

Community Awareness Plan

Applicable TEKS

Science Grade 4	Science Grade 5	Science Grade 6
4.2 C, D, F 4.3 A	5.2 D, F, G 5.3 A	6.2 E 6.3 A

Duration

Two to five 40-minute lessons

Objectives

Students will brainstorm and discover any problems with their stream and their main causes. The students will develop a community awareness plan to educate their community about water pollution and ways to reduce it.

Prerequisites

Students should complete *Lesson 10—Data Analysis*

Materials

- ▶ Team notebooks
- ▶ Optional: computer and projector (to show satellite imagery)

Procedure

1. Inform students that the class will work together to discover any problems with your stream and then brainstorm (a problem-solving process) to find the possible main cause.
2. Before starting the brainstorming process, students should review their handouts and see if they can identify any problems. (Examples: Were the dissolved oxygen levels low? Were there any unusual smells along the creek? Was the water temperature high? And so on.)
3. Before starting the brainstorming session, remind your students that there are no bad ideas and no wrong answers when brainstorming. Also let them know that you will be writing their ideas on the board.
4. Brainstorming session—

- a. Brainstorm: Ask your students to list all possible problems with their stream.
 - Example: high water temperatures.
 - b. Select and Brainstorm: Select one or more of the problems and ask them to list all of the possible causes.
 - Example: high water temperatures possibly caused by sun exposure (no shade), high turbidity, tests conducted on a very hot day, nearby point sources releasing warm water into the stream, etc.
 - c. Brainstorm and Select: Ask your students to remove items from this list that are not supported by their collected data. If only one item remains, then that is the possible main cause. If more than one remains, then you may need to select one as the possible main cause. If none remain, then you may need to restart the brainstorming session or select a different problem.
 - Example: from the data—the water was not turbid, it wasn't a hot day, and there were no point sources nearby; therefore, the only one remaining on the list was "sun exposure (no shade)," so that is possibly the main cause.
 - d. Brainstorm: With the possible main cause known, ask your students to list ways that would minimize this cause (which should resolve or minimize the problem).
 - Example: increase shade by planting trees, installing artificial shade, planting native plants along the banks, etc.
 - e. Select: Select the most reasonable item from this list and then proceed to developing a community awareness plan.
 - Example: plant trees to increase shade.
5. The development of the community awareness plan can be a classroom activity (via brainstorming sessions) or a predefined plan you created. To help develop this plan, you should think about the:
 - a. Target group—who in the community can help minimize the cause?
 - Example: Landowners around the stream, environmental groups, or local garden clubs might help plant trees.
 - b. Message—what simple message can you create to explain the problem and its main cause? In your message, you could also add information about water pollution, who conducted survey, etc.

