

Objectives

The student will be able to do the following:

- Define a riparian area
- Define channelization
- Understand the benefits and hazards associated with riparian areas, channelization, and floods
- Map the stream environment and identify potential flood zones
- Be able to explain his/her findings to other students (to teach others)

Materials

Questions for each group

Computers with internet access or library access

Background

This unit continues on from the introductory unit on streamflow and flooding. Students are asked to visually inspect the stream and think critically about their environment.

This lesson also uses an alternative teaching style to engage students. Each student will be responsible for learning unique material and then teaching it to other students as part of a jig-saw group distribution.

Advance Preparation

Groups must be determined so that they can evenly disassemble and then reassemble into new groups, with one member from the old groups in each new group. The teacher may want to provide resources for students, such as articles and print outs that can aid students in identifying answers to their particular question.

To ease in group assembly and disassembly, it may be helpful to cut the questions into slips (so that each student has a copy of the question). Slips can be numbered with their new group numbers (A1-6, B1-6).

Procedure

1. Point out that scientists not only study their environment, but also communicate their findings to others. Tell students that they will have a chance to be both learners and teachers today.
2. Explain the procedure:
 - a. Each group will be given a set of questions. To keep things manageable in the Hokulani setting (with 10 groups of six students each), two groups will be given the same questions. To aid in reformulating groups, number each student in the group from A1-6 and B1-6 (premarked on the questions).
 - b. Each member of the group must work together to make observations and inferences about the answer to each question. The group may consult outside resources.

- c. Each member of the group must write the answers to the questions in his/her notebook.
- d. After the investigation period, each group will disband and will reform according to his/her number (all of the 1As will form a group, all of the 2As, etc.). In the end there will be 12 new groups. 10 of these groups will consist of students. In the case of Hokulani, the two extra groups can also teach the two teachers. In each group, there will be one student who answered each question set.
- e. In the newly formed groups, each student takes his/her turn teaching the rest of the group about what his/her group learned as answer to the particular question.

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