

Measuring the play dough

Child: Tom Teacher: Rosie Date: February

A learning story

Tom held up a long piece of play dough he had squeezed from the piping equipment and exclaimed, "Look, Rosie - it's sooo long!"

"Yes, you're right, Tom, it sure is! Let's get a ruler and measure it to see how long it really is," I suggested.

Tom placed his play dough strip along the tape measure.

"Can you see the numbers, Tom? They tell you how long it is," I explain.

After studying the numbers carefully, Tom cleverly announced, "19 long."

"Yes, 19 centimetres," I add.

"I'll make another one - but even longer this time. Look, this one is ... 22 centimetres," he continues.

"Wow, can you make the strip as long as the ruler - 30 centimetres long, Tom?"

After much squeezing and slight adaptation, Tom successfully makes the strip reach from one end of the ruler to the other.

"Look - it's 30 centimetres long now!" he announces proudly.



It's 19 long!!



This one is 22 centimetres.



I've made it 30 centimetres now!!

Short-term review

Tom is always so interested and captivated by whatever is happening at kindergarten. His number recognition is superb. He easily tells me the numbers on the ruler as he reads them. Measurement is a constituent of the maths curriculum at school – clearly Tom has already mastered a fundamental use of the ruler. He made sure the edge of the dough strip corresponded with the beginning of the ruler so that the dough length could be measured accurately.

Well done, Tom. We'll have to measure you to see how tall you are now. That would be a great big number!!



What's happening here?

The teacher suggests measuring a length of play dough when Tom comments that “it’s sooo long!”

What aspects of noticing, recognising, and responding to mathematics learning does this assessment exemplify?

This documented assessment in Tom’s portfolio records in detail the sequence of his measurements, including photographs that Tom will be able to read himself. Tom can therefore revisit this process. The short-term review even includes a photograph of part of a ruler. The teacher notes the specific mathematics learning and suggests a possible next step – measuring Tom himself.

What does this assessment tell us about mathematics learning (using a *Te Whāriki* lens)?

This record illustrates responsive and reciprocal relationships between Tom and his teacher. This is a good example of pedagogy that incorporates outcomes from the Communication/Mana Reo strand. The teacher is helping Tom to develop skill in using the counting system and to strengthen his learning about the mathematical symbols and concepts of numbers and length. The initiative is shared. She adds a tool for measurement, adds the word “centimetres” to Tom’s measurement, sets a challenge (30 centimetres), documents the process, and suggests a next step.

How does this assessment exemplify developing competence with mathematics?

This assessment is about using units of measurement as Tom sets himself the task of making piped lengths of play dough longer and longer. The teacher introduces the idea of measuring by numbers of centimetres using a ruler, and Tom readily practises this task. He learns that, by using a ruler, he doesn’t have to compare the lengths of dough against each other. He can remember the length in centimetres of the longest one so far. If the proposed next step is taken (measuring how tall Tom is), it might well be preceded by some estimation (the teacher has already signalled this possibility when she predicts “That would be a great big number”). Tom is learning the use and value of a mathematical tool (a ruler) while learning about a unit of measurement (centimetres). The teacher also records that Tom has used an accurate method of measuring by his making sure that the edge of the dough strip corresponded with the beginning of the ruler. The photographs in the assessment provide a record of this method for Tom to refer to on future occasions.