

➤ SURVEYS, TALLY MARKS AND BAR GRAPHS

Target Group: **Year 4**

Australian Curriculum Reference: **Mathematics**

Statistics and Probability/Data representation and interpretation

- + Select and trial methods for data collection, including survey questions and recording sheets (ACMSP095).

Credit: This lesson plan adapted from www.caphat.com.au/resources/surveys

LESSON SUMMARY

Students learn about surveys and how tally charts and bar graphs can be used to record and present results.

LESSON CONTENT AND METHODOLOGY

- + Teacher opens lesson with a quick brainstorm about the meanings of the terms *surveys*, *recording/tally sheets*, *horizontal and vertical*.
- + Students watch one video about tally marks (refer to *Resources* in this lesson plan).
- + Teacher discusses the video with the class to check for clarity of understanding about how tally marks are used to count.
- + Students work with partners on Worksheet 1, making tally marks to count the pens and pencils that are in the classroom.
- + Students watch one of the videos on drawing bar graphs (refer to *Resources*).
- + Teacher discusses the video with the class to check for clarity of understanding about how bar graphs are drawn. Teacher uses correct terminology to identify the various elements of the graph, such as axis, table, horizontal and vertical bar graphs.
- + Students use the data collected on Worksheet 1 to draw a bar graph and then answer questions related to the graph.
- + Teacher discusses answers with the class, using Interactive Whiteboard/board to display the answers to the questions on the worksheet.
- + Students complete Worksheet 2 to reinforce their understanding of the concepts.

RESOURCES

- + Worksheet 1: *Surveying the Classroom*
- + Worksheet 2: *Bar Chart Survey Results*
- + *Cool Math – Learn about Tally Marks*: www.youtube.com/watch?v=iwZJvh_7oqA
- + *Counting With Tally Marks*: www.youtube.com/watch?v=adalPOILm88
- + *How to Make a Bar Graph*: www.youtube.com/watch?v=dHe6kRRvgTI
- + *Cool Math – Learn About Bar Graphs*: www.youtube.com/watch?v=dHe6kRRvgTI

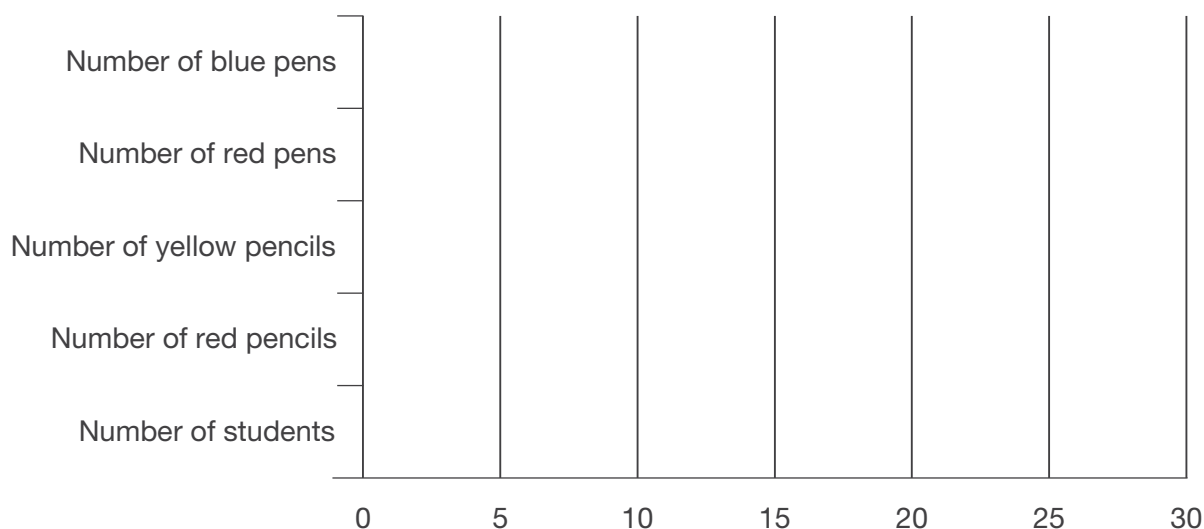
WORKSHEET 1

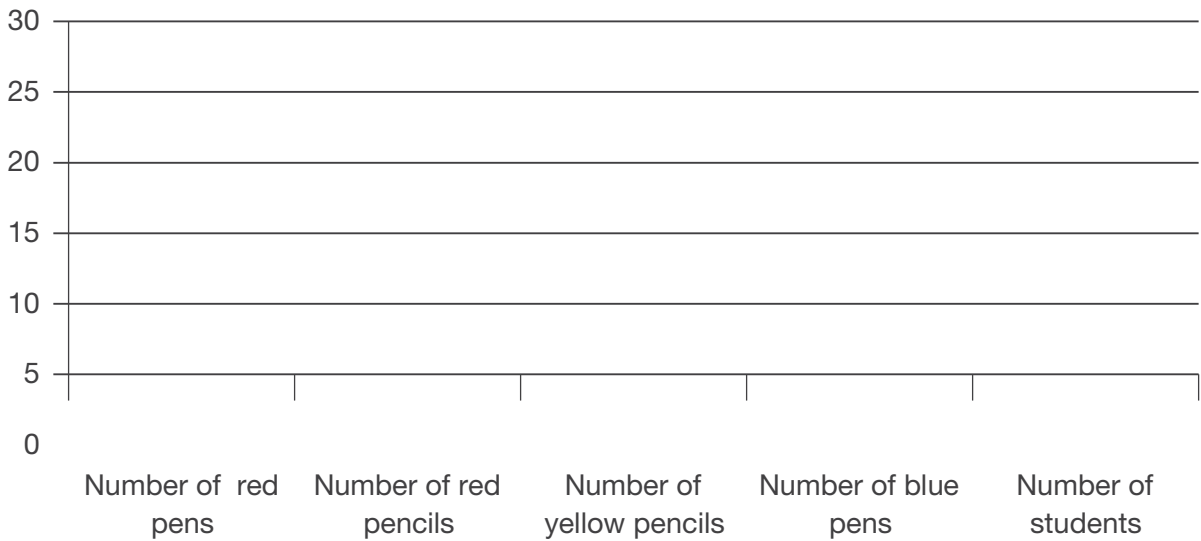
Surveying the Classroom

This activity involves students looking at the pens and pencils in the classroom and recording their results on the tally sheet.

Question	Tally
How many students are in the class?	
How many students have a blue pencil or texta?	
How many students have a yellow pencil or texta?	
How many students have a red pen?	
How many students have a blue pen?	

Fill in the horizontal and vertical bar graphs below, using the results from your survey.





Write answers to the following questions.

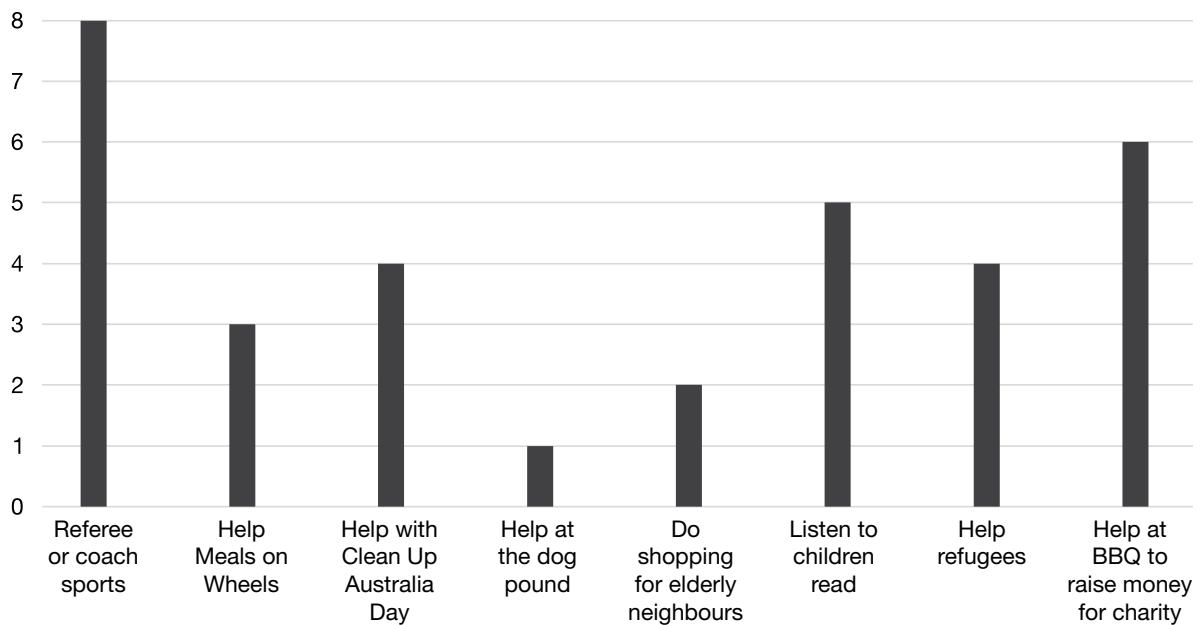
How many red pencils (or textas) are in the classroom?	
Are there more blue pens (or textas) than red pens?	
How many more green pencils (or textas) are there than yellow?	
Are there more pens or pencils (or textas) in the survey?	
If there are more pencils (or textas) than pens why might that be?	
How many students are in the class?	

WORKSHEET 2

Bar Chart Survey Results

How people help their community

Harry asked his neighbours about what sort of things they did to help their community. He then drew a graph which included all of the results.



Using the information in this bar chart, write answers to the following questions:

What is the most common way that people help?

What is the least common thing people do to help?

How many people did Harry survey?

How many people said they help out at BBQs to raise money for charity?

What is the third most common way that people help?

What is the difference between the number of people who do shopping for elderly neighbours and those who listen to children read?