ocean is an integral part of the water cycle and is connected to all of the earth's water reservoirs via evaporation and precipitation processes.

g The ocean is connected to major lakes, watersheds and waterways because all major watersheds on Earth drain to the ocean.

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

c 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 move sediments.

d Sand consists of tiny bits of animals, plants, rocks, and minerals. Most beach sand is eroded from land sources and carried to the coast by rivers, but sand is also eroded from coastal sources by surf. Sand is redistributed by waves and coastal currents seasonally.

6 The ocean and humans are inextricably interconnected.

f Coastal regions are susceptible to natural hazards (tsunamis, hurricanes, cyclones, sea level change, and storm surges).