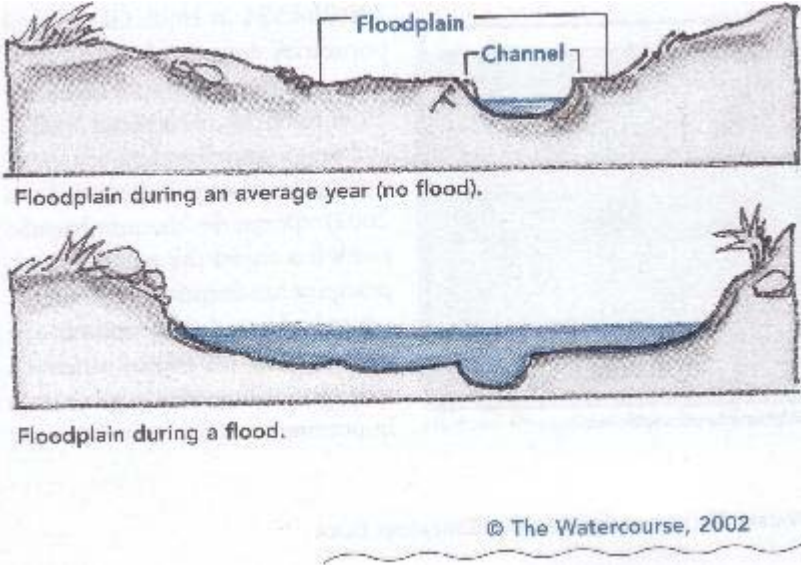


Time Frame:	Standards:
30-45 Minutes based on age and development level.	The educators implementing this activity will determine appropriate standards based on age and student activity. Idaho Standards referenced as an example. http://www.sde.idaho.gov/site/content_standards/
Objectives:	
Learn to recognize a River Habitat Flood Plain	
<p>Looking at vegetative growth within the flood plain area, students can:</p> <ul style="list-style-type: none"> • Establish and gain understanding of flood plains by looking at the content and variety of common aquatic and sub aquatic vegetative growth. • Recognize and identify components of a river or stream riparian zone and • Analyze how these various elements support the habitat organisms 	
Background Information:	
<p>Watersheds are natural products of erosion over time. Land is eroded by water with a dramatic example being the Grand Canyon. Water moving over the land can erode the land over which it flows. Rivers and streams form natural channels that contain the water most of the time. When rivers and streams flood, usually during spring snow melt, the water exceeds the banks and fills the flood plains.</p>	
 <p style="text-align: right; font-size: small;">© The Watercourse, 2002</p>	
<p>The flood plain contains the riparian zone, the zone between water and land. When rivers and streams flood, they also have much erosion, which can destroy the banks of the river, taking away the soil which supports trees and other plant life. This sediment turns the river a murky color and can clog the gills of fish, clams and mollusks. It also makes the water so dark that aquatic plants have a difficult time photosynthesizing. This sediment can bury</p>	

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small animals (macro-invertebrates), mollusks, and other organisms living on the river's bottom, fouling spawning areas, and covering their habitat with a layer of silt.

Materials:

Guest Speaker: Sierra Club, Henry's Fork Foundation, DEQ, IDWR, or Department of Lands watershed Specialist

- Handouts about the watershed flood plain (Usually supplied by the educator or the guest speaker or state water department, etc. The teacher could plan ahead with the requests)
- Science Journal
- Pencil (s)

Procedure:

Invite the guest speaker to talk to the students and tell and show them about the river or stream habitat and the associated wildlife and their habitats. Discuss and show the floodplain and Riparian zones along the banks of the river to the students and discuss the differences of the floodplain vegetation any obvious erosion resulting from floods. The guest speaker or educator might discuss the following subjects with the students based on habitat's evident at the field trip location:

- The composition of the bottom and banks of the river
- The variety of surfaces they observe in the banks and bottom areas and the impact of the differences
- The various aquatic and sub aquatic plants evident
- The importance of submerged or partially submerged logs
- The impacts or importance of the edges of the river being vegetated, barren, or made of manmade materials
- The impacts or importance of pools and riffles
- The impacts of trees shading the river
- The impact of the various land types surrounding the river (EG. The various types of watershed land types, etc, natural, semi-natural, suburban, urban, agricultural, industrial)
- The flood plain flat area near a body of water that is likely to flood

The guest speaker or educator could assign the students to describe flood plain, erosion, river habitats in their journal and draw a quick illustration of common aquatic and sub aquatic vegetation.

The students in this station will prepare to share their new knowledge with the other teams of students later when they all assemble as part of the Jig-Saw learning process.

Assessment:

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Students will share their new knowledge of their flood plain and riparian zone portions of the river habitat. The students will demonstrate knowledge of how the flood plain supports needs for food, water, air, and shelter and discussing the sensitivity of the animals to change.

Students will complete their Journal entries and document what they learned in preparation to sharing with the other students in their shared time for the jigsaw learning and sharing times.

Additional Content:

Optional examples of content are listed below that the students could complete and include in their journals as appropriate based on the guest speaker's knowledge level and adjusted for age and capability of the students.

Example note cards:

Definitions

Flood Plain:
Erosion:
River Habitat:
Riparian Zone:
Other?

Illustration suggestions.
Picture of the Habitat.
Add labels of flood plain,
river habitat, Riparian Zone,
and erosion common aquatic
and sub aquatic vegetation

References:

State Fish and Game Office
The Watercourse 2000, 2002, and 2004. The Watercourse U.S.A. Bozeman Mt.
<http://projectwet.org/>
Project Wet, Bozeman Mt. <http://projectwet.org/>