Students are responsible for all notes and activities handwritten in class for all quizzes and tests as well as for a notebook grade at the conclusion of each chapter. The information below is taken from the SC Department of Education Science Support Documents which can be found at https://www.ed.sc.gov/apps/cso/standards/supdocs_k8.cfm?#area_5. All classroom activities and topics of study for this chapter are based on the standards listed below.

5-3.1 Explain how natural processes (including weathering, erosion, deposition, landslides, volcanic eruptions, earthquakes, and floods) affect Earth's oceans and land in constructive and destructive ways.

It is essential for students to know Earth's oceans and land can be affected in constructive ways and destructive ways by natural processes.

Constructive

• Processes that create landforms (deposition, landslides, volcanic eruptions, floods)

Destructive

• Processes that destroy landforms (weathering, erosion, landslides, volcanic eruptions, earthquakes, floods)

Natural processes that can affect Earth's oceans and land include:

Weathering

• Weathering is a general term used to describe processes that break down rocks at or near the surface of the earth.
• Weathering can be either physical or chemical.
• These processes cause the surface of the earth to dissolve, decompose, and break into smaller pieces.
• Water is an important cause of weathering.
• Plants cause weathering when roots break apart rock.
• Changes in temperature can break rock, as well as ice forming inside cracks in the rock causing it to break even more.
• Anything that causes rocks to wear down or break apart is a cause of weathering.

Erosion

• Erosion is the movement of *sediments* and soil by wind, water, ice, and gravity.

Deposition

• Deposition is the dropping, or *depositing*, of sediments by water, wind, or ice.
• Deposition builds up new land on Earth's surface, like a delta at the end of a river or the pile up of a sand dune in the desert.
• Shells on the beach are deposition by ocean waves.

Landslides

• Landslides are mass movements of land due to gravity.
• Landslides can cause buildings to fall, or power and gas lines to break.
• Landslides even occur on the continental slope in the ocean.

Volcanic eruptions

• Volcanoes are mountains with openings in Earth's crust through which magma, gases, and ash reach Earth's surface.
• Volcanoes can change Earth's surface.
• When the magma erupts from the volcano the top of the mountain can be changed, either

built up or exploded off.
• The lava and ash can destroy forests and bury fields.
• Volcanic eruptions can even change Earth's weather patterns.
• Volcanic eruptions also occur under the oceans; these volcanoes that are built up are called *seamounts*.
• If the seamount rises above the ocean surface it is called a *volcanic island* (for example Hawaii or Japan).

Earthquakes
• Earthquakes are vibrations on Earth's surface caused by sudden movement in Earth, often along a *fault*, a break in Earth's surface.
• Some earthquakes cause little damage and some cause a lot of damage.
• Large earthquakes can cause landslides.
• Earthquakes under the ocean can cause huge waves, called *tsunamis* that destroy land and cause great damage if they come ashore.

Floods
• Floods occur when a large amount of water covers land that is usually dry.
• When the flood occurs, rapid erosion can take place and move soil and sediments away.
• When the flood recedes, new sediment is left behind and can build up rich soil deposits.