



Investigation 1:

You want to know if there is a relationship between peoples ages and pet ownership. You are going to use the statistical investigation process (from page 2) to find out if there is a relationship or association between the two.

Step 1: Pose a statistical question. Create a question that involves peoples ages and pet ownership status. Write it below.

Step 2: Collect data. Find some people to survey and record (tally) their answers to the questions “how old are you” and “do you have a pet” in the table below. *The more people you survey, the bigger the sample and the more accurate the results.*

	Own a pet	Don't own a pet
Under 16		
16		
17		
18		
Over 18		



Investigation 1 (continued):

Step 3: Organise and analyse the data. Organise your raw data into the two-way frequency table below. Calculate the percentages based on the total.

	Own a pet		Don't own a pet		TOTAL	
Under 16		%		%		%
16		%		%		%
17		%		%		%
18		%		%		%
Over 18		%		%		%
TOTAL		%		%		%



Investigation 1 (continued):

Step 4: Interpret the results. Write 3 observations about the data.

You might like to consider the following prompts for your observations:

- *Is pet ownership more common among younger or older students?*
- *Are the differences between age groups large or small?*
- *Are there any surprising results?*
- *Does one group clearly stand out from the others?*



Investigation 1 (continued):

Step 5: Communicate the findings.

Refer to your original question in step 1. Write a short paragraph summarising what you found, then present your findings to a partner or small group.

You might like to consider the following prompts:

- *Did your investigation answer the question?*
- *Were there any limitations in your data (e.g. small sample size, only surveying classmates, all similar ages, surveying participants in the city vs rural)?*
- *How could this investigation be improved if you repeated it?*
- *“I noticed that ____ had the highest/lowest percentage of pet ownership. This suggests that ____ may be associated with ____.”*