

### Activity 3 Graph It!

#### Activity focus

In this activity, students take their recorded data (the census tally) and convert it into a column graph or bar chart. They will identify the variables (data items), label each axis, give the graph a title and find the mode.

#### What you will need

- Internet access is recommended
- Whiteboard/paper and coloured markers

#### Statistical concepts

Graph, axis, variables, mode

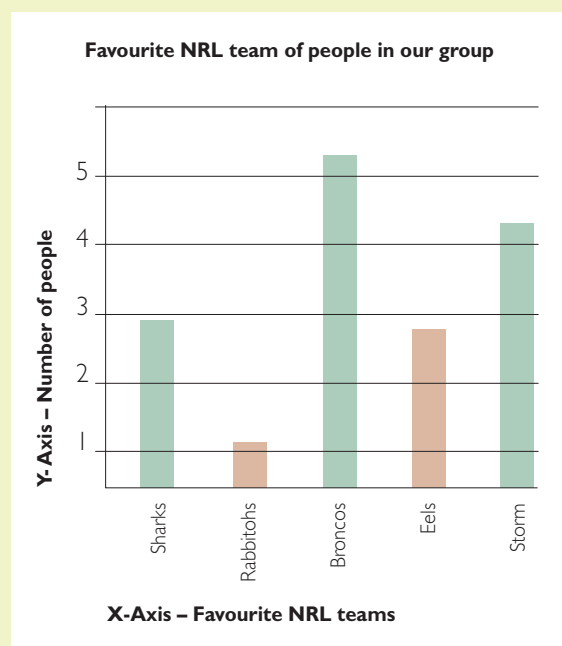
#### Activity instructions

Students will convert the census tally data into a graph (also called a bar chart or column graph).

- Discuss the key components of a **graph**
  - **Title** (what the graph is about)
  - **X-Axis** (the horizontal axis of the graph)
  - **Y-Axis** (the vertical axis of the graph)
  - **Variables** (what is being presented on the X and Y axis)
- Identify the variables (data items):
  - NRL teams
  - Number of people who chose each team as their favourite
- Mark all possible values of each variable on the X and Y axis:
  - List NRL team names on the X Axis
  - Mark intervals of 1 on the Y Axis
- Label each axis to show what variable it represents:
  - X Axis = "Favourite NRL teams"
  - Y Axis = "Number of people"
- Give the graph a title "Favourite NRL team of people in our group".
- Create a graph of the census counts for each team with one or more supporters using the data in the tally. Draw a column for each team (on the X-Axis) that is the height of the total number of supporters (shown on the Y-Axis).

- Discuss what the graph shows and identify the **mode** (the most frequent or most common value). The mode shows which team is the most popular. It is possible to have more than one mode (bi-modal = 2 modes, multi-modal = more than 2 modes).

This is an example of a graph:



Discuss the survey question further by asking students:

- What other data could be used to find out the favourite teams? (e.g. Team memberships) Why wouldn't you use this data? (i.e. not all people are members of their favourite teams, etc).

#### Additional information

- To reinforce the concept of presenting data in a graph or bar chart see the ABS Statistical Language web pages: <http://www.abs.gov.au/statlanguage>
- Definitions are provided in the Facilitator Guide and are also available on the ABS Statistical Language web pages.

