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

A.1. Some land forms we see today were once under water

A.2. Forces underneath land masses and the sea floor (tectonics) can change the shape of the Earth’s surface NSES(K-8), TX(4), SC(5), CA(4), MA (3-5)

A.3. Some islands form from underwater volcanic activity

A.4. Changes in sea level shape the Earth’s surface

A.5. Some rocks found on land were formed in the ocean. NSES(K-8), MA(3-5), TX(5), SC(5).

A.6. The coastline changes as sea levels rise and fall

A.7. During ice ages sea level falls; during periods of warm climates sea level rises. NSES(5-8), TX(4)

A.8. Sedimentary rocks are formed when ocean sediments are compressed. TX(5), NSES(K-8), SC(5), MA(3-5)

A.9. Some igneous rocks found on land were formed in the ocean by volcanic activity. MA(3-5), TX(5), NSES(K-8), SC(5)

B.1. Movement of water erodes and deposits materials that shape the coastline. TX (5.12a), SC(5), NY(K-8), GA(5), MA(3-5), NSES(K-8), CA(4), FL(3-5)

B.2. Wave energy can break down rocks on the shore constantly changing the appearance and location of the shoreline.

B.3. Waves and currents move sediment along the coastline.

B.4. Rivers carry sediments downstream to the ocean.

B.5. Different kinds of beaches are made of different materials.

B.6. Sand grains come in many shapes, sizes, and colors that provide clues to their origin.

B.7. Sediment from one area can be deposited in other locations along the coast.

B.8. Sediments are deposited at the mouth of rivers, which builds coastline. GA(5)

B.9. Shells and other materials from once living organisms are broken down into sand

B.10. Most sand on beaches comes from rivers.

C.1. Unique habitats form where the ocean meets the land GA(3), TX(3), CA(3)

C.2. Some of these habitats are created by living organisms.

C.3. Corals are living animals that build rocky reef structures along the shoreline in tropical climates

A.10. Organisms embedded in sedimentary rocks become fossils. GA(3), NSES(K-8), HI(K-3), CO(K-4), CA(3-4)

A.11. Some sediments are made up of dead ocean organisms

A.12. Marine fossils can be found in various types of sedimentary rock such as sandstone.

A.13. Marine fossils can be found in the Grand Canyon and in mountain ranges such as the Appalachians

For more on plate tectonics & volcanism, see Principle 2 Grades 6-8.