

Vignette 9 – Rapid Routines

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SPEAKERS

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Kia ora, and welcome to vignette nine, looking at retention and the use of rapid routines. So these rapid routines are a way to support retention. And they link nicely with some of the main research around effective teaching or learning of maths. The first comes from our own New Zealand curriculum around opportunities to learn where it clearly articulates ways to plan reactivation. It also comes from some of the work around Professor Peter Sullivan, as one of his six principles around promoting fluency and transfer. And it also comes from some of the work around the National Council of Maths teachers in their five ideas for teaching mastery. how they work, rapid routines are a way that we can ensure that our ākongā have regular opportunities to practice and deepen those key concepts that often in traditional planning can be six, nine, even 12 months apart before ākongā get opportunities to revisit. So we're looking at ways we can use our warmups to embed these rapid routines.

They also help us with questions, we're looking at ways to assess very quickly entry knowledge through whole class opportunities. Because we want to know, who are the struggling learners? What are they struggling with? Why are they struggling, and are these factors in our control? And at the same time, for us, as teachers, we want to diagnose these quickly and build them in, not have them on. We want to ensure we're trying to promote all those key proficiencies and practices. And we can get immediate snapshots around where our ākongā are. We can create them from using the elaborations. By delving into these, we can see a series of success criteria that go with them. And teachers have been exploring these and finding that these are very useful to create a rich resource within a few minutes. By selecting some ideas from the success criteria that we may not be familiar with, or we want to affirm, we choose a few question types, in this case, nesting. How many 10s altogether in 450? And then repeating that question a couple more times in the week, looking at patterning, looking at mental computation, what's been added. So we're trying to promote all those things around place value in this particular example. But rather than just having lots of questions that the students answer, we are focusing on one or two questions that we see all our ākongā do rather than 20 questions that we see none of our ākongā actually do, it's looking for those rich insights.

One way of delivering these is through the moveNprove. Now, this is an area that teachers are experimenting with. And all of these videos and ideas will be available on the 'Just in Time Maths' Facebook page called 'Maths ideas and insights' where teachers are now sharing their own ways of using rapid routines, and also sharing data and insights from their ākongā across the country. How they

work is the room is allocated with four corners and a central place. The corners are where ākongā are invited to go. If they are willing to explain why they have arrived at that answer. Often we use the 'I think because...' and the middle is a place they go where they are not too sure about how to explain just yet, or they want to listen to what other peers in their room say. We choose a question that's often multiple choice by using three truths and a lie. We can use questions modify from PAT, or even go to the ARB's where they have plenty of multiple choice type options. We also have a few PDFs that are also available on the Facebook site I referred to earlier. Once they get going, ākongā have a short time to individually think about a question. Then they are invited to move and go to corners. The kaiako also invite randomly one or two of the ākongā from each group to speak and articulate what they want to do. Sometimes we encourage them to use manipulatives or draw, but we want this to be fairly quick and a data snapshot, you can actually arrive there. To go a little bit further, ākongā are then invited to move around again. So the kaiako can also listen and find out what are these errors in their thinking, what's going on here? We finish these well within 10 minutes, because the answer is not given. This becomes a wonderful opportunity for the group to work together to try and convince and influence using words, symbols or manipulatives, in as little as five minutes, two or three times a week, to try and reach a consensus. If one's not met, it can be moved over to the week after. It's also a great opportunity if a teacher is say, looking at decimals with Year 7/8 next week, to have a moveNprove the week before, just to give us an immediate insight to see where our ākongā are.

A notorious one that we've been using is one around number equations, which has been recently in the news in relation to the recent Royal Society's report on maths. So this whole idea of equivalence is causing teachers to be very interested in how their students are going with this, whether they're in Year two, or whether they're even in Year 10. A question like this is given to the students. And we found that some believe it's 16, and will give an answer. Some will think it's 11. Some, not quite too sure yet. Some will be convinced this absolutely none of those, and others will be able to give some explanation around the reason behind their correct solution. It's also given us plenty of opportunities to share this information with all the teachers around the sector, who are having a play in this area. And we encourage you to have a go with some of these rapid routines because they are helping build a quick insight into how kids are going. It's also give them plenty of opportunities to use those other skills of defending, debating, convincing and influencing. And finally, yes, we encourage all our teachers to share on the site ideas, whether it's videos, whether it's their own versions of these because we're all in this journey together. It's all about teachers creating resources for other teachers.