

Lesson 9

Riparian Banks

What do the riparian banks indicate about overall health of the river?
What causes riparian banks to change?
What is the impact of the change(s)?

GOAL To understand that riparian banks provide insight into the overall health of a river

OBJECTIVES Students will:

- ✓ draw a side view of a riparian bank
- ✓ show the changes to the banks
- ✓ discuss how the changes affect the water

MATERIALS butcher block paper for 5 student groups, markers, pencils

CORE CURRICULUM CONTENT STANDARDS

- Language Arts 2(2)
- Science 1(7), 7(7,8), 8(2,3), 14(1,2,6)
- Social Studies 9(1,4,8), 10(1,2), 12(2,5,7,8)
- Arts (1(1), 6(2))

VOCABULARY riparian areas

PROCEDURES

1. Begin the activity by explaining to students that the *riparian areas* change as the river meanders through different sections of the watershed. In this activity, have students illustrate some of the changes in river habitats.
2. Divide the class into four groups and provide each group with a large piece of butcher block paper.
3. Assign each group one of the following sections of the river:
 - a. woodland area with floodplain nearby
 - b. farming area with grazing cattle
 - c. housing development with lawns
 - d. urban area with businesses
4. Have each group of students draw a side view section of the river. Include any animals, plants, or non-living item along the bank. Have students include what they think would be seen along the riverbank.
5. After pictures are completed, find a place for the pictures to be placed so that all the profiles of the river edges can be displayed. Have students look for differences in riparian areas.

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6. Now provide the following changes that could occur along the river.
 - a. development is encroaching into the woodland area, causing pockets of clear cut areas.
 - b. grazing cattle have caused erosion, resulting in sediment changes in the river
 - c. people living in housing development using riparian areas for recreation; swimming, picnic lunches, and fishing.
 - d. increase in run-off due to impervious surfaces; businesses hired a landscape architect to create more pervious areas around business to control flooding.
7. Have student groups use the other side of paper to reflect changes to particular area. Display profiles again and discuss changes.
8. Ask students if activity in one area of watershed affects the habitat and health of the river in another. Discuss within groups and present ideas to class.

EXTENSIONS

1. Have students visit several sites along the Farmington River. Have them sketch the area from a side view. Discuss the health of the river based on what was observed.
2. Discuss why it is important to preserve the riparian areas. Ask what positive or negative effect or impact humans have on an area.

GLOSSARY

riparian areas - the vegetative area or bank by a river