**Wastewater Treatment Overview** Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**How Wastewater Treatment Works…The Basics**

*Intro*

1. What is the purpose of primary treatment?
2. What is the purpose of secondary treatment?

*Primary Treatment*

1. Describe what each part of primary treatment is designed to remove.

|  |  |
| --- | --- |
| screen |  |
| grit chamber |  |
| sedimentation tank |  |
| Pumps |  |

*Secondary Treatment*

1. What is the goal of secondary treatment?
2. Trickling filter and activated sludge are both processes used to move the effluent from sedimentation tanks to another facility. Describe how a trickling filter works.
3. What is the benefit of the activated sludge process?
4. After sewage leaves the primary treatment tanks, it is pumped into an aeration tank. What is it mixed with then? Why?
5. What happens to the partially treated sewage after it leaves the aeration tank?
6. What is done during the disinfecting process?

*Other Treatment Options*

1. Describe the advanced waste treatment techniques that are in use or under development.

**Blue Plains Virtual Tour**

[**http://esa21.kennesaw.edu/activities/ww-treatment/ww-tour-dc/blue\_plains.swf**](http://esa21.kennesaw.edu/activities/ww-treatment/ww-tour-dc/blue_plains.swf)

Fill in the chart as you travel through each part of the wastewater treatment plant.

|  |  |  |  |
| --- | --- | --- | --- |
| **Process** | **Materials Used** | **Pollutants Removed** | **Effect (Result)** |
| Preliminary (1st phase) |  |  |  |
| Primary |  |  |  |
| Secondary |  |  |  |
| Nitrification/ Denitrification |  |  |  |
| Filtration and Disinfection |  |  |  |