

Name _____

The Wastewater Treatment Plant

Introduction

For thousands of years, civilizations have used water to carry wastes away from homes and workplaces. In the past, the guiding principle was that the "solution to pollution is dilution". No matter how dirty something is, if you throw enough water at it, it will disappear. Modern science has shown us that simple forms of waste treatment like dilution only solve a small part of the problem.

Task

You will investigate the differences between modern wastewater treatment methods, the effects of those methods on the environment, and predict the future evolution of wastewater treatment as our government debates the seriousness of current water pollution. You will produce an inventory of water polluting practices and substances that could be distributed to homes in your neighborhood.

The Process

- What activity takes place from flushing to when the water reaches the treatment plant?
- Describe the location of the sewage treatment plant. Include in your answer how close the plant is to your city and to waterways.
- Are there separate systems for storm runoff and raw sewage? Are they combined? What is the main disadvantage of a combined system?
- What is removed during the primary treatment?
- What happens to the sewage during secondary treatment?
- What happens to what's removed?
- What is the tertiary treatment, if any?
- What is done with the sludge, could it be recycled in your opinion? Explain your reasoning.
- How often are tests carried out to monitor and test efficiency of the plant?

- J. Under what circumstances, if any, does the liquid discharge from the plant NOT meet minimum standards?
- K. What special training do the workers at the sewage treatment plant receive?
- L. Diagram a simple “flow chart” tracing the sewage from its source to its place of discharge from plant. Indicate all physical and chemical treatments used.