

Vignette 4 – Place Value

SUMMARY KEYWORDS

vignettes, curriculum, numbers, progressions, link, place, nesting, renaming, develop, misconceptions, level, learners, areas, underpin, resources, unpick, anxiety, computation, contextualize, strategies

Rob Proffitt-White and Robyn McNeill

Hello, and welcome to vignette four, where we're going to talk about a big idea around place value. And the reason why we chose place value was at the start of the “Just in Time” initiative, we asked respondents to choose from a selection of different strands and sub strands to where they would like a focus to be. And place value that also includes renaming and rounding and nesting and estimating and links to mental computation has actually come out on top. And so we decided to use this to contextualise some of the following vignettes, what we also did is we wanted just to prepare a guide using the elaborations and the key ideas of the New Zealand curriculum that are also found on the NZ Maths website and prepare an example of a scope and sequence that goes from level one to our target areas of three and four. And the reason for this is working with teachers in the last few months, around level three and four, many of the misconceptions, and many of the students are expressing that they have some concerns and some anxiety around some of the 3, 4, 5 digit level place value. So this will help us to identify and remediate most of the misconceptions.

And so these progressions just show you how they link from each curriculum level and start building on one another. And so we've identified in and out and to read and write, order and compare. And what we're going to do in further vignettes it is actually unpack these further, give you some examples, show you how you can implement these into your classroom everyday practice. And we've looked at name and expand and nesting. Again, really making sure that we develop an unpick number system as important so that children get to see how these link and build on for bigger numbers.

We've also decided, haven't we Robyn, that we're going to include renaming as well as this is an area that you'll see that will help us link more to mental computation and the PVP (place value partitioning).

So we've also developed and pulled out the strategies in relation to the curriculum levels as well so that you're able to see where all these key knowledge progressions fit. And what do they look like when a child is using place value in their everyday strategies. And again, we're going to show you some of these ideas of things that you can do in your classroom in further vignettes.

Robyn, where did these numbers strategies come from?

So we've actually just pulled these out from the curriculum elaborations, but they can also be found in the number framework. And so lots of different places. Again, a lot of examples you can find on the NZ Maths website as well.

The main idea here is to get across this understanding of 10 of these is one of those, and we're trying to express to kids that if we can get our teachers to understand the whole themes around place value, it will help the learner's with these groupings. Because the three main areas you want to focus on is that know our learners develop a sense of the size of numbers, they can learn ways of relating multi digit numbers to each other. And they can decimalize their approach to multi digit numbers, especially as this is so important in those levels three and four. And from our own investigations in these areas many of the kids in those level three and four, are having a little bit of that anxiety around when they see decimal numbers in certain problem types. So we hope that this will actually underpin some ways that you can actually help ākonga. And just finally, a lot of our resources will be using place value strips so we have a place value strip here. It's also found, quite often in a lot of other resources, on NZ maths and you'll find a theme that we like to use rather than yet is to promote existing resources because there are many great things out there. So we will reference as we go through these vignettes, where you can find activities to immediately help and support your teaching and learning of mathematics.