Sugar Rush

Purpose:

The purpose of this activity is to engage students in applying their number knowledge to solve a measurement problem.

Achievement Objectives:

GM3-1: Use linear scales and whole numbers of metric units for length, area, volume and capacity, weight (mass), angle, temperature, and time.
NA3-1: Use a range of additive and simple multiplicative strategies with whole numbers, fractions, decimals, and percentages.

Description of mathematics:

In readiness for this problem, the students should have familiarity with each of the following components of mathematics. The problem may be solved with different combinations of these components.

- multiples of ten
- finding one tenth of a value
- understanding that 10% = 1/10
- skip counting in 5s
- multiples of 5
- knowledge of the mL as a unit of volume

This activity may be carried out with guidance, or by allowing the student to follow their own method of solution. The approach should be chosen in sympathy with students' skills and depth of understanding.

Activity:

A 350 mL can of soft drink says that it contains 10% sugar.

One teaspoon contains 5 mL.

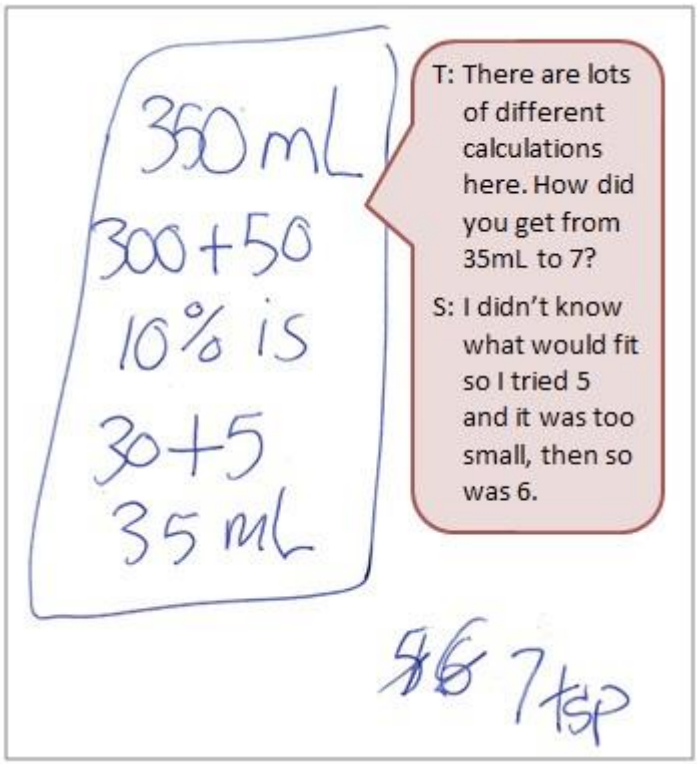
Work out how many teaspoons of sugar are in one can of this drink.

The procedural approach

The student is able to follow a sequence of calculations, involving measurement and proportion, leading to a solution.

Prompts from the teacher could be:

1. What does 10% mean?
2. Can you find 10% of 350 mL?
3. How many lots of 5 mL is this?
4. How many teaspoons of sugar are in this can drink?



The conceptual approach

The student is able to construct a sequence of calculations, involving measurement and proportion, leading to a solution.

Prompts from the teacher could be:

1. What is 10% of this can?
2. How many teaspoons of sugar are in this can drink?