

Water for life

Related outcomes

- WM 3.2: A student selects and uses appropriate problem solving strategies to complete investigations.
- WM 3.3: A student uses mathematical terminology and some conventions to explain, interpret and represent mathematical situations in a variety of ways.
- WM 3.4: A student gives a valid reason for a solution to an investigation and checks that the answer makes sense in the original situation.
- M 3.1 (a): A student selects from a range of units and measuring devices to measure accurately and record in practical situations.
- M 3.1 (b): A student makes conversions between measurement units.
- M 3.4 (a): A student estimates, measures and records the capacity of containers using litres and millilitres.
- N 3.1: A student counts, compares and orders whole numbers up to seven digits and represents them in symbols and words.
- N 3.5: A student selects and uses appropriate mental, written and calculator techniques to approximate and calculate solutions to problems involving whole numbers, money and decimal fractions.
- VA 15: A student appreciates the contribution of mathematics to our society.
- VA 16: A student recognises that mathematics has its origins in many cultures and is developed by people in response to human needs.
- VA 18: A student appreciates the impact of mathematical information on daily life.

Possible indicators

A student can:

- estimate then measure the amount of water used for daily activities
- use a variety of containers to correctly measure liquids to the nearest millilitre
- use a calculator to solve number problems.

Syllabus links

Measurement Number	Volume 11, 12 Addition 8, 9 Multiplication 11
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Teaching activity

- 1 Students investigate the amount of water they use in one day at home and at school. To do this, they list activities which require water usage during a day. These could include: having a shower; washing hands; brushing teeth; drinking a glass of water; and flushing a toilet.
2. Students estimate the amount of water required for each of the activities listed. They then investigate strategies to determine the actual amount of water used. For example, one strategy could involve placing a plug in the hand basin before washing hands and then measuring with a cup the amount of water in the basin.

3. Provide students with the following measurements.

A glass of water holds 200 mL

An older style toilet cistern has a 15 L flush

New toilet cisterns have a 3 L half flush and 6 L full flush.

Each minute under a normal shower can use 23 L of water.

4. Students use this information to determine how much water they use in a day. This information is collated into a written report and then compared in small groups with the reports of other students.

5. As a whole class, find the total amount of water used by all students. Show students how to calculate the average amount per student.

6. Students discuss how the average amount of water used per student compares with the individual's consumption.

Extension

7. In groups, students discuss ways of conserving water in the home.

Language

volume, millilitre, litre, kilolitre, average, total, consumption