Home Learning TV: Junior Math 

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| **Segment lesson planning details** |  | | | |
| Title for segment: | Amazing mazes | | | |
| Year levels *(e.g. Yrs1 – 3)*: | 1-3 | | | |
| NZC learning areas: | Maths and Stats | | | |
| Purpose of lesson:  (What learners will learn) | * Use the language of direction. * Make and describe quarter turns. | | | |
| Success Criteria – students will be able to:  (how they will know when they have learnt it) | * Use the language of direction to describe the route through a maze. * Use the language of direction to guide a friend through a maze. * Rotate their body and other objects through 1/4 turns. * Follow a sequence of directions. | | | |
| **Segment content/context details *(as appropriate)*** | | | | |
| Māori specific content i.e. the learning draws on Mātauranga Māori: | Language of direction | Pacific specific content i.e. the learning is focused on Pacific knowledge: | |  |
| **Segment production details** | | | | |
| Equipment requirements: | Counter, small figure such as lego person | | | |
| Copyright requirements:  Please be specific: Source(*Seven Sizzling Sausages* by Sam Smith –url link to the source), intended use (to demonstrate alliteration), and length (timings for video clips) |  | | | |
| **Segment links and attachments *(list all links to recordings or attachments, the source and confirm that copyright permissions are granted)*** | | | | |
| Links to recordings /resources |  | | | |
| Attachments | AmazingMazes-BasicMaze.pdf, AmazingMazes-HarderMaze.pdf  Two maze images (licence purchased from Shutterstock by Education Technology) | | | |
| **Segment plan content** | | | | |
|  | Teaching and learning activities linked to purpose | | High level script (key points/questions) | |
| **Activate**: Activating prior learning, knowledge of contexts and relationships | Connection to personal experiences.  Introduction to the topic of mazes | | [Pretend to be surprised/interrupted as you are doing a maze in a puzzle book (or one printed from the internet)]  Welcome in multiple languages  Sorry – I was just in the middle of doing a maze. Do you like mazes? They are fun – I was nearly finished doing this one.  What kind of mazes have you done? Maybe you’ve done some at school? Or maybe you’ve seen them in a book like this one?  Have you seen a maze so big you can walk through it? There are lots of them all round the world – including plenty right here in New Zealand.  I’ve got a couple of pictures from a-MAZE-ing ones from overseas.  This one is at the Dole pineapple factory in Hawaii. Can you see how big it is – look at the size of the cars!  And this one is in Italy. The man who made it made it because he was challenged by a friend to make the biggest maze in the world! | |
| **Learn**: Introducing learning  Reinforce routines, provide multiple exposure to concepts, and strategies. Scaffolding learning | Language of direction  Links to te reo language of direction. | | I’ve got some mazes here that I was hoping we could solve together. Would you like to do that? Great!  It’s a bit tricky though because normally when I solve mazes with a friend we are sitting right beside each other and can just point at it as we go.  How can we describe how to solve a maze?  Let’s have a look at this maze (Basic maze). I am going to start at the entrance at the bottom here. I’ll use a counter to show where I’m starting. Which way do I need to go? Up? That makes sense. How far up do I need to go? One square would take me to here [move counter]. What now? Left to this square? No – that doesn’t work, I need to keep going up, two more squares.  Ok now we are at a corner. Which way do we go? Left? That’s right – and how many squares? Just one.  What way at this corner? Down one square…  [Continue on, describing the path through the maze using up down left and right.]  Use Māori as well if possible  That was a pretty easy maze – shall we try a harder one?  Use the same kind of directions for the harder maze. | |
| **Respond**: Providing opportunities to use and practice | Linking language of direction to perspective (viewing maze from outside vs inside)  Exploring the idea in the real world – suggestion for follow up activity. | | That is pretty good – and it works well for these mazes. But imagine if we were inside one of those huge mazes I showed you earlier. When you are walking through a maze you don’t go up down, left and right, you turn around when you get to corners so you are facing a different direction. Let me show you what I mean. I’m going to use this little person to help. [ideally a duplo or lego person, but any small figure would work. If you don’t have one you could use the counter but draw an arrow to show which way you are facing.]  Let’s go back to the easy maze first. I’ll put the person here, facing into the maze. What direction do we need to tell her to go? Not up this time – this time we tell her to walk forwards! She still needs to go three squares to get to the corner.  What do we tell her to do at the corner? We could say move left and she could go left but then she’d go backwards down this part and that would be a bit silly!  Instead, when we get to this corner we need to tell her to turn to the left. She’ll need to make a quarter turn, so that she’s facing that way. We call it a quarter turn because it is a quarter of a full turn. If she made a full turn she would be back facing the same way she started!  Continue on to give directions through the whole maze.  Use Māori as well if possible   * E huri whakamauī (turn left) * E huri whakamatau (turn right) * Haere whakamua (go forward)   If you have time to fill in – try the harder maze too.  This is cool – you could try this with a friend or a family member. You don’t even need a maze – you could just give them instructions for a path around the house. Can you give someone instructions for how to get from your kitchen to your bedroom? Just use forward, turn left and turn right. You won’t have squares, but you could tell them how many steps.  Once you get really good at it you could try blindfolded! Maybe not if you have stairs in your house though! | |
| **Share**: Learner and parent reflection on learning and engagement and what they can do next | Reflecting on learning and challenge for at home. | | Wow – that’s a lot of maze work. We’ve practiced giving directions for finding the way through a maze both for looking at it from above – and also for how we could give directions to someone actually in the maze.  Did you know that one way to make sure you don’t get lost in a maze is to put one hand on the wall as soon as you go in. If you keep following that wall around all the corners you come to, you should always get either to another entrance, or back to where you started! It might not be the fastest way through the maze though! You might want to try that with a maze in a puzzle book if you have one.  Sign off in multiple languages. | |