



What Happens When it Gets There (Learning Experience #2) Student Procedure



1. What do you think should happen to water between the time it goes down the drain or toilet and when it enters the groundwater or a local waterway that people use for recreation and as a source of drinking water? Write your answer in your journal.
2. Share your ideas with your team and agree on an answer to Question #1. Note: your teacher may have you create and conduct experiments with a sedimentation tank.
3. Working with your team, research the steps followed in a typical municipal wastewater treatment plant, discovering the reasons for each of the primary, secondary and tertiary procedures and completing the Student Sheet #1 graphic organizer. The recorder in each team should keep track of the information you find and cite the sources of the information.
4. Discover at least one technique that is used to remove excess nitrogen and phosphorus from the treated effluent before it is released into a waterway. Record this information on the graphic organizer sheet *Removing Nitrogen and Phosphorus* (Student Sheet #2).
5. Research the structure and function of individual septic systems and compare how they treat sewage with the procedures followed in a municipal sewage treatment plant. Record this information on the graphic organizer sheet *Septic System* (Student Sheet #3).
6. Contact the closest municipal sewage treatment plant and ask for a copy of a recent operating budget, or find the information online. Calculate how much sewage treatment costs in your town or a nearby town per person or per household each year. Discuss actions that could be taken by your local government and individual homeowners to reduce the cost. Your action plan should be clearly stated in a letter to your local governing body or a letter to the editor of your local newspaper.
7. Write a reflection in your journal about the value of clean water to your town/ region.