

Welcome Chaperones! Thank you for choosing to spend time with your child's class at the Museum. Your role as chaperone is essential to ensuring that your group has a positive experience. To help you get started, this guide asks questions about exhibits in the main building — the Nature Exploration Center (NEC) — that are related to students' curriculum. You also can help students find answers to their OWN questions by reading exhibit labels and talking with Museum staff. Remember: students must stay with chaperones at all times.

First Floor

Find the Coastal North Carolina gallery

Find the three murals about barrier islands (in front of the windows). Barrier islands are characteristic of the east coast of the United States.

- 1 How far do the barrier islands stretch?
- 2 Which conditions must be met for the formation of barrier islands?
- 3 Explain how longshore currents can change the shape of the barrier islands. (Watch the movie!)

Second Floor

Go to the Underground exhibit

Find the panel labeled "Groundwater: A Buried Treasure." The ground beneath us functions as a huge reservoir of fresh water.

- 4 What different sources of fresh water do the Coastal Plain, Piedmont and mountain regions use?
- 5 What happens if too much water is drawn from a groundwater well?
- 6 How would you drill a safe well downstream from a pollution source?
- 7 Does this mean that we shouldn't worry about polluting groundwater?

Third Floor

Find the Prehistoric North Carolina Gallery

Find the display titled "How Old Is It?" Determining the age of fossils and rocks gives us important clues to the Earth's geological past. Study the three dating techniques — Radiometric Dating, Relative Dating, and Radiocarbon Dating — in order to answer the following questions:

- 8 How would you find the age of:
 - A. a bear jawbone found in an archeological dig site?
 - B. a mollusk shell found among many other shells such as Ecphora?
 - C. a meteorite?

Answers to questions

- 1 2,000 miles, from New York to Texas.
- 2 Coastal plains slope gently; sand is plentiful and wind and water energy are abundant; sea level is rising.
- 3 Longshore currents run parallel to the shore, moving sand along the coast and changing the shapes of the islands.
- 4 Coastal Plain: aquifers in porous sedimentary rock (groundwater); Piedmont and mountains: surface water.
- 5 The water table drops and the well dries out.
- 6 A safe well should be drilled through an impermeable layer (for example, clay) that keeps the pollution out.
- 7 No! Polluting the groundwater reduces the amount of available water and increases the cost of drilling wells.
- 8
 - A. radiocarbon dating
 - B. relative age dating using the Ecphora shells as a reference
 - C. radiometric dating



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For more information on planning your visit, please visit the Museum's website: naturalsciences.org.