



## Riparian Forest Buffer Leader Guide

### Purpose

The purpose of this station is to demonstrate the importance of plants and soils along the stream to water quality and aquatic animal life. This station will be flagged in \_\_\_\_\_ [insert color].

### Preparation

You will lead groups of students (no more than 20 per group) for \_\_\_\_\_ [insert duration, in minutes]. Allow five to ten minutes at the end of your session for clean-up before a new group of students arrives at your station.

Be sure to review the “Riparian Forest Buffer Station Instructions” and “Riparian Forest Buffer Data Sheet” in advance to ensure that you understand everything covered in the lesson. Throughout the lesson, encourage students to ask questions.

You will use the following supplies at your station:

<i>12 Arbor Day tree guides</i>	<i>Six cloth measuring tapes</i>
<i>Six metal yard sticks</i>	<i>Two soil core tools</i>
<i>Six water droppers</i>	<i>Six squeeze bottles</i>
<i>Six USDA Soil Texturing Field Flow Charts</i>	<i>Nine clip boards</i>
<i>Pencils</i>	<i>One soils color chart</i>
<i>Colored flagging</i>	<i>Soil sample for ribbon tests</i>
<i>Extra soil sample (clay type)</i>	<i>Soap and water for clean up</i>
<i>Two-way radio (optional)</i>	<i>Shovel</i>
<i>Station instructions</i>	<i>Student data sheets</i>

Note that the USDA Soil Texturing Field Flow Chart must be ordered in advance (available from Forestry Suppliers Inc., [www.forestry-suppliers.com](http://www.forestry-suppliers.com))

Before students arrive, flag three trees of different species using the supplied colored flagging.

### The Activity

When students arrive, begin the lesson by introducing yourself and describing your job position. Discuss how riparian forest buffers protect the stream’s water quality, asking the students to participate by sharing their ideas.

Present and review the “Riparian Forest Buffer Station Instructions.” Break the students into pairs and distribute one copy of the “Riparian Forest Buffer Data Sheet” to each pair. Conduct a demonstration soil test (refer to the “Soils” section of the “Riparian Forest Buffer Station Instructions”). Lead the students in completing the two ribbon tests described and ask them to record the results in the “Soils” section of their “Riparian Forest Buffer Data Sheet.” Emphasize how soil type is important to plants and the riparian forest buffer’s health. Clean up with soap and water.

Next, ask the students to identify the trees that you flagged. In pairs, have students use their tree guides and notes to identify the trees and complete the “Trees” section of the “Riparian Forest Buffer Data Sheet.”

After gathering all of the data, bring the entire group together for a brief discussion of their findings. Emphasize the importance of the trees to the riparian forest.

**Collect the students’ data sheets before they leave for the next station, ensuring that they have included their names on the sheets.** Organize and prepare your supplies for the next group. At the end of the day, be sure to submit all student data sheets to the lead teacher.



## Riparian Forest Buffer Leader Guide (con't)

### **Optional Activities**

Consider completing the Tree Measurement Activity outlined in the “Riparian Forest Buffer Station Instructions.” This activity should be done in pairs.

### **Important Details**

- Visit and organize your station before the first trip.
- Check that your supplies are in place and functioning, and know how to use them.
- Teachers are familiar with the tests and are valuable tools for the station. There may also be parents and volunteers with your student groups.
- Report any safety concerns, accidents, or needs to the appropriate persons.
- Teachers should handle any discipline problems if they occur.
- Be prepared to start by \_\_\_\_\_AM [insert time] and to finish around \_\_\_\_\_PM [insert time] each day. If you are unable to be at your site due to an emergency, inform the site director as soon as possible.
- Field trips will be held during unfavorable weather unless a safety issue exists (e.g., lightning, floods, heavy rain, etc). You will be notified as soon as possible if the trip is cancelled, and will be informed of the make-up day. On the day of the trip, the project director will decide no later than \_\_\_\_\_ AM [insert time] if a cancellation is necessary. After that time, you may call \_\_\_\_\_ [insert phone number] about the status of the field trip that day.
- Bring a bag lunch if one is not provided.
- Debriefing will be held with the site director between \_\_\_\_\_ and \_\_\_\_\_[insert times].
- You and your co-leader(s) can organize and modify your station as works best for you, making sure to cover the basics and doing your best to ensure that the students understand how the riparian forest buffer affects the stream's water quality.
- Have fun with the students!