

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

Go to the display marked "Sound." Find the panel showing the food web.

- 1 What basic organisms exist at the bottom of the food web?
- 2 What would happen if these basic organisms suddenly disappeared?

## Second Floor

### Find the Underground area (part of Mountains to the Sea)

Soil is made up of solids and spaces.

- 3 Name four constituents of soil.

Look at the soil profiles of four North Carolina areas.

- 4 Which of these soil profiles would you expect to find in this county (Wake County)?
- 5 How would you explain the color of this soil profile?

Now look at the bottomland forest soil profile.

- 6 How would you explain the black part of this soil profile?

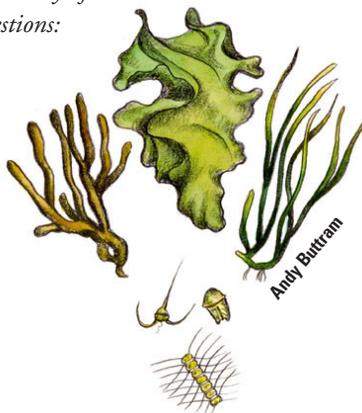
## Third Floor

### Find the Design-a-Stream touch screen computer (near the snakes)

Can you design a healthy stream by setting the levels of dissolved oxygen, sediment and nutrients?

Check the quality of your stream by analyzing the numbers and variety of the invertebrates that are caught. Then answer the following questions:

- 7 What levels of dissolved oxygen, sediment and nutrients are required for a healthy stream?
- 8 Name two invertebrate species that indicate good water quality.



## Answers to questions

- 1 Plankton, algae, eelgrass and detritus.
- 2 The food base for organisms higher up in the food web would disappear, and these organisms would starve. This effect would continue all the way up the food web.
- 3 Water, air, organic matter, minerals.
- 4 Piedmont soil.
- 5 Piedmont soils are made from rocks containing iron. When the iron oxidizes, the soil takes on a rusty red color.
- 6 The waterlogged soil of bottomland forests lacks enough oxygen to support decomposers. The organic matter in the soil cannot decay completely, and the buildup of carbon makes the soil black.
- 7 Oxygen high, sediment low, nutrients low.
- 8 Caddisfly, mayfly or stonefly.



For more information on planning your visit, please visit the Museum's website: [naturalsciences.org](http://naturalsciences.org).