Home Learning TV: Junior Mathematics

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| **Segment lesson planning details** |  | | | |
| Title for segment: | Sophie Pascoe | | | |
| Year levels *(e.g. Yrs1 – 3)*: | Yr 1-3 | | | |
| NZC learning areas: | Maths - Statistics | | | |
| Purpose of lesson:  (What learners will learn) | Learners will learn to   * recognise the equals sign as equality. * make a pictograph using data * use a bar graph and make statements * justify their thinking | | | |
| Success Criteria – students will be able to:  (how they will know when they have learnt it) | Learners will be able to   * explain the purpose of an equal sign * interpret information in a pictograph * make a pictograph * make statements from a bar graph * use the word *because* to justify their ideas | | | |
| **Segment content/context details *(as appropriate)*** | | | | |
| Māori specific content i.e. the learning draws on Mātauranga Māori: | bk | Pacific specific content i.e. the learning is focused on Pacific knowledge: | |  |
| **Segment production details** | | | | |
| Equipment requirements: | counters/whiteboard to make a graph. | | | |
| 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) | <https://www.gettyimages.co.nz/detail/news-photo/sophie-pascoe-of-team-new-zealand-celebrates-with-the-gold-news-photo/1337426623?adppopup=true>  <https://www.gettyimages.co.nz/detail/news-photo/sophie-pascoe-of-team-new-zealand-competes-in-the-womens-news-photo/1336504844?adppopup=true> | | | |
| **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 | Slideshow | | | |
| **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 | Presenter to greet students for the day  Introduction for the session.  Presenter to explain Warm up  Question for warm up.  Mathematical explanation and justification  Another warm up example  Presenter to justify thinking.  Extending warm up ideas  Using symbols to represent mathematical thinking  Presenter to justify thinking  Recap of main idea from warm up | | Greet children and welcome for the day  Today we are going to look at an inspirational New Zealander and-explore a pictograph and a bar graph  Before we do that let’s have a look at some mathematical statements.  We are going to look at a true or false statement.  Your job is to agree or disagree with the statements and justify your thinking using the word *because*.  [show slide 2]  This statement reads 8 = 8. Turn and talk with your whānau or a toy do you agree or disagree with this statement? [wait time and show slide 2 again]  Paaia!  I think it is true because this statement reads 8 = 8 or 8 is the same as 8. Which means that the equation is balanced or the same on both sides.  [show slide 3] and give wait time  Can you see how the see-saw is balanced because the numbers are the same on both sides?  Have you been on a see-saw like this? If tamariki are the same weight and no one pushes off, it will stay straight across or balanced. If one tamaiti weighs more, then the side they are on tips down.  Here [show slide 3] they are the same, so it is balanced.  Have a look at this statement  6 = 9 [slide 4]  Turn and talk with your whānau do you agree or disagree with this statement? [wait time and show slide 4 again]  Ka rawe ! I disagree because 6 is a smaller number than 9, so the equation is not balanced. We know this because if we started counting from 6 (count 6,7,8,9) 9 comes after 6 which makes it a bigger number, so it is not equal.  [show slide 5]  See the see-saw tips down on the bigger side.  The line across the equal sign means the two sides are not equal.  Let’s have a look at the next statement. It looks a little bit different, but we can still read the equation the same.  Turn and talk with your whānau do you agree or disagree with this statement? Remember to use the word because to justify your idea. [wait time and show slide 6]  Did you read the equation as 10 equals 8?  It looks a little tricky because we used dots to represent the number 8.  Isn't it great that in maths you can use numbers or symbols to represent our thinking?  Awesome! So, do you agree or disagree with this statement?  I disagree because 10 is not the same as 8 dots. We know this because if I counted back from 10 to 8. (10,9,8)  8 is smaller than 10 which means the equation is not equal or balanced. So, the statement is false. We would need to add two more dots for the statement to be true or put a line across the equal sign.  How great that we learnt that the equals sign also means ‘the same as’ and we justified our thinking using the word *because*. | |
| **Learn**: Introducing learning  Reinforce routines, provide multiple exposure to concepts, and strategies. Scaffolding learning | Introduce learning theme  Activating prior knowledge or experiences  LInking to home context  Introducing New Zealander in focus  Definition of achievements  Question for students at home.  Show information to focus on for the session  Introducing Graph  Activating prior knowledge  Definition of graph  Students and presenter to make graph  Presenter to model making the beginning of the graph  Students to finish the graph using knowledge  Purpose of a pictograph  Using graph to find information  Presenter to solve  Question for students to solve  Presenter to model | | Did you watch the Paralympics? [wait time]  What events did you watch? [wait time]  I watched... [presenter to state what they watched]  We have some inspiring athletes in Aotearoa.  Who is an inspiring athlete for you? [wait time]  Do you know who this amazing athlete is? [show slide 7, give wait time]  I will give you another clue, what event is she competing in? [show slide 8, give wait time].  Ka tika! That is right. It is Sophie Pascoe. She is a swimmer.  Sophie has competed at 4 Olympics and is our most decorated New Zealand Paralympian - which means she has won the most medals of any Paralympic athlete.  She has broken many world records and has won her medals in all swimming strokes: butterfly, backstroke, breaststroke and freestyle. [show slide 8]  Do you like to swim? What is your favourite style? [wait time]  Remember it is always important to make sure a matua or adult is with you when you are swimming!  Throughout her Olympic career, Sophie has won many medals.  Gold, Silver and Bronze. Do you know what winning gold means?  [wait time]  That is right, it means she finished first in her race.  A silver medal means she finished second and a bronze medal means she finished third.  This is what I found out about her medals. [show slide 9 - presenter to read slide]  There is a lot of information here.  If we wanted to find out how many gold medals, she has won in total we could arrange this information in a graph.  Do you know the names of any graphs? [wait time]  We are going to use a pictograph to sort our information.  That means we use pictures and arrange them, so it is easy to read.  Let us take a look [show slide 10]  Can you see that we have a space for gold medals [gesture]  silver medals [ gesture] and bronze medals [gesture].  Using the information underneath, let's fill in the graph, you could do this at home as well, with pen and paper or some materials.  \*\*NOTE: Presenter to physically make graph either on whiteboard or using counters or pictures to represent medals.  in 2008 she won 3 golds so we will put three medals in the gold column to represent them. [presenter to do this]  She also won a silver medal. So, we will put a medal in the silver column to represent that one.  Can you fill in the rest of the graph [wait time]  Show presenters graph or slide [11]  Wow: having the data arranged like this means we can easily see how many medals she has won.  How many golds has Sophie won? [wait time show graph or slide 11]  I think she won 11 golds, let’s check together by counting the medals in the gold column.  [count medals 1-11]  Aue! - Sophie has won 11 gold medals! How incredible is that?  If we want to find out how many medals, she has won altogether what could we do? [wait time, show graph]  That's right, we could count all of the pictures, because we know each picture or symbol represents a medal.  We know already that she has won 11 gold medals so let’s continue to count on from 11 when counting the silver and bronze medals.  [Presenter to count medals starting with silver, 11, 12 etc]  19 medals altogether! How incredible. | |
| **Respond**: Providing opportunities to use and practice | Introducing new graph and ideas  Activate prior knowledge  Presenter to explain purpose of graph  Modelling of a claim or statement from a graph.  Students to make claim from the graph then presenter to model.  Students to make claim from the graph then presenter to model.  Students to make claim from the graph then presenter to model.  Finding information from a graph - students to solve. | | If we want to compare the medals she won at each Olympics we could use a different graph to show this information.  This graph is called a bar graph. [show slide 12]  Do you know why it is called a bar graph? [wait time]  That's right, it is because the information is displayed using bars or columns. [point]  Have a look at the graph [show slide 12]  What do you notice with this graph? [wait time]  There is a lot of information here.  We can see that in 2008 she won more gold medals than silver because the gold bar is taller than the silver bar.  What statement can we make about 2012? Remember to use the word because to justify your statement [wait time - show graph]  We can see that she won an equal amount or the same number of gold and silver medals because the bars are the same height.  What statement can we make about 2016? [wait time - show graph]  We can see that she has won fewer silver medals than gold because the silver bar is shorter than the gold bar. If we look at the numbers over here [presenter to gesture] we can see that she won 3 gold medals and 2 silver at the 2016 Paralympics.  What statement can we make about 2020? Make sure to use because in your answer [wait time - show graph]  We can see that Sophie won gold, silver and bronze medals at this Olympics. We can see that she won 2 gold, 1 silver and 1 bronze. How many medals is that? [wait time - show graph]  2 + 1 + 1 = 4.  4 Medals in total!  What a fantastic effort.  We can also use this graph to look across the different years.  At which Olympics did she win the most Silver medals? [wait time – show graph]  What did you look at to decide?  Tino pai. The tallest silver bar is in 2012. So Sophie scored the most silver medals in the 2012 Paralympics. | |
| **Share**: Learner and parent reflection on learning and engagement and what they can do next | End of lesson      Recap of learning                      Challenge for home              Farewell | | What a great lesson today.  We have looked at true or false statements and learnt that the equals sign also means “the same as”  We celebrated Sophie Pascoe’s amazing swimming efforts by creating a pictograph to compare the medals.  We looked at a bar graph and made statements about each year justifying our thinking by using the word because.  Isn’t it great that we can interpret so much information from a graph!    Can you do an investigation at home and make a graph to display the information?  You could ask your whānau what their favourite Olympic events are or come up with your own Statistical Investigation.  Have fun!  Ka Kite. | |