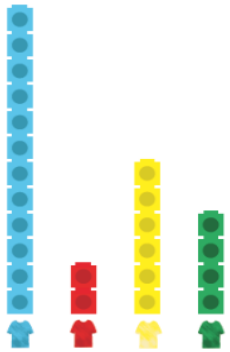
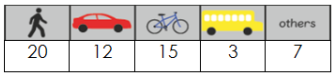
Year 5 Maths Summer Week 1

5 days of problem solving	Day 1 Activity	Day 2 Activity	Day 3 Activity	Day 4 Activity	Day 5 Activity
Factual fluency (to aid fluency)	https://www.topmarks.co.uk/maths-games/hit-the-button **Number Bonds - Missing Numbers (+ and -)**	https://www.topmarks.co.uk/maths-games/hit-the-button **Number bonds - Addition within 100**	https://www.topmarks.co.uk/maths-games/hit-the-button **Number bonds - Subtraction within 100**	https://www.topmarks.co.uk/number-facts/number-fact-families **Up to 50**	https://www.topmarks.co.uk/number-facts/number-fact-families **Up to 100**
Problem/activity of the day	What could this graph be representing? (enlarged below)  What questions could we ask / answer about this graph?	Here is some data. (Scroll down for enlarged data) What do you think it is about?  Present the data in a **bar graph** (with **title** and **labelled axis**). Look at the given numbers and think of a suitable **scale**. Write an explanation of what you think it is showing. **Finished? Can you present this data in a different form?**	1. Gather some data on a topic of your choice. 2. Show the data in a table or a tally chart. 1. Present your data in a suitable graph to show what you have found. 2. Present your findings to someone at home. **Finished? Could you use a line graph to show your results? Why or why not?**	Create and answer a series of questions about your data that you collected yesterday. 3 questions you find easy to answer 3 questions you find difficult to answer 3 questions you cannot answer	Complete all the tasks in the 'class 5 problem', to work out which child was away (problem below): - Read the data. - Make a tally chart using the first names in the class. - Make a frequency table using first names. - Work out which child was away when they made the graph.
Resources you will need	Paper, pencil and ruler	Paper, pencil and ruler	Paper, pencil and ruler	Paper and pencil	Paper, pencil and ruler
Tips, clues or methods to help	Examples of questions that might be asked about the graph	You could try: - a pictograph - a pie chart - a line graph (see examples below)	**Examples of data you could gather:** - genres of books in your house - colour socks you have	Read the questions from day one as a starting point.	Keep an eye on how many children there are with the same initial in their first names.
Checking	None	None	None	None	None
Theme	Graphs	Graphs	Graphs	Graphs	Graphs

See below: enlarged problems, question prompts, the 'class 5 problem', graph support
Additional online activities: https://www.mathsisfun.com/data/data-graph.php
https://nrich.maths.org/2399?utm_source=primary-map

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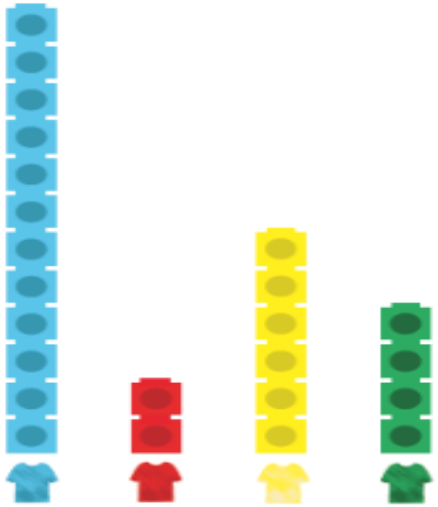
Day 1 enlarged:



Examples of questions you might ask about the graph on day 1:
(if each unit represents one t-shirt)

How many blue t-shirts were sold?

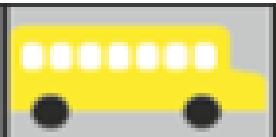
What is the total number of t-shirts sold?

How many more yellow t-shirts are needed to make more than green and red combined?

If one unit represents 45 t-shirts, how many blue and red t-shirts were sold?

Vocabulary: the most, the least, highest, lowest, popular, amount, percentage, how many, more than, less than, difference, total, altogether

Day 2 enlarged:

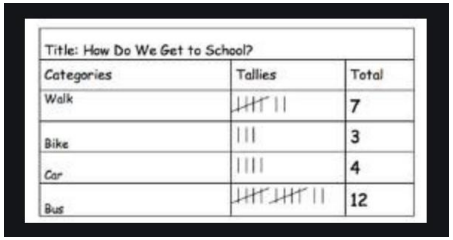
				others
20	12	15	3	7

Vocabulary: axis (x or y), transport, vehicles, scale (same distance between marks), travel, the most, the least, highest, lowest, popular, amount, how many, more than, less than, difference, total, altogether, data (collected information)

Graphs types support:

Tally charts

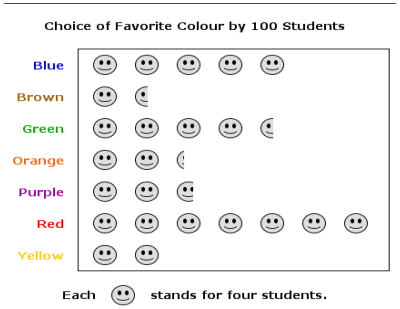
Tally charts are tables with **tally** marks to show a valuable data set.
Remember that every fifth mark is drawn across the previous 4 marks. 𝍸



Title: How Do We Get to School?		
Categories	Tallies	Total
Walk	𝍸 II	7
Bike	III	3
Car	IIII	4
Bus	𝍸 𝍸 II	12

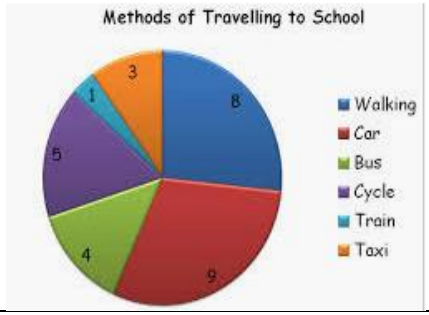
Pictographs / Pictograms

Pictograms use pictures to show data. They are set out in the same way as bar charts, but instead of bars they use columns of pictures to show the numbers involved.



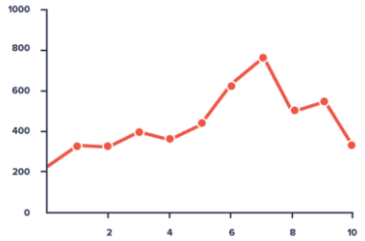
Pie charts

Pie charts are used to show percentage data. They use different-sized **sectors** (each 'slice') of a circle to represent the fraction equivalent to the percentage data.



Line graphs / charts

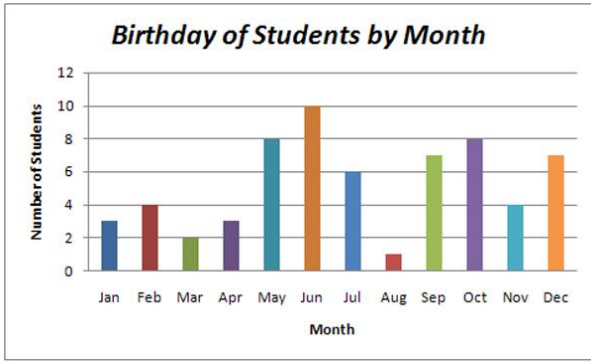
Line graphs/charts uses a line to show the value of something over time.



Day 3 Support – This is an example of tally chart

Title: Items of clothing in my wardrobe

Category	Tally	Total
Trousers	III	3



Example of a **bar graph / chart**

Bar charts/graphs use bars to show data. You use a bar chart to compare the values of several numbers at once.

Day 4 Support

Vocabulary you might want to use for your questions:

the most, the least, popular, how many, altogether, total, more than, less than, difference, same as, equal, amount, higher than, lower than, the highest, the lowest

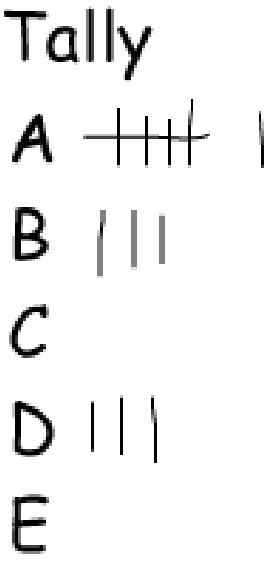
Day 5 – The 'class 5' problem:

One day when **34 children were in class**, their teacher, said they were going to make some graphs and tables using their first names. She put the class lists onto the white board.

Here are the lists of first names of the members of Class 5. (They are in alphabetical order of their surnames so they do not seem to be ordered.)

Girls in Class 5	Boys in Class 5
Hetty	David
Annie	Nelson
Tessa	Ali
Debbie	Jake
Willow	Harry P
Jess	William
Abby	Ben
Sindy	Tom
Penny	Dai
Bel	Arlo
Sara	Andrew
Pippa	Harry W
Selma	Tim
Becky	Joe
Mel	Alan
Pauline	James
Netty	Jeff
	Mohammed

First, the class made **tally charts** of the initial letters of their names. They worked in pairs.
The first part of Becky and Selma's tally looked like this:



Make a full tally chart using the class first names.

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Day 5 – the 'class 5' problem (continued):

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Next, they all made frequency tables using this information.
This is the first part of Alan and Joe's table:

Frequency table

A - 6

J - 5

B - 3

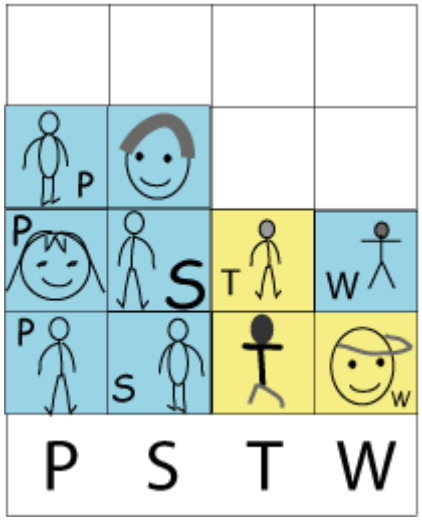
H - 3

D - 3

Make a frequency table using all the class's names.

Next, they decided which letters of the alphabet were needed and which were not needed to make a block graph of their class names. Then the boys took yellow squares and the girls took blue squares, drew a picture of themselves and put the initial of their first name on the square and stuck it onto paper to make a pictogram graph.

The last part of the class's block graph looked like this:



Who was away from school that day from this information?