

Introduction

This lesson plan will lead you through a short activity to help you better understand the basic processes used in wastewater treatment.

Time:

Materials: Two clear plastic fruit drink jugs, funnel, mesh screen or colander, a large sponge, a bowl or small pail

Instructions

1. Making your “wastewater”: Pour some water in one jug labelled “wastewater” and add a small amount of soil, a few decayed leaves, and small twigs. It should look dirty when you mix it – there should be some floaties and soil should sink.
2. Screening: Place the funnel in the mouth of the second jug, mix the wastewater, and pour the contents through the screen into the funnel in the jug. The big solids (floaties and chunks) will be separated from the wastewater by the screen. Big solids are discarded.
3. Sedimentation: Allow the screened water with finer solids to settle out and the water to clarify. Carefully separate or decant the cleaner water into the bowl leaving behind the solids or “sludge”.
4. Filtering: Transfer the remaining wet solids “sludge” onto the sponge and squeeze the clear water into the bowl. The sponge should be dirty but fairly dry and this is called the “filter cake”.

Congratulations, you have just treated or cleaned your wastewater!



Wastewater, before and after treatment