Home Learning TV : Junior Project

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| **Segment lesson planning details** |  |
| Number and title for segment: | 3 – Finding your way (Enterprise -Curious/Creative theme) |
| Year levels *(e.g., Yrs1 – 3)*: | Yr 2-6 |
| NZC learning areas:  | Social Sciences and Mathematics  |
| Purpose of lesson:(What learners will learn) | Students will learn to:* Identify the importance of maps in navigation
* Create a simple map using a scale
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| Success Criteria – (how they will know when they have learnt it).  |  Students will be able to* *Create a simple map using appropriate scale*
* *Transfer a physical 3D landscape to a scaled 2D version*
* *Understand the importance of maps in the process of discovery and navigation*
* *See how maps can be used to solve problems*
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| **Segment content/context details *(as appropriate)*** |
| Māori specific content i.e. the learning draws on mātauranga Māori:  |  Reference to Polynesian navigation methods and whakatauki | Pacific specific content i.e. the learning is focused on Pacific knowledge: | There Reference to Polynesian navigation methods and physical maps |
| **Segment production details** |
| Equipment requirements: | Sheet of A4 paper (or similar e.g., cereal box), pencil [or pens colouring pencils], a sheet or blanket, matchstick [used] or spoon, 4 physical items [shoe, t-shirt, book, jar or similar ] |
| 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) | *All images are copy right free or from Getty.* |
| **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  | *PowerPoint* |
| **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 | *Making connections to previous lessons**Reminder of previous learning and how the skills might help in the new learning area.**Set the scene for the new learning area on Navigation. Invite the audience to begin thinking about the new learning ahead.* *[1.40]**Introduce new vocab and key skills for this session**[1.15]* | *Bula Vinaka, Fakaalofa lahi atu, Fakatalofa atu, Kia orana, Mālō e lelei, Mālō nī,Talofa lava, Kia ora koutou katoa, a big Pacific welcome to you all.* *Hello there again, well haven’t we been having a fun time in Junior Project over the last couple of days.* *Today we are going to look at just how those two ideas of curiosity and creativity go together. We are going to need both of these skills because today we go on our own voyage of discovery and then we are going to draw a map of our voyage. (PP1)**Wow that sounds pretty tricky doesn’t it, but I know we can do this, because we are pretty smart.* *I hope you are ready for adventure because today we are all going to become navigators and explore a new world that we are going to create. If there are any adults with you today it might be a good idea to ask them if they are happy about going on this voyage with you, it would be good to have some company. So, are you ready for adventure? Good for you, well let’s get going then.**Do you know that if our ancestors, our tīpuna, were really curious and really, really creative, oh and pretty smart too, then they would not have discovered Aotearoa way, way back.**You see our tipuna were great navigators. Do you know what a navigator is? Well, we are going to need to know that because that is what we are going to be today, great navigators (presenter writes the word navigator on the board).**You see a navigator is the person whose job it is to work out the direction that a waka, vaka or a plane or a boat should be travelling in. For our ancestors, a navigator was a person who explored the sea. The kaiwhakatere was a very important and wise person who had a huge amount of knowledge. (PP2)**Could you be a kaiwhakatere? You would need to store all your maps - in your head.* *Imagine that. In the past navigators were usually men but now, though anyone can be a navigator.**We still need to navigate today don’t we, every time we go somewhere we navigate from where we begin to where we want to get to.*  |
| **Learn**: Introducing learningReinforce routines, provide multiple exposure to concepts, and strategies. Scaffolding learning  | *Introduce new vocab and key skills for this session**Activate problem to be solved by today's activity* | *When you and your whānau head out in the car for an outing to somewhere new you sometimes use maps to get from one place, your whare - home, to where you are going, your destination. You navigate your journey by using the map on your phone or the navigation system in the car and this tells you where to go. (PP3)**When you walk to school or to a friend’s place the street signposts guide you and you can navigate your way through the streets to your destination by going down the right streets. (PP4) These are all types of maps. But imagine if you didn’t have these and imagine if you were planning to travel thousands of miles across the Pacific Ocean from your homeland in Hawaiki to an island far, far away and imagine if no one had been there before so there were no maps and imagine if you were trying to find that island in a vast ocean that covered 160 million square kilometres.* *Wow how would you do it? Well, you would have to be creative wouldn’t you, and brave.**You would need a really well built waka. You would also need a very good navigator to plan and guide the journey. Polynesian navigators might not have had maps like we have today, but they were super smart.* *They used the position of the sun and the moon and the stars as a map PP6 that allowed them to build pathways across the great Pacific Ocean. They knew when the weather conditions would be right to start the journey, they could use the winds and the swell of the tides to guide their decisions. Once they were on their voyage they could predict where land was by looking at the cloud formations, what vegetation was floating in the sea, the flight of birds in the sky and the sea life they saw in the water.* *All of this information they put into their super brain which whirled around like a computer and allowed them to follow a pathway from Hawaiki across the Pacific and eventually arrive safe and sound in Aotearoa, New Zealand.**As I said super clever people eh.**They had a problem and they used their knowledge of the sea and the stars to solve that problem.* *They even developed compasses in their mind to make sure they were going in the right direction.* *All of this without physical maps or compasses or phones or anything.* *They were certainly curious and very creative. I think Maui would have been a good navigator, don’t you?**Are you good at finding your way? Do you need to use a map or instructions to help you? Let’s pause and think about how we find our way when we get lost.. He aha ōu whakaaro? What are your thoughts?****Te tapaepae o te rangi*** *(PP7)**See there to the place where the sky reaches down.* *This whakatauki might have been what an early navigator could have said, looking to the horizon and wondering lay beyond.**Moving on through time, we are more familiar with maps like these PP8, and when Europeans went on their journeys of discovery they drew maps so that others could follow them.**These European navigators had instruments like compasses and sextants PP9 to help them build their own accurate pathways. They still had to be excellent navigators though.**A map is really a drawing that reduces a big area of land down to a small picture so that we can find our way from one place to another. But a good map has to be accurate otherwise people who use it will get lost and that is the problem that we are going to solve when we make our own map, and we are going to solve it by using a scale.**Nowadays we have google maps and phone apps and navigation systems to help us but I reckon that deep inside all of us there is a navigator just waiting to set out on a voyage of discovery and seek what lies beyond the horizon. We are still smart enough to be navigators just like our tīpuna - ancestors, what do you reckon?* *Yep, I knew that you would be keen.**4.30* |
| **Respond**: Providing opportunities to use and practice  | The stepping is to put the left foot down and then put the next foot s heel touching the toes of the first foot this will be a count of two steps repeat the process.Using scale to produce a simple map. Problem solving skills are developed as well as the ability to transfer knowledge form one situation to another.Developing the skill of turning a 3D ‘island’ into a 2D image***[8.00]*** | *Well every journey needs to be prepared for, so before we start we need to go and gather what we need for our voyage of discovery.**You will need a sheet of paper and a pencil or pen or colouring pencils this is what we are going to use to create our map.* *You will also need to build your new world. So, you need a single bed sheet. You will also need four objects that you can easily carry in one hand. A shoe or a T shirt or a jar or a small container or box or even a book. You only need four objects.* *You will also need something to work out scale. A used matchstick is good, but a pen or pencil will do. If you are using a matchstick then ask an adult to light it and put it out first so you are using a dead match do not use a live one. If it has a red end do not use it but ask an adult to help here. A pen or a toothpick will be just as good. It would be good if there was an adult with you to help gather up all of these items.**(PP10)**For production - there used to be a video here as a time-filler, but it was not cleared for use. Is there anything in your library that could be used instead?* *Welcome back, did you manage to gather everything on the list? When our tīpuna were getting ready for their voyage, the whole village would be involved in the preparation, some would be building the waka, some would be blessing the voyage and others would be preparing the provisions needed but today we are only going on a short journey, so you have to do all the jobs yourself, unless you have an adult helping that is.**Now let’s look at the next step on our list of instructions.* ***Step one****. Put the paper and pencils down, we will be using these later.****Step two.***  *The next step is to fold your single sheet in half and lay it out on the floor, just like this. This is our island. (PP11)**So far though there is nothing on our island so let’s move on to Step 3.****Step three.*** *Take the first of your four objects and place it somewhere in the middle of the sheet. Just like this. Now this is a maunga - mountain that is on your island - moutere. (PP12)**Think of a name for your maunga. I’m calling mine Mount Tasi. Try to remember the name of your mountain because you will be using it when you make your map.****Step four.*** *The next step is to take your second object and place it on the sheet. Make sure that all of your objects are separated by quite a space. It would be best if there were at least two of three steps between each object. Make sure that they stay on the sheet though.* *I’m putting my second object here. There. Now this is a roto - lake. So far I have a maunga - mountain and a roto - lake on my island and now I need to think of a name for my lake. Let me think, yes, I’ve got it Lake Lua. Now you think of a name for your lake. (PP13)**I bet you know what the next step is going to be.* ***Step five.*** *That’s right I’m placing my third object right here. It is away from my lake and my mountain. You do the same. This is my wairepo - swamp, Tolu swamp. You think of a name for your swamp as well. (PP14)****Step six.*** *Right, now for the last object. It may be a bit tricky to place this last object so that it is separated from the first three. How about here? That’s good I like that. Have you placed all of four objects down as well? Well, done. This last object is my tāone - town. My town is called Fa what will you call your town? (PP15)**Great so what have we created. An island with a mountain a lake a swamp and a town. Now that was the easy part.* *What we have to do now is create a map of our island so that others can find their way around it. This is where our navigational skills really come in.**Take a deep breath, hā ki roto because now we are going to get really clever.* ***Step seven.*** *Pick up your sheet of paper, this is going to become a map of your island. The sheet is a small version of the sheet. So the map will be a miniature version of your island. Fold it into quarters so that it looks like this. (PP16)****Step eight.*** *Start at one corner of the sheet like this. And now step like this, in a straight line until you get to your mountain which is in the middle of the sheet. One foot in front of the other like this and count each step you take. If you find it easier you can always use your hands instead of steps, the important thing is that you keep count. Tahi, rua, toru, wha…. (PP17)**I took 4 steps* *How many steps did you take? You should have taken between 4 and 5 steps. If you have small feet maybe you took 6 steps.****Step nine.*** *Now you have to use scale to transfer that distance onto your map. Take your matchstick [or your pencil]. Now if each step equals one matchstick measure out the same number of matchstick lengths as number of steps that you took and measure this out onto your sheet of paper. You should end up somewhere near the middle of your sheet of paper. This is because your mountain is in the middle of your island. Does that look right to you? (PP18)**If not or if you are using a pencil or pen to measure then you will need to adjust the scale that you are using. It might be that four steps equal one pencil length. You will have to play will the scale a bit until you work out a scale that looks like you have arrived at the middle of your sheet of paper.****Step ten.*** *When you think that it looks right then draw your first object onto your sheet of paper. Name it as well. There I have drawn my mountain and named it Mount Tasi. Have you mapped your mountain? (PP19)****Step eleven.***  *Next step is to step from your feature to the next nearest one and count your steps. Use the same scale to transfer that information to your sheet and draw and name your feature.* *You are doing so well. Look at how my map is growing and developing.* ***Step twelve.*** *Next step out to the third feature. This should be the next nearest object on your sheet. Remember to always step in a straight line and use the shortest possible path to each object. (PP20)* *Count your steps and then use your matchstick or whatever else you are using to measure the distance on your map. Now draw and name that feature. Just like this.****Step thirteen.*** *Now step out to the last feature and count your steps and transfer that distance to your map using the same scale. Thee I have drawn and named my last feature. My map is nearly complete. How is yours going e hoa?**I’m happy with my map, it has my mountain, my lake, my swamp and my town all located and named. How did yours turn out?* *If it looks a bit strange it might be that your scale was not the best one. Don’t worry about this, being creative means that you have to try new things and make mistakes before you get it right. That is all normal and how that is how we make new discoveries. I’m sure our tīpuna didn’t always read the stars 100% accurately but they didn’t give up and nor will you.* *Now write your scale on the map like this. I matchstick =1 step, or of your scale was different then write that down.**Now all that is left is for me to name my map. What shall I call my island? I know Sefulu Island, I am going to write that across the top. There all done. (PP21)**Just like the navigators from the past we have used our creativity to navigate a new world. We have mapped an island so that others can find their way around it. You might want to give your map to people in your home and tell them to use it to walk to the swamp or to the mountain. See if they are as good as you at navigating.**Well done my kaiwhakatere. Well done my navigator, well done my map maker. Tino pai.* |
| **Share**: Learner and parent reflection on learning and engagement and what they can do next | *Debrief prompts student’s reflection on learning outcomes and progress**Includes opportunity to share learning or learn together with whanau, HLTV or others* * *Introduces ‘independent learning’ through a provocation*

*Introduce and provide link to the next lesson* | *Today we discovered how our tīpuna navigated their way across the Pacific Ocean and how they used their knowledge of the stars and the sea to direct them towards new lands.**They were curious and creative just like you.**We then made our own map using our own creativity and navigational skills. And just look at the amazing maps we produced. I’m sure yours is much better than mine but I am still really happy with my map.**Let’s look back at what we learned today:**We learned:** *How our Tīpuna navigated across the Pacific*
* *How to use scale*
* *How to make a simple map.*
* *We had a problem and we worked hard to solve that problem*

*I hope you are proud of your map. I am proud of you for taking up this challenge –wero, and going on this voyage of discovery just like our tīpuna did.**When you have finished your navigating remember to put all of your objects and your sheet back where you got them from. A tidy navigator is a good navigator and if anyone helped you today make sure that you thank them. A polite navigator is a good navigator.**Next time we meet we are going to do some more voyaging. So until then;**Ka kite ano e aku hoa* |