

Our Lost Teeth

NEW June 2024

Year level: 2

Approximate number of lessons: 1, with follow up questions for ongoing discussions.

Learning goals

- contribute to formulating an investigative question that can be answered with data
- anticipate what the data might show, eg which outcomes might be more frequent than others
- discuss how the data-gathering process might affect other people
- identify who and what the data measures
- collect categorical data for more than one variable
- create data visualisations for categorical data, eg pictographs and dot plots
- describe data visualisations for categorical data, noting the frequencies of categories, eg most frequent category, least frequent category
- choose statements from class created descriptive statements that best answers the investigative question
- match statements made by others with features in simple data visualisations, and agree or disagree with the statements

Resources

- [Tooth pictures](#)

Our Lost Teeth - Main lesson

Introduction

In this lesson ākonga undertake a statistical enquiry around the number of lost teeth. A topic of interest to many year 2 ākonga. As ākonga lose teeth across the year, it is suggested that the class can revisit the data again during the year to see how the number of lost teeth changes.

? PROBLEM:

Class discussion

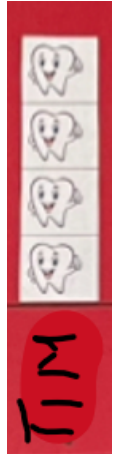
- Ākonga share what they know about loose/wiggly teeth and lost teeth. It is important that ākonga recognise the difference between a wiggly tooth and a lost tooth.
- Explore familial differences around what happens to teeth once they have fallen out.
- Support ākonga to pose the investigative question '*How many teeth have our class lost?*'

- Record additional questions of interest. *Who has lost the most teeth? How many people have not lost any teeth yet?*
- Anticipate possible outcomes.
 - Write the investigative question on big paper
 - Encourage ākongā to have a guess about what they think they will find
 - Record guesses on post it notes on the big paper.

📋 PLAN:

Show ākongā the [teeth icon sheet](#).

- Say 'I have some pictures of teeth that we can use today.'
- Ask ākongā to design a way of showing how many teeth each person has lost using these teeth pictures.
- Guide ākongā to design a visual representation of teeth. They will probably line up the teeth with each individual name.



Discuss the effects that this process may have on people.

- For ākongā who have not yet lost any teeth, how will they be involved and will they be included?
- Hopefully this discussion highlights inclusive approaches and makes room for ākongā to add data as time goes on.
- At one stage none of us had lost any teeth, they will lose their teeth one day!

Discuss who this data representation is going to include and what it will record.

- For example, This representation will show Room 4's Lost Teeth, how many teeth Room 4 have lost so far in their lives to this point in time. This will include all ākongā in Room 4.

Discuss how we could find out how many teeth ākongā have lost.

- Ākongā might suggest that they can recall how many teeth they have lost...
- They might suggest they could count how many teeth they have and compare with how many they should have...
- Discuss which method might be the best...

Agree on a method, e.g., count the teeth they have and work out how many they have lost

- How do we safely count our teeth?

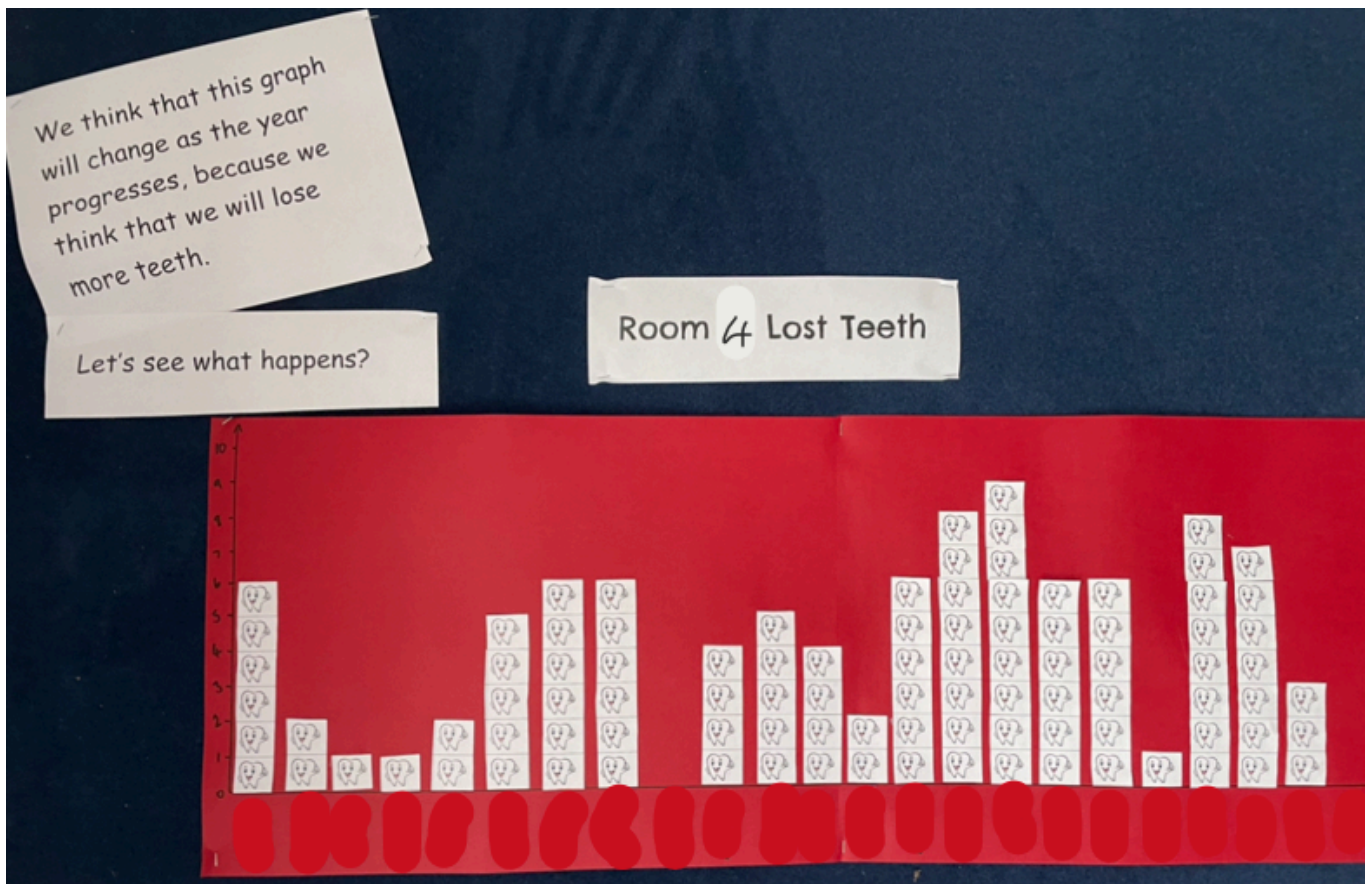
DATA:

Collect data

- Support ākongā to wash their hands and count their teeth. They may need a mirror here.
- Work out how many teeth they have lost.
- Provide multiple copies of the teeth sheet for ākongā.
- Ask each individual to cut out the number of teeth that they have lost.

ANALYSIS:

- Guide ākonga to line these columns up as a horizontal display. Make sure there is a space for everyone, even those who have not yet lost any teeth.
- You may ask ākonga to compare columns, or they may do this naturally themselves. How can we make it easier to read these columns? Suggest a vertical axis with numbers to make reading the columns easier.



Discuss the function of the vertical axis. It helps us to see how many teeth have been lost without counting the teeth in the column.

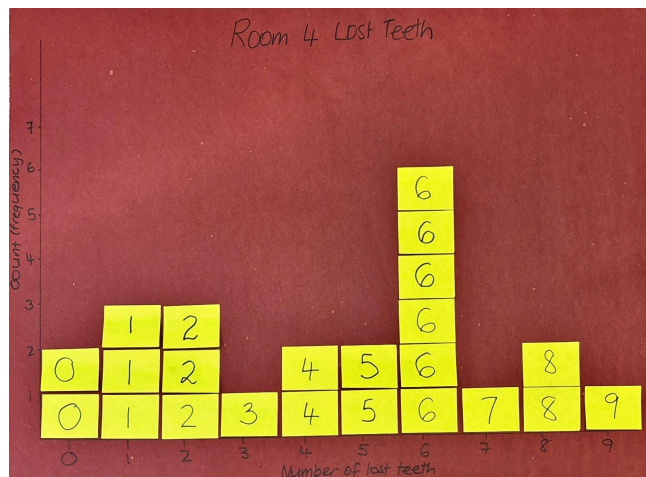
Discuss:

- Who has lost the most teeth? How can you see this on the graph?
- Who has lost the least teeth? How can you see this on the graph?
- Who has lost the same number of teeth? How can you see this on the graph?
- Who has lost two teeth? How can you see this on the graph?
- What is the most frequent number of lost teeth?
- How many teeth have been lost altogether?

Ask if there is another way that we could show the number of teeth that ākonga in our class have lost?

Ākonga might suggest recording the number of lost teeth for each ākonga. Provide each ākonga with a Post it note or a square of paper to write down their number of lost teeth, reminding those who have no lost teeth to record zero (0) on their Post it note.

Create a summary data display together, noting how the horizontal axis now records the number of lost teeth and the vertical axis is how many ākonga have lost that number of teeth.



Discuss what this summary graph shows and ask how it shows the data differently to the previous graph. For example, when the displays above are compared, it is easier to see that the most common number of lost teeth is 6 in the summary display.

💡 CONCLUSION:

Answer your investigative questions - How many teeth have our class lost?
 Ākonga may wish to find the total number.

Pose investigative questions for the future

- How many more teeth will we lose this term? Next term? Before the end of the year?

- Record questions from the analysis and conclusion, and anticipated outcomes to accompany the graph as a wall display.

Our lost teeth - follow up sessions

As ākonga lose teeth overtime, allow them to add to the initial graph. This will change the answers to the questions you have and provoke an ever changing conversation in your classroom.

Plan to revisit the data each term.

- You may use a different colour for teeth lost in each term. This would allow for the following provoking questions:
 - How many teeth have we lost this term?
 - Were more teeth lost in Term 2 or Term 3?
 - How many teeth have we lost this year?
 - Who has lost the most teeth this term? Might they also lose the most teeth next term?

- You may re-create a summary data display each term. Making a new graph of the number of teeth lost at the end of the term (with the numbers rather than the tooth icon) will also support showing the change over time. While in the first graph the teeth can be added to it, many ākonga will have a new total number of teeth lost, therefore the second graph will need to be created at each check in or follow up session.

Notes for teachers

These types of graphs make fabulous talking points in cloak bays as ākonga and whānau arrive and talk each morning. The written questions within your wall display will guide whānau and tuakana to engage with ākonga.



Data Detectives use PPDAC

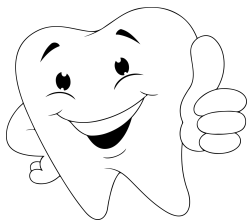
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Data detective poster

Our Lost Teeth student materials

Resource list with preparation

Resource	Preparation required	Approx numbers
Teeth icon sheet	Photocopy sheets - cut into strips Students cut out their own individual teeth Scissors needed	Initially a sheet would work for six students, there will be spares. Copy 4-5 pages depending on class size.



<https://pixabay.com/illustrations/dental-health-oral-health-dentistry-6976711/>

Teeth icon sheet

