

# Pineapple on Pizza?

NEW 9 May 2024

Year level: 3

Statistical focus: Summary investigations

Approximate number of lessons: 2

## Learning goals

- pose summary investigative questions about everyday situations, using categorical data
- contribute to formulating an investigative question that can be answered with data by identifying the variable and the group of interest
- anticipate which outcomes might be more frequent than others
- use survey questions to collect data from others
- discuss how the data-gathering process might affect other people
- identify who and what the data measures
- collect, record, and sort data or use secondary data sources
- use data cards, tally tables, and recording sheets to collect primary data and to share secondary data
- create data visualisations, eg picture graphs, dot plots, and bar graphs using provided grids
- describe data visualisations for categorical data
- make statements about data visualisations that include using variables in the statements
- answer an investigative question by choosing statements from findings
- reflect on findings and compare with anticipated outcomes

## Resources

### Lesson 1

- Post It notes
- Kaiako need to know some information about the controversy around pineapple on pizza, see link below.

### Lesson 2

- Year 1-3 Data cards, [CensusAtschool Set A](#), printed and laminated for sorting.

# Pineapple on Pizza - Lesson 1

## Introduction

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Class discussion

- Explore the history of pineapple on pizza and identify the international controversy that exists around placing fruit, namely pineapple, on to a pizza.
- For teacher information please see [Pineapple Pizza - History of the controversial Hawaiian Pizza](#)

## ? PROBLEM:

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- Talk about pizza, record ākongā thinking around pizza and pizza eating experiences. Be aware of topic specific vocabulary (base, toppings, pepperoni, pineapple etc.). Most importantly ensure that all ākongā hold a clear understanding of what pizza is.
- Ask ākongā to pose an investigative question to explore the classroom's pineapple on pizza preferences.
- Discuss what ākongā anticipate the answer will be? Why do they think this?
- Discuss who will be included in this data collection, who will the data represent?
- Confirm the investigative question: Do the **girls and boys in our akomanga prefer pineapple or not on their pizza?**

## 📋 PLAN:

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- Make a plan to collect information (data) so that you can find out how many ākongā in the akomanga prefer pineapple on their pizza.
- On a large sheet of paper record the investigative question across the top of the page.

Investigative question: ***Do ākongā in our akomanga prefer pineapple or not on their pizza?***

- Ask ākongā what survey question they would ask one another to get information to answer the investigative question.
- Note with ākongā the difference between the investigative question and the survey question. The survey question is what we ask each individual to help us to answer the overall investigative question. The investigative question is about the overall class preferences.
- A possible survey question is ***Do you prefer pineapple on your pizza?***
- Consider the possible answers, discuss how stating preferences might affect people. What will ākongā who have never tasted pineapple before say? Is anyone allergic to pineapple? Will girls and boys have the same pineapple preferences?
- Decide on three possible answers, yes, no, no preference.
- Agree to collect the data using data cards and then collating these in a table.
- On the large sheet of paper record the survey question under the investigative question.

Survey question: ***Do you prefer pineapple on your pizza? Yes, No, No preference***

- Draw up the following table.

Girls			
Boys			
	Yes	No	No Preference

### ## DATA:

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- Invite ākonga to create their own data card. Each ākonga will draw their faces and one of the following pieces of information...
  - A pineapple to show that yes they like pineapple on their pizza
  - A question mark to show that they are not sure or have no preference [no preference]
  - Do not put anything extra, to show that they do not like pineapple on their pizza [No].
- Ākonga place their own data card onto the large sheet in the correct box, creating a data visualisation with the data cards.

### || ANALYSIS:

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- Describe the data that you can see. Use the following analysis questions to seek ideas from ākonga.
  - How many ākonga, girls and boys would prefer pineapple on their pizza [Yes]?
  - How many ākonga, girls and boys do not want pineapple on their pizza [No]?
  - How many ākonga, girls and boys are not sure [No preference]?
  - Which category is the most common [has the largest number of ākonga who chose that category] ?
  - Which category is the least common [has the smallest number of ākonga who chose that category]?
  - Do boys think similarly to girls or differently?, in what way?

### 💡 CONCLUSION:

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- Pose the investigative question again, ***do ākonga in our ākomanga prefer pineapple or not on their pizza?***  
Write a statement concluding your findings based on the analysis questions above.
- Consider what the data may look like if it was from another classroom.
- Consider what the data may look like if it was from a classroom in Italy?, in Canada? Or other countries?

# Pineapple on Pizza - Lesson 2

## Introduction

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Class discussion

- Recap the lesson from yesterday.
  - that the data that was collected was limited to one particular akomanga.
  - that people from other countries might have different preferences.

### ? PROBLEM:

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- Create a discussion around limitations of yesterday’s data. Create a wondering about other akomanga in the school, will they feel the same? Other akomanga in Aotearoa, will they too feel the same?
- Discuss the New Zealand Census, what it is, what information is collected, and what it is used for.
- Discuss CensusAtSchool. Let the ākōnga know that CensusAtSchool did ask tamariki from all over Aotearoa whether they like pineapple on their pizza.
- Introduce the 25 Year 1-3 [CensusAtSchool Set A](#) data cards.
- Discuss that each card represents one child.  
Notice that these data cards are similar to the ones they made yesterday, but that they also hold other data.
- Notice the pineapple icons on the data cards, notice the question marks, notice that some cards have neither.
- Pose the investigative question: ***do these ākōnga prefer pineapple or not on their pizza?***
- Note for teachers: while it might be tempting to think about all tamariki in Aotearoa, the dataset is too small to do that, so we can only ask about these ākōnga.

### 📋 PLAN:

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- Make a plan to sort the secondary data (data cards) so that you can find out if these ākōnga prefer pineapple on their pizza.
- On a large sheet of paper record the investigative question across the top of the page. ***Do these ākōnga prefer pineapple or not on their pizza?***
- Check the [CensusAtSchool questionnaire](#) to see what the survey question was that was asked to collect the data [look at Question 28a).
- Decide to use the same type of table as we used with our data collection. Draw this up on the large sheet of paper.

Girls			
Boys			
	Yes	No	No Preference

## ### DATA:

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- Invite ākonga to sort the 25 data cards.
- Ākonga place the data cards onto the large sheet in the correct box, creating a data visualisation with the data cards.

## ▮ ANALYSIS:

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- Describe the data that you can see for these ākonga. Use the following analysis questions to seek ideas from ākonga.
  - How many ākonga, girls and boys would prefer pineapple on their pizza [Yes]?
  - How many ākonga, girls and boys do not want pineapple on their pizza [No]?
  - How many ākonga, girls and boys are not sure [No preference]?
  - Which category is the most common [has the largest number of ākonga who chose that category] ?
  - Which category is the least common [has the smallest number of ākonga who chose that category]?
  - Do boys think similarly to girls or differently?, in what way?

## 💡 CONCLUSION:

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- Pose the investigative question again, ***do these ākōnga prefer pineapple or not on their pizza?*** Write a statement concluding your findings based on the analysis questions above.
- Compare and contrast your findings with the findings from yesterday's data.
- Do the ākonga in this akomanga have similar preferences to the ākōnga in the data card Set A, or are their preferences different? Why do we think that might be?

## Notes for teachers

- These lessons could form a part of an inquiry comparing and contrasting cultural norms. For example, this could be the provocation of a statistical enquiry looking at food across countries that participate in the Olympics.
- It would be possible for two or more classes to run Lesson 1 concurrently and then share data with each other. This would provide a powerful connection for ākonga, realising that all groups or samples have slight differences. It would also provide opportunities for rich data conversation across akomanga, creating questions to delve deeper into the data.



Data Detectives use PPDAC

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