Maths Week/ Wiki Pāngarau 2025

Survivor Series/Kia Mōrehurehu

Day 4 Set E

For students

WHAT TO DO FOR STUDENTS

1 **You can work with one or two others. Teams can be different each day.**

2 **Do the tasks and write any working you did, along with your answers, in your maths book.**

3 **Your teacher will tell you how you can get the answers to the questions and/or have your work checked.**

4 **When you have finished each day, your teacher will give you a word or words from a proverb.**

5 **At the end of the week, put the words together in the right order and you will be able to find the complete proverb! Your teacher may ask you to explain what the proverb means.**

6 **Good luck.**

BIRDS AND BUTTERFLIES

This Survivor Series activity involves exploring data about New Zealand birds. Your teacher will provide you with a link to the **dataset** that you will work on as a class.

Working in small groups your teacher will assign your group three New Zealand birds to work with in the first task and will give you a **printout** showing just those three birds.

Background information about the creation of the dataset
To create a dataset about New Zealand birds the following prompt was used in an Artificial Intelligence (AI) tool. Note the prompt includes the variables of interest and the specific New Zealand birds that the information was wanted for.

> *Data information about birds I want length, weight, diet, habitat, is the female or male larger, predominant colour for females, predominant colour for males, beak colour and conservation status for the north island brown kiwi, tui, bellbird, fantail, kaka, morepork, rifleman, tomtit, kereru, north island robin, south island saddleback, kea, variable oystercatcher, pukeko, toroa, new zealand dotterel, takapu, little penguin, kakapo, takahe, weka, kotare, blue duck, shining cuckoo.*

AI is commonplace and while AI can be useful, it is important to **double-check facts** if accuracy is critical, **ask for sources** or request a web search if you need up-to-date or verified information and to **use it as a starting point**, not the final authority.

Task 1 - Creating a useable dataset

In this first task you will

1. Confirm the variables for the dataset.
2. Verify the data provided for the variables given.
3. Find the information for the additional variables.
4. Update the information checked in part 2 and add new variables found in part 3 on the spreadsheet for your group's three birds.
5. Tidy the dataset so that the data is in a useable form to use in statistical software.

1. Confirm the variables for the dataset.
    - Consider the variables given - are there any adjustments needed?
    - Decide if any additional variables need to be included.

This is a whole class activity, but work in your smaller group, sharing ideas to the class discussion.

- Look at the provided dataset in the spreadsheet and the paper copy of the information for the three birds your group has. Consider the variables that are given.
    - What do you notice?
    - What do you wonder?
    - Are there any other variables you would like to consider?
- Provide input to the class discussion with suggestions, confirming as a class any new variables to find and deciding on adjustments needed to existing variables.

2. Verify the data provided by the AI tool for the variables given.
    - Use New Zealand Birds Online to check the data
    - Correct any information in the spreadsheet that is found to be incorrect through the verification process.

This is an activity for your group, where you are verifying the information for the three birds that you have been allocated, which looks like this:

Bird	Length	Weight	Diet	Habitat	Is Female or Male Larger?	Predominant Colour (Female)	Predominant Colour (Male)	Beak Colour	Conservation Status
North Island Brown Kiwi	45–55 cm	2.8–3.9 kg (female), 2.2–2.8 kg (male)	Worms, insects, fruits, seeds	Forests, scrublands	Female	Reddish-brown to dark brown	Same as female	Pale ivory	At Risk – Declining

- In your group you will check the information given by the AI tool against information provided by New Zealand Birds Online.
- Make notes on your sheet that you can use to update the spreadsheet.
- Remember to adjust variables as agreed previously.

3. Find the information for the additional variables.
    - Use New Zealand Birds Online as a first source to find the required information.

Find the information for any new variables that as a class you have decided to find.

- Use New Zealand Birds Online as a source to find the information for the new variables.
- Add this information to your sheet - there are blank columns provided for this.

4. Update the information checked in part 2 and add new variables found in part 3 on the spreadsheet for your group's three birds.

Using the information you have found in parts 2 and 3 that is recorded on your sheet, update the spreadsheet for the three birds that your group is responsible for.

5. Tidy the dataset so that the data is in a useable form to use in statistical software.
    - This includes removing any units e.g., 4cm should be recorded as 4.
    - Updating any numbers given as intervals e.g., 15-20.
    - Consider how to deal with data that is a list of outcomes e.g., habitat.

Check all the variables in the spreadsheet for your group's three birds. Based on discussions earlier check:

- There are no units in any of the cells - the unit should be given with the variable name.
- There are no numbers listed as intervals.
- The words have consistent spelling and capitalisation, e.g., Female and female will be identified as different categories.

Once the dataset in the spreadsheet is tidied for all the birds, this information can be used for task 2.

Task 2

For this task your teacher will give you instructions on how to undertake your own statistical investigation using the PPDAC cycle. This may include using an online statistical software tool or doing the analysis by hand using pen and paper. The instructions assume using an online statistical software tool.

PROBLEM: Pose an investigative question for a variable in the dataset that you are interested in.

PLAN/DATA: The data has been collected/verified/updated in Task 1.

ANALYSIS: Using a statistical software tool, e.g., CODAP, make graphs to help answer your investigative question. Describe what the graph shows about the variable of interest, explaining what you notice about the variable for these New Zealand birds.

CONCLUSION: Answer the investigative question you asked using evidence from your analysis.