

Resource 13 – Reviewing the school’s toilets¹

In this activity you will assess the toilets in your school.

Background

Where there are large concentrations of people, as in schools, a large amount of waste is generated. Environmentally safe ways of removing and processing waste are essential for a healthy and clean environment.

Elaborate systems have been established to deal with human waste. In cities, sewerage pipes transport this waste (sewage) to a sewage treatment plant. In homes, the kitchen sink and dishwasher, the laundry sink and washing machine, as well as the shower, bath, hand basin and toilets, are all connected to the sewerage system.

At the plant, the sewage is treated by allowing bacteria to eat the organic material. All solid waste is removed and disposed of separately. If the sewage is effectively treated, it will be clean and safe to return to rivers or the sea.

Toilets and urinals consume a large proportion of the school’s water. Large quantities of water are needed to flush waste through the S-bend and make sure the material slides down the sewerage pipes without getting stuck.

1 How big is a flush?

Use some measuring instruments to calculate the volume of water in a toilet cistern. Take into account the fact that the tank has rounded edges and is usually only about 80% full. Mechanical components will also take up space in the cistern.

Estimate:

- a) how much water is released with each flush and half-flush
- b) the number of times the toilets are flushed each day
- c) how much water is used each day.

2 How much is wasted?

Work out a safe way of calculating how much water is lost from a broken cistern.

3 Maintenance action

Work in groups. Make a list of problems that can happen to the plumbing in the toilets. Devise a plan for the school to keep the toilets repaired.

¹ Based on an activity from Bob Winters 2000, *Every Drop Counts*, Gould League and Melbourne Water.

Further research

- Visit the Museum Victoria website to view Melbourne Water's virtual sewer tour at <http://www.mov.vic.gov.au/>
- Ask a plumber for an old, complete toilet cistern. Pull it apart and reassemble it.