

Ordering by size

Child: Nicholas

Observer: Julie

Date: 14 March



\$29.95

Nick asked me how much this was.

"Twenty-nine dollars, ninety-five cents, Nick," I said.

"That's a lot of money - but I've got heaps of money. When my Nana died, she left me some money," Nick told me.

"What will you spend it on, Nick?" I asked.

"A motorbike!" he told me.

"How about drawing me a picture so I can see what sort of bike you'll buy?"

Nick drew several bikes and ordered them from small to large.

"The big one is a Harley-Davidson!" he said. "The Harley has stripes. I think the wee seatbelt is at the back for the wee person. I don't know why they have two aerials at the back!"

"Yeah, I don't know. Why would they have aerials?" I said.

Nick said, "The aerials are for the wee microphones in the helmets - so they can talk to each other - so the driver can hear the person at the back. Harleys can go really fast - about forty speed or ninety speed or something. The wee ones is ... One is a Honda, and there's a Ford and a Mercedes."

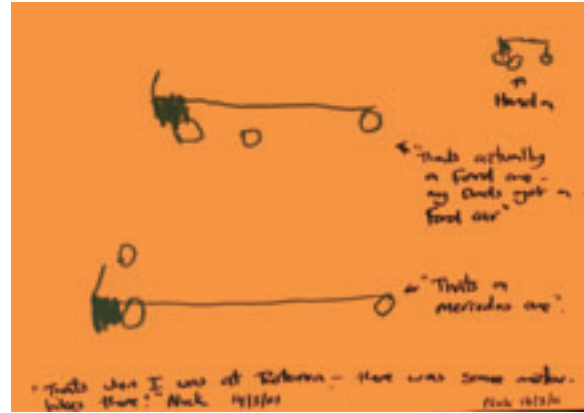
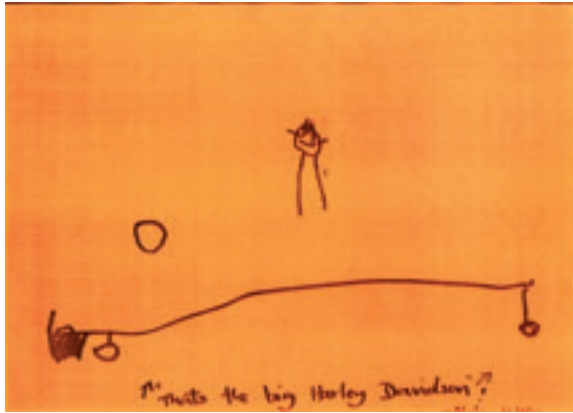
"Wow, Nick! You know a lot about bikes. Would you like to tell me more or is that the end of the story?"

"It's the end," said Nick.

Short-term review

I had *such* a lovely talk with Nick today – firstly about money and motorbikes and then later about some pictures he was interested in.

Nick shows he is aware that the symbols indicate an amount of money on the price label but he didn't know how much. He feels confident to ask for help when he needs it and he really seems to enjoy having a good in-depth talk from time to time. We probably spent at least half an hour chatting together today. When I see an opportunity to invite Nick to draw, I take it – and he is becoming more confident and willing to take risks with writing and drawing. I love the way Nick's first bike was very small, then he branched out and drew bigger and bigger bikes, culminating in the Harley. The ideas and inventiveness in his thinking about aerials was great I thought. "Wee microphones" in the riders' helmets so they can talk to each other!!! And obviously he has an understanding that aerials are needed for the transmission of sound.



What's happening here?

This is a conversation between the teacher and Nick. It begins with a number question and ends with a discussion about a drawing.

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

The teacher is using this opportunity to describe, and provide an example of, some of Nick's recent development with drawing and of his "inventiveness" (in his thinking about aerals). In her short-term review, she has been very explicit about what she means by "inventiveness". Nick explains what he is drawing and comments that he doesn't know why there are two aerals. However, he guesses that it is something to do with the microphones in the helmets. This is not just an interesting story: the teacher links it clearly to learning that is valued. She writes Nick's words as the text of the story to accompany his drawings.

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

The teacher comments that Nick "feels confident to ask for help when he needs it and he really seems to enjoy having an in-depth talk from time to time". This is a specific commentary on his communication practices. She also writes that he is becoming "more confident and willing to take risks" with writing and drawing, and she notes

the way in which this exemplar illustrates his inventiveness with thinking about aerals. Nick is drawing and talking about what he knows from home experiences, a connection to the principle that family and community are an integral part of the early childhood curriculum. The Exploration/Mana Aotūroa strand includes mathematical processes specified in *Te Whāriki*, such as classifying for a purpose and making comparisons (ordering the bikes from small to large to emphasise the value of the Harley-Davidson). Nick's interest in the way in which numbers can denote value is an example of "familiarity with numbers and their uses", an outcome of the *Te Whāriki* Communication/Mana Reo strand.¹⁸

How does this assessment exemplify developing competence with mathematics?

This account begins with a question from Nick about the numbers on a price tag. The conversation with the teacher ("What will you spend it on, Nick?") moves the conversation on to motorcycles, a topic that Nick knows a lot about. When the teacher then suggests he draw a picture about this, he draws four bikes and "ordered them from small to large". The ordering is in terms of the size (length) of the bikes (and, perhaps, their status in Nick's eyes): Nick can name the type of each motorbike and he includes his mathematical ideas (about measuring their size and speed) in his account of his drawings.