

# Y1 Cats or dogs? - PPDAC cycle

NEW June 2024

Year level: 1

Approximate number of lessons: 1

## Learning goals

- People and the environment are not data, but data can tell us things about people, their lives, and their environment.
- At this age, each step in the cycle will need to be led and supported by the teacher.
- Data visualisations are representations of all available values of one or more variables that reveal relationships or tell a story.

## Resources

- [Y1 Cats or Dogs? Google Slides](#)
- [Gracie and Friends Data Toolbox](#) - about the data toolbox, needs to be loaded onto an ipad or tablet, a freely available app
- [Census at School data](#)

## Activity - Lesson 1

### Introduction

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This lesson asks ākongā to state whether they prefer cats, dogs or neither. It does not rely on ākongā having these as pets so all can participate with their one opinion. There is no 'right' or 'wrong' and there are rich oral language opportunities.

### ? PROBLEM:

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Pose the investigative question '**Does our class prefer cats, dogs or have no preference?**'

- Begin with asking ākongā to have individual think time and decide what their own opinion is.
- Next, have ākongā move to the place on the physical continuum that reflects their opinion.
  - You may wish to have a visual here to prompt them (place printed out photos to show where to stand for cats, dogs, no preference).
- While they are standing in their groups, have them discuss their reasons for why they chose to stand in this position.
  - Encourage several ākongā to report back the ideas of the group.

## 📋 PLAN & DATA:

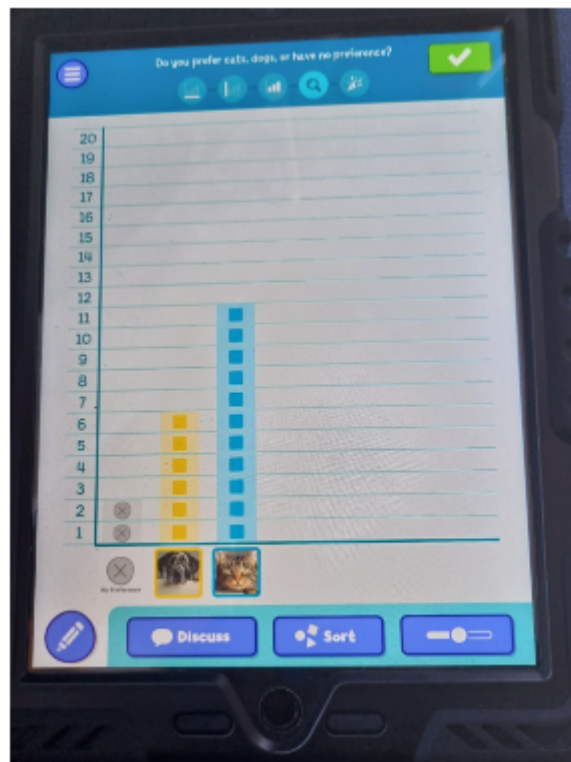
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Come back together on the whariki to decide on how we could collect or record the information for which each ākonga prefers.

- Kaiako may find that the ideas fall into two categories.
  - Usually ākonga would either give each person a card to write their own name to place against cat, dog or no preference, or they would create a symbol or pictorial representation for cat, dog or no preference.
  - Sticky notes are really useful to create your own symbol cards quickly with limited resources.

Alternatively you can use the [Gracie and Friends Data Toolbox](#) app to have ākonga collect the data through conversation and then record it on the graph as they speak to each person.

- The app can be screen cast to the classroom screen for discussion as a wider group.
- Discuss how some titles and labels are less useful for clear and accurate data discussion.



**Example of cats and dogs data collected by a class**

## 📊 ANALYSIS:

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While sitting in a circle have ākonga begin to place their picture of a cat, dog or no preference onto the whariki.

- Pause and prompt ākonga to think about what they are seeing so that when you come to the analysis discussion they have noticed the building data picture.
- Discuss what else needs to be added to the data display so people who were not part of creating it know what it is (title, labels).

- If using the ipads for data collection then the individual group results will need to be collated onto one ipad [on the screen] to see the results for all.

Using these suggested prompts view the displayed data and discuss ākonga findings. The kaiako scribes the ideas shared by ākonga as they talk about what they have noticed. Ask akonga ‘How could you describe what you see?’

- What do you notice about where people have placed their picture?
- What can you say about what this shows?
- Do people in our class prefer cats, dogs or neither? How do you know that?
- What else do we need to know to answer our question?
- Is there anything missing for others to be able to ‘read’ our data?

From viewing the picture graph (or bar graph in the ipad) and the discussion, create statements together with the kaiako supporting where needed.

## CONCLUSION:

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Answer your investigative question **‘Does our class prefer cats, dogs or have no preference?’**

- Share your statements from the analysis to display with your data so that others can view and see if they agree with your findings.
- A good next step could be to wonder about if the class next door would have the same data?
- Would our whānau data be the same?

## Notes for teachers

It is worth thinking about ways to include those who are not very interested in cats or dogs. How can you get the people who have no preference to talk about their perspective? You could think about a continuum line for ākonga to physically place themselves on and then have some talking time before doing the data collection part of the lesson.

Opinions could be vastly different depending on if the animals were to be considered pets or working animals. Some communities are very opposed to cats due to environmental reasons so it is good to be aware of your local community norms.

This lesson could be completed again using the [Census at School data](#) and talking about the differences noticed between the Census data and your class data.

You could take this lesson further by looking at this [LinkedIn post](#) about how pet preferences have changed over the years. Support from the kaiako is needed to unpack this post in a visual way that can be understood by ākonga of this age.

National Geographic Kids has a downloadable primary resource titled [35 Cool Things About Pets](#) that could take your pet preference conversations further.

You could take this idea further by having ākonga create their own investigative questions on the Data Toolbox. For example ‘Did you wear shoes with laces, velcro or no tie/casps to school today? Ākonga then type their question into the app (with the support of their kaiako if needed) and go about collecting data to answer their question. There is the opportunity to take a photo for the symbol on the bar graph to

personalise this. These self generated investigative questions are an excellent way to build in purposeful, engaging and motivating oral language opportunities.

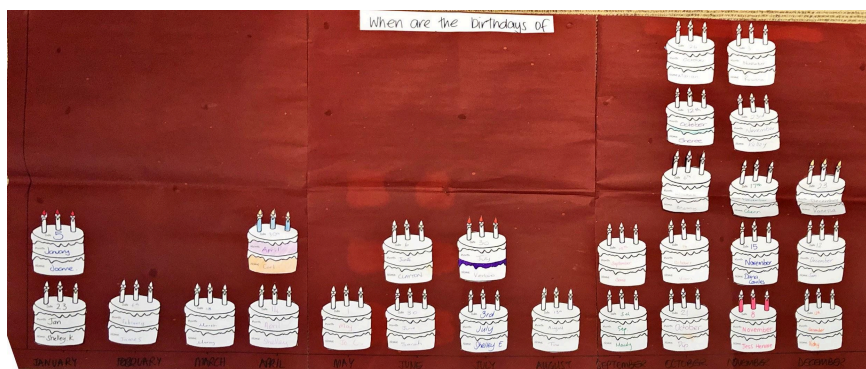
## Picture graphs and pictographs

From Arnold, P. (2022). *Statistical investigations | Te Tūhuranga Tauanga*. NZCER Press (pp. 227-228)

- Picture graphs and pictographs are graphical summaries that show a visual of the distribution of a categorical variable.
- In a picture graph, a picture or a symbol is used to represent one observation on the graph.
- In a pictograph, a picture or symbol is used to represent several items that belong in the same category.
- Pictures or symbols must be the same size and spaced the same distance apart.
- If different symbols are used for different categories then these need to be the same height and width.
- Picture graphs and pictographs show frequencies.
- Pictographs can be misleading especially if precise counts are required.

### Examples

Investigative question: *When are the birthdays of the students in our class?*



Picture graph of birthdays for the students in our class

Investigative question: *How do students at Karekare College get to school?*



Key: One symbol = 20 students

Pictograph of travel methods to school for Karekare College students



Data Detectives use PPDAC

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## Data Detective Poster