Home Learning TV - Segment submission 

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| **Segment lesson planning details** |  |
| Title for segment: | Manu Tukutuku (kites) |
| Year levels *(e.g. Yrs1 – 3)*: | Yr 1-3 |
| NZC learning areas:  | Mathematics - Measurement |
| Purpose of lesson:(What learners will learn) | Learners will measure length using non standard and standard measures.Learners will calculate perimeter using cm.Learners will use counting strategies as well as known basic facts to calculate perimeter. |
| Success Criteria – students will be able to:(how they will know when they have learnt it) | Measure length using hands.Measure length using cm.Add measurements together by counting on in 10s.Add measurements together using known facts to 10.  |
| **Segment content/context details *(as appropriate)*** |
| Māori specific content i.e. the learning draws on Mātauranga Māori: |  Manu tukutuku - Matariki Kites. Students will learn about the tradition of flying kites at Matariki.  | Pacific specific content i.e. the learning is focused on Pacific knowledge: |  |
| **Segment production details** |
| Equipment requirements: |  |
| 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) | Image of kite: <https://teara.govt.nz/en/photograph/5290/manu-taratahi>Image of kite: <https://teara.govt.nz/en/diagram/5294/how-to-make-a-manu-taratahi>Image of kite: <https://www.nzgeo.com/stories/on-a-wing-and-a-prayer-2/> |
| **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  |  |
| **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 | *Greeting and intro to the lesson.**Introduce learning intentions**Launch of warm up**Time for students to think and talk* Show powerpoint slide 2 for 15 seconds.*Presenter models different reasoning*Show slide 3 for 15 seconds.*Time for students to think and talk* *Presenter models different reasoning*Show slide 4 for 15 seconds*Time for students to think and talk* *Presenter models different reasoning* | Tēnā koutou e hoa. It’s great to see you here for maths today.Today we are learning to: Make a claim and justify our thinking using the word because. Measure length using standard measures and non standard measures.Measure the perimeter of objects. We are going to be thinking more about Matariki and all the maths that happens during this time, but first, let’s start with a warm up.First I am going to show you some images of shapes. Have a careful look and think about which shape is the odd one out.The odd one out is the one that you think doesn’t belong, or is different to the others. Remember to justify your thinking using the word **because**. All great mathematicians do that.Ready? Here’s the first image. Which shape doesn’t belong? Have a look and talk to someone at home using that magic word **“because**”.Ka Pai e hoa, what did you think? Did you use the word because?Did you think that the triangle at the bottom doesn’t belong because it isn’t coloured in black like the other shapes?Maybe you thought the square doesn’t belong because all the other shapes are triangles. Perhaps you noticed that the square has four sides [count and point], and triangles have three [count and point on one of the triangles]. Maybe you thought something else. I’m sure you had lots of good ideas.Okay e hoa. Let’s have a look at another one. Here it is.What did you think this time? Did you say that the circle doesn’t belong because it has a curved edge, and all the other shapes have straight lines? Maybe you said that the circle doesn’t have any corners, and the other shapes do [point to some corners].Hmmmmm… perhaps you thought the diamond at the top doesn’t belong because it isn’t coloured in black like the other shapes.Okay e hoa. One more. This one’s a tricky one. Look carefully and remember to use that special word “because” to justify your thinking.Wow that one was tricky! What did you notice?Did you notice that the square at the top is different because it isn’t black like the other shapes?Or, did you say that the triangle is the odd one out because it has less than four sides, and all the other shapes have four sides or more? Perhaps you looked really closely and decided that the octagon [gesture] was the odd one out because it has eight sides and the other shapes have 3 [point], 4 [point], 5 [point] sides, which is a pattern. Have a look around you, what shapes can you see? What is the same and what is different about the different shapes that you can see? |
| **Learn**: Introducing learningReinforce routines, provide multiple exposure to concepts, and strategies. Scaffolding learning  | *Introduce next part of lesson - perimeter**Introduction of task using non standard measure**Explanation of length.* *Presenter models how to measure using non standard with a focus on repeating the measure accurately.* *Students time to think.**Presenter models and provides think time.**Presenter explains what non standard and standard measures.**Demonstration of ruler.**Intro of cm and mm.**Opportunities for students to explore using measures at home.* | Today we are going to be learning about something called perimeter and thinking about ways that we can measure it. First, let’s have a look at some different ways that we can measure the length of things. I’m going to measure the length from one end of my table to the other. Some of you will have tuned into an earlier lesson about The King’s Foot where we learned about measuring length. So, we might just revisit that before we start.Hmmmm… I wonder what I could use to measure the length? I’ve got it! I will use my hand [show]. Do you think when I measure my table I should measure like this? [model using hands with one positioned vertically and the other horizontally]. Or do I need to keep my hand position the same each time? What do you think? [think time]Ka pai e hoa. You’re right. We need to keep our hands the same way because then we know it will be accurate. Okay, I’m ready to measure the length. I will start at the very edge here, and go alllll the way to the other edge. I need to make sure there are no gaps between my hands. Watch carefully and count with me, let’s go! [slowly measure table and count aloud].Wow! I just measured the length of my table and it is \_\_\_\_\_ hands long. I wonder how long your table is? You could go and measure your table or something else you have at home and come back when you're done [give 20-30 seconds to measure, presenter to measure other things in studio while children do that]How did you get on? How many hands long is your table?Hmmmm…. I wonder if you measured my table with your hands, would you get the same measurement as me? Have a think and korero with someone at home about that [give 10 seconds].You’re right! You would get a different measurement because your hands are a different size to mine! Hmmmm…. I wonder what we could use to measure so that we always get the same measurement? [think time].Did you say a ruler? That’s what I was thinking too! Rulers are great for measuring because they have what we call a standard unit of measurement. That means that my ruler will be the same as your ruler. Unlike hands which are all different sizes. We call them non standard measures.Have a look at my ruler here. It measures in cm and mm [show]. There are \_\_\_ cm on my ruler. [presenter to model measuring something small in studio]. When I measure with my ruler it is really important that I start at 0 just like I had to start at the edge of the table with my hands. [point] . I will put the 0 right on the edge of my \_\_\_\_\_\_\_ [show]. Then I look at my ruler to see where my \_\_\_\_\_ ends. Look! It ends at \_\_\_\_\_\_ so that means my \_\_\_\_\_\_ is \_\_\_\_\_\_cm long.If you used your ruler to measure my \_\_\_\_\_\_, you would get the same measurement.If you have a ruler at home, maybe you could show someone at home how to measure length with it. If you don’t have a ruler you could use your hands, feet or something else that you have nearby. |
| **Respond**: Providing opportunities to use and practice  | *Activating prior knowledge - discussion of the importance of measurement.* *Explanation of purpose of measurement - link to lives.*Show slide 5*Introduction of context linked to Matariki.**Introduction of the task - launch*Show slide 6 and run finger around the perimeter.Show slide 7*Students solve* *Presenter models strategies and solutions*Presenter records on the board:40cm and 40 cm4+4=84 tens + 4 tens = 8 tens40+40=80Presenter records on the board:80cm+30cm80,90,100,110*Connection.*Show slide 8*Students solve* *Presenter models strategies and solutions*Teacher records on the board:8cm = 2cm = 10cm6cm = 4cm = 10cm2cm =2cm = 4cm10cm+10cm+4cm =10cm+10cm = 20cm20cm+4cm=24cm | So why do we need to measure things? Talk quickly to someone at home [5 seconds].That’s right, we need to measure things so we know how long, wide, or tall something is. Today we are going to work out how much material we need to make something. [Show slide 5] Did you know at Matariki we can celebrate by flying manu tukutuku or kites. Traditional kites are made of natural materials such as toetoe, flax and raupō. The manu tukutuku are flown at Matariki because it is a time to remember ancestors, and the kite is a symbol of the connection between us and them. To make a traditional kite the first step is to make the frame with pieces of toetoe. The frame is the outside of the kite and makes a triangle shape like in my plan here This is called the perimeter. I want to measure the perimeter of my kite so that I know how much toetoe to collect later. To work out the perimeter we need to know the length of each side of our object I have put the measurements on my plan here. These two long sides of my kite are 40cm long [point].The bottom of my kite is shorter and measures 30cm long [point]Hmmmmm…. I wonder what we need to do now to work out the perimeter? [run finger around perimeter again, give think time]That’s right, to work out the perimeter we have to add up the length of all of the sides. So we need to add 40cm + 40cm + 30cm. I’ll give you some time now to have a go at that. [think time 10 secs]How did you add those measurements up? What was your answer?Let’s do it together.First I am going to add 40cm and 40cm together. [write on board]. Because I know that 4+4 = 8 [write on board] , I know that 40 + 40 must equal 80. Do you see the pattern here?Now what do I need to do? You’re right! I need to add on the 30cm.So that will be 80cm + 30cm [write on board].Let’s add the 30 on by skip counting in 10s. I know that 30 is made up of 3 tens. Let’s start at 80.80 - 90 - 100 - 110! [use fingers to keep track of count, write answer to equation on board]Wow! The perimeter of our kite is 110cm, which means I will need to collect 110cm of toetoe later. Let’s practise finding the perimeter of another shape. Here it is[show slide 8] Remember we need to add the length of each side together to work out the perimeter. You have a go now, maybe someone at home could do it with you. I’ll give you some time to do that [show slide 8 again, give 10 sec]Ka pai e hoa. That was a lot of numbers to add together. How did you do it? Did you notice that some of the numbers combined to make ten? Let’s have a go together. [ list numbers on board]Hmmmm.. first I can see that 8cm and 2cm make 10cm. [write 8cm+2cm=10cm on board and cross out numbers from list]I can also see that 6cm and 4cm will also make ten [write 6cm+4cm=10cm on board and cross out numbers from list]Finally, I can see 2cm + 2cm makes 4cm [write on board].What do we need to do next? That’s right, we need to add these all together [write 10cm +10cm +4cm = on board].We know that 10cm + 10cm is 20cm, and 20cm + 4cm is 24cm. So, what is the perimeter of this shape? Ka pai, it is 24cm! |
| **Share**: Learner and parent reflection on learning and engagement and what they can do next | *Reflection of learning.**Linked back to matariki and context.**Opportunities for exploration at home.*  | Tumeke! Today we have learnt so much maths. First we learnt how to measure length using non-standard measures, which was our hands. Then we explored a standard measure which was our ruler. Lastly we also learnt that the perimeter is the length or distance around the outside of an object or space. To work out the perimeter we need to measure the length of each side and add these measurements together. Knowing the perimeter of an object or space is important when doing jobs and activities like building a fence and marking sports fields and courts.We also learnt that kite flying is a special way to connect to our ancestors and celebrate Matariki. I wonder, could you use some things you have at home to make a kite? What will the perimeter of your kite be?Ka kite, see you next time.  |