

Jake's survey

Child: Jake **Teacher: Shelley** **Date: 6 June**

Jake arrived, walking up the ramp, saying he would like to do a survey on bags. He came to me and we talked about how he would need to go about this. Jake thought this topic was a good idea for a survey as he didn't have to ask anyone any questions!!

Jake had a clipboard and worked on the yellow table. He drew bags and coloured them. "Look, this one doesn't have a handle," he said.

I asked if he was going to include multicoloured bags. Jake explained that there were no multicoloured crayons. I suggested he go and have a look at the sock graph to see how I had depicted multicolour socks. He came back still stumped. Finally I asked if he needed help. I showed him how I drew lines of different colours. At the table the other children discussed what made "multicoloured". Two colours were two-tone, so you needed three or more to be multicoloured. Jake also drew a big bag with a cross through it to signify "no bags".

He worked through looking at the lockers. Then he came to get me. He was not sure if he had got them all and said there were a lot with no bags. I asked if he had started from the top and worked along.

Jake looked horrified. "I started from the bottom and worked along." I explained that that was fine, and that I was just checking that he had worked in a line to make it easier and it didn't matter where he started. Jake was fascinated that there were some bags the same as each other.

Short-term review

This boy works to a plan. He is systematic and likes to complete a job. Jake has become very involved in surveys and likes to discriminate, sort, match, count and record. Jake is absorbed in thinking up ideas of what he would like to survey.

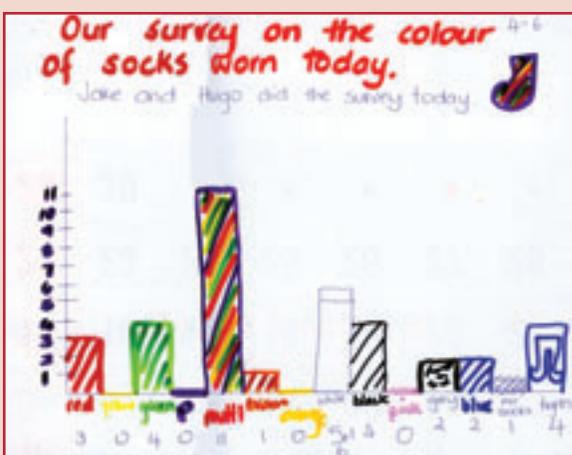
What next?

Jake seems totally in charge of this!



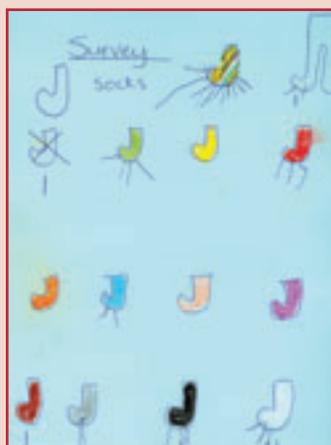
What's happening here?

This assessment is one of several items in a series on doing surveys at the early childhood centre. Children carried out surveys on the colour of their socks and tops, on pets at home, on where they love to play, and on their bags. The teachers helped them to convert the data into graphs. In this exemplar, Jake surveys the children's bags hung up over their lockers in the cloakroom.



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

The surveys were displayed on the wall so that the children could compare different ways of displaying survey data. Individuals' surveys, like Jake's, were also included in the children's folders so that they could revisit them. The teacher responds to Jake's initiative to do a survey by prompting him to refer to previous work when he gets stuck. She provides advice on request and encourages discussion among the children when Jake can't discover a solution to his problem. These strategies for "finding out" have been documented and can serve as reminders for the children about what to do when they're "stuck". The teacher checks Jake's system for recording the bags and verifies that his method will provide accurate data.



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

In *Te Whāriki*, being a learner – and in this case being a learner of mathematics – includes calling on the resources of people, places, and things to assist with making sense of the world. This is exemplified here. Jake consults the teacher, and one of the aspects of difficulty (multicoloured recording) also becomes a topic for discussion by the children. Jake also uses the wall display (*things* in the environment that help with learning) and is participating in a *place* where surveys are of interest and are carried out in a range of ways. Jake's engagement in the process of doing surveys illustrates the learning outcome in *Te Whāriki* that children will develop the expectation that numbers can "amuse, delight, illuminate, inform, and excite".²³

How does this assessment exemplify developing competence with mathematics?

Jake's purpose in this learning story is to gather information about his environment, and he uses a mathematical tool (surveying) to do this. *The New Zealand Curriculum* states: "Statistics involves identifying problems that can be explored by the use of appropriate data, designing investigations, collecting data, exploring and using patterns and relationships in data, solving problems, and communicating findings."²⁴ While Jake is mainly collecting data in this assessment, he is also considering how to record data (on multicoloured bags) appropriately. Also, his choice of a recording method that ensures that the survey will include all the bags shows that he has thought about the design of his investigation. The teacher records that Jake "likes to discriminate, sort, match, count and record".