

Stream Observation Exercise

Overview:

This lesson will allow students to observe a river that is part of their local or outdoor school location. Students will record findings of natural and human interaction.

National Geography Standards:

Standard 14: How human actions modify the physical environment.

Standard 15: How physical systems affect human systems.

Oregon Geography Content Standards:

6.12. Collect and analyze data to describe regions of the Western Hemisphere

6.15. Explain how people have adapted to or changed the physical environment in the Western Hemisphere.

Objectives:

The objective of this lesson is for the students to observe and record the physical and human interaction on the environment, specifically a stream. Students will become aware of natural and human made changes to the stream.

Grade Level: 6 Time: 60 minutes

Materials:

Blank White Paper, Pencil, Appendix 1, 2 and 3

Background:

Students will be given Appendix 3. This picture is of a stream that has human made objects and signs of natural and human created erosion. The picture also contains examples of animals and various plant life indicative to the area of a stream. The instructor will ask the students to create a list of 10 things the students see in the picture. The instructor will then ask for volunteers to share their lists. After a student has shared the instructor will ask if anything on their list was made by people. Instructor will also inquire if anything from their lists can be classified as natural vegetation or signs of

animal life. Lastly, instructor will inquire for signs of natural or people made erosion were found, and if not can they find any now, to add to their lists.

Procedures:

Students will be taken to a stream. Next students will use Appendix #2 to label what they find. Example; student finds a frog, and then labels it on their map, checking it off on handout one, in the animal category. Students will get into groups of 3-4 and share their findings with others of the group. Last, students will complete the bar graph and questions of their findings on the stream observation. Example students will color the bar line to six if they found six human made objects. Students will also give thoughtful answers to the four assessment questions.

Assessment:

Students will complete appendix 1, containing a bar graph activity and critical thinking questions. This is to be assessed via the assessment rubric.

Reading Comprehension/Critical Thinking Questions Rubric

Category	4	3	2	1
Interpretation	Answers are mostly correct and demonstrate excellent comprehension. Opinions are always fully justified.	Answers are often correct and demonstrate good comprehension. Opinions are adequately justified.	Answers are occasionally correct and demonstrate an incomplete comprehension of the topic. Opinions are sometimes justified.	Answers do not reflect accurate comprehension of the topic(s). Opinions are unjustified.
Detail	Answers are mostly complete, extensive, and include many details.	Answers are usually complete and include several details.	Answers contain some details.	Answers lack the required detail or are incomplete.
Use of Information	Answers mostly include supporting evidence from the text/lesson when necessary. Quotations or paraphrases are often included in answers.	Answers usually include supporting evidence from the text/lesson when necessary. Quotations or paraphrases are sometimes included.	Answers include occasional supporting evidence from the text when necessary.	Answers do not include supporting evidence from the text when necessary.
Clarity	Answers are very easy to understand. They are clear and concise.	Answers are always easy to understand.	Answers are sometimes understandable, but need to be more to the point.	Answers are difficult to understand.

Extensions and/or Adaptations:

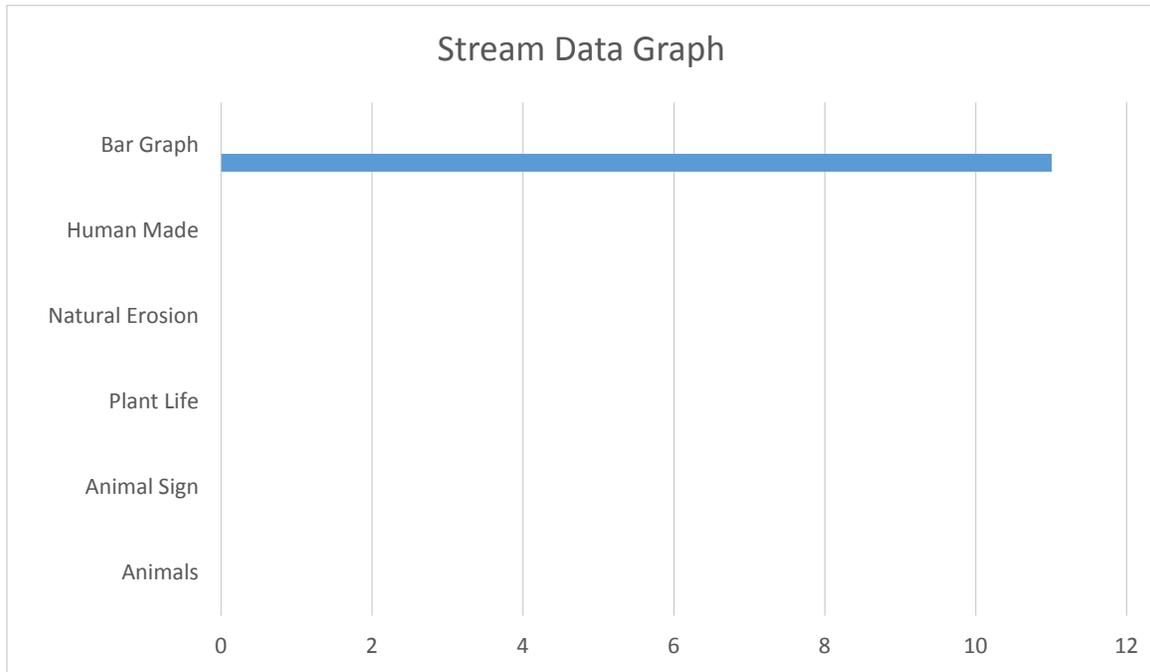
Instruction can use this information, and then do the lesson again in a different stream area for compare and contrast exercise.

Instructor can also have students draw the stream itself as an alternative for various student groups.

Stream Observation Activity

Appendix 1

Record your findings below



1. What do think would happen to the plant life of this stream if more human made objects were present?
2. How would or is this stream beneficial to humans. Why might you want to build a farm near it?
3. What have humans done to change or alter this stream?
4. If you were in a different state, how do you think this stream might be different?

Appendix 2

Observation Exercise: Stream Observation Activity: Scavenger Hunt

Students, observe this form, record findings in the appropriate box.

 <p>A field guide titled "field guide animal tracks" showing various animal tracks. The tracks are arranged in a grid and labeled with animal names: opossum, fox, raccoon, skunk, mouse, chipmunk, squirrel, deer, turkey, duck, and bear.</p>	<p>Make a Checkmark for animal tracks or signs. (100 points each)</p>
 <p>A photograph of a raccoon sitting on a log in a stream, looking towards the camera.</p>	<p>Write down any animals that you see in the area. (100 points each)</p>
 <p>A photograph of a stream with a significant bank erosion, showing a deep, exposed soil bank.</p>	<p>Write down signs of natural erosion. (100 points each)</p>
 <p>A photograph of a large pipe or culvert opening into a stream, surrounded by dense vegetation.</p>	<p>Write down signs that humans have been in this location. (100 points each)</p>
 <p>A photograph of a stream flowing through a dense forest with many trees and ferns.</p>	<p>Write down various plant life found. (20 points each)</p>

Appendix 3
Background Activity Picture

