# Activity: Down the drain in my house (Years 3 and 4)

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| **Victorian Curriculum F–10[[1]](#footnote-1) links:**  **Science**  **Levels 3 and 4**  **Science Understanding**  **Science as a Human Endeavour**  Science knowledge helps people to understand the effects of their actions  **Chemical sciences**  Objects are made of materials that have observable properties |

What ends up at the sewage treatment plant?

Students explore different household materials that may end up in the sewage at the sewage treatment plant and they conduct a home audit of sewage that enters the sewerage from their home.

## Duration

Two double sessions

## **Activity steps**

1. Explain to students that everything that goes down the kitchen, laundry and bathroom drains, as well as what you flush down the toilet is called ‘sewage’ (or wastewater). Make the point that a lot of water ends up as sewage.
2. Pose the question, ‘What do we get rid of fromour home that might end up as sewage?’
3. Draw and label a simple plan of a house on the whiteboard, ensuring that the kitchen, bathroom, toilet and laundry are evident. Move from room to room, asking students to identify items that come from each room that may endup as sewage. List these on the board.

Note: an important part of this initial discussion is to focus on the idea that the items need not be solid, for example, the water and detergents from the dishwasher and washing machine, or cooking oil. Prompt students to think of these types of items as well as the more familiar. See our [sewerage web page](https://www.melbournewater.com.au/node/163) for a list of household items.

1. Ask students to draw and label a plan of their home, using the plan on the whiteboard as a guide. In each room, students draw where the sewage is produced, for example, the shower in the bathroom; the toilet; the sink and dishwasher in kitchen; the washing machine in the laundry. The four main areas from which sewage is produced are the kitchen, laundry, toilet and bathroom. There may need to be some agreement reached with the students for rooms with an alternate name: for example, ensuite equals bathroom or for combinations of rooms such as laundry/bathroom.

**Teacher tip**

Acknowledge that there are different configurations of homes but all have these essential systems to remove waste. Talk to students about the possibility of using symbols to illustrate toilets, laundry sinks, etc.

1. Ask students where they think the sewage goes once it has left their house. Explain that sewerage is the system of sewers (large pipes) that transfers sewage to a treatment plant, such as the sewage treatment plant. Show them the simplified diagram at:

[Sewerage ––how it works](https://www.melbournewater.com.au/node/163)

1. Students use their plan to conduct a home audit of the different types of sewage produced by the family. Students can list the sewage by room using a table or list them on their plan.
2. Drawing on the student home audits, create a list of the different types of sewage produced in each room of the home. Add this information to the class house plan.
3. Ask students to think about sewage by the time it gets to the sewage treatment plant. Working in pairs, students agree on words to describe their thoughts and use a Y chart (looks like, smells like, sounds like) to record their ideas. Students contribute their ideas to a sewage treatment plant word bank and use a range of dictionaries to check for spelling accuracy.

1. Creative Commons Licence Victorian Curriculum and Assessment Authority (VCAA) <<http://victoriancurriculum.vcaa.vic.edu.au/>> Accessed 14 August 2016. [↑](#footnote-ref-1)