

Riparian Corridor – What Is It?

Lesson Abstract

Summary:	Students discover characteristics of flora and fauna in the context of the physiographic regions of Missouri. The importance of these organisms to flood control, erosion prevention, and biodiversity is stressed.
MO GLE:	SC4.1.B.6; 4.1.D.6; 5.3.A.6, 5.1.A.6
Subject Areas:	Science, Communication Arts
Show-Me Standards:	Goals – 1.1, 1.6 Strands – SC 3, 4, 5; CA 6
Skills:	Writing, hypothesizing, questioning
Duration:	2 class periods (50 minutes)
Setting:	Classroom
Key Vocabulary:	Riparian corridor, buffer zone, stream bank, slumping, humus

Rationale:

- The riparian corridor is essential for the health of the stream.
- The health of the riparian corridor will affect recreation, agricultural practices, wildlife habitat, aesthetics, and flood management.
- Healthy stream banks are essential for a healthy stream.
- Healthy stream banks help prevent erosion and damage from floods.
- Students will observe firsthand the characteristics and attributes of a given riparian corridor in their local area (watershed).

Student relevance:

- The diversity of plants and animals in an area determine the biological health of that area.

Learning Objectives:

Upon completion, students will be able to . . .

- Identify their physiographic region of the state.
- Determine plants and animals in their biographical region through questioning.

Students Need to Know:

- Common plants and animals in their area.

Teachers Need to Know:

- The concept of erosion.
- The hydrologic cycle.
- The different types of soils (humus, sand, clay).
- Physiographic regions of Missouri.
- Differences of riparian corridors across the state of Missouri.
- Human influences of riparian corridors and stream banks.
- The differences between sand, gravel, and rock formations.
- Typical fauna and flora of riparian corridors.

Resources:

The following materials are available at no charge from the Missouri Department of Conservation, P.O. Box 180, Jefferson City, MO 65102-0180, (573)751-4115.

Understanding Streams (brochure)

Animal Cards/Habitat Cards (poster with 24 species)

Conservation Education Series for Junior and Senior High

Aquatic Field and Classroom Activities

Missouri's Rare and Endangered Species

Wildlife Management in Missouri

Biogeography of Missouri

Relief Map of Missouri

Available from the Missouri Department of Natural Resources, Division of Geology and Land Survey, P.O. Box 250, Rolla, MO 65402, (573)368-2125.

website for DNR publications:

<http://www.dnr.mo.gov/geology/adm/publications/pubscatalog.pdf>

Materials Needed for Lesson:

Biogeography of Missouri -Available free from MDC order on line at:

<http://www.mdc.mo.gov/documents/teacher/materials/request.pdf>

Relief Map of Missouri

Index cards

Writing paper

Procedure:

- Review the terminology for riparian corridors and stream banks with students.
- Introduce physiographic regions of Missouri (pages 1-11 in *Biogeography of Missouri*: <http://www.mdc.mo.gov/teacher/materials/>).
- Have students identify the physiographic region they live in using the *Relief Map*.
- Review the flora and fauna common to the physiographic region they live in.
- Use Appendix 6 in *Biogeography of Missouri* and put names of common flora and fauna on the cards, then distribute the cards face-down to students so they can't read them (have these prepared in advance).
- Each student in turn will take their card (without looking at it) to a designated student, and go to the front of the class. The designated student will let the rest of the class see the card but not the student who originally had it.
- The object is for the student at the front of the class to try and guess what the animal or plant is by asking questions. The guessing student has a limit of 10 questions.
- When the student has correctly guessed the plant or animal, he or she can describe the contribution of this organism to flood control, erosion control, and/or biodiversity. Then the student can go to the map and place the card in the appropriate physiographic region (more than one region could be correct).
- If the student cannot identify the plant or animal, the class will name it. Then the student can place the card in the appropriate region on the map and describe this organism's contributions as described above.

Evaluation Strategies:

- Have students select their favorite riparian corridor native plant or animal, draw a picture of it, and write a short poem about it (place in a poster format).

Extension Activities:

- Create a bulletin board or wall mural using large art paper to create the plants and animals that would be found in a typical Missouri riparian corridor.
- Visit streams in different physiographic regions of Missouri. For example, a group of students from the Ozarks could travel to streams in northern Missouri or the big river region of the Missouri or Mississippi rivers. This would enable the students to become acquainted with the differences. Have students write stories for the local or school newspaper about their experiences and findings.
- Adopt a stream or Department of Conservation Access through the STREAM TEAM Program. (See Resource References in back for more information.) <http://www.mostreamteam.org/>

Suggested Scoring Guide:

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Teacher Name: _____

Student Name: _____

CATEGORY	3	2	1	0
Contributions	Routinely provides useful ideas when participating in the group and in classroom discussion. A definite leader who contributes a lot of effort.	Usually provides useful ideas when participating in the group and in classroom discussion. A strong group member who tries hard!	Sometimes provides useful ideas when participating in the group and in classroom discussion. A satisfactory group member who does what is required.	Rarely provides useful ideas when participating in the group and in classroom discussion. May refuse to participate.
Quality of Work	Provides work of the highest quality.	Provides high quality work.	Provides work that occasionally needs to be checked/redone by other group members to ensure quality.	Provides work that usually needs to be checked/redone by others to ensure quality.
Focus on the task	Consistently stays focused on the task and what needs to be done. Very self-directed.	Focuses on the task and what needs to be done most of the time. Other group members can count on this person.	Focuses on the task and what needs to be done some of the time. Other group members must sometimes nag, prod, and remind to keep this person on-task.	Rarely focuses on the task and what needs to be done. Lets others do the work.
Problem-solving	Actively looks for and suggests solutions to problems.	Refines solutions suggested by others.	Does not suggest or refine solutions, but is willing to try out solutions suggested by others.	Does not try to solve problems or help others solve problems. Lets others do the work.
Working with Others	Almost always listens to, shares with, and supports the efforts of others. Tries to keep people working well together.	Usually listens to, shares with, and supports the efforts of others. Does not cause "waves" in the group.	Often listens to, shares with, and supports the efforts of others, but sometimes is not a good team member.	Rarely listens to, shares with, and supports the efforts of others. Often is not a good team player.
Grasps the Concept of Biogeography	Student has a complete understanding of the concept of biogeography and relates the flora and fauna relationship with the diverse Biogeography of Missouri.	Student has a reasonable understanding of the concept of Biogeography and relates the flora and fauna relationship with the diverse Biogeography of Missouri.	Student understands that different areas in Missouri have different types of land forms, plants, and animals	Student does not choose to participate in the activity

Rubric Made Using: **RubiStar** (<http://rubistar.4teachers.org>)