



### 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		%		%		%
<b>TOTAL</b>		<b>%</b>		<b>%</b>		<b>%</b>



### 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 \_\_\_\_."*