Knowledge Organiser

Year Group	Subject	Topic
4	Maths	Statistics/Decimals

Bar Charts	Frequency Tables

Bar charts have a horizontal axis and a vertical axis. Bars are used to show the data of each category. There must be a gap between each bar. The scale of the bar chart is based on the range of data.

The scale on this bar chart counts in twos.
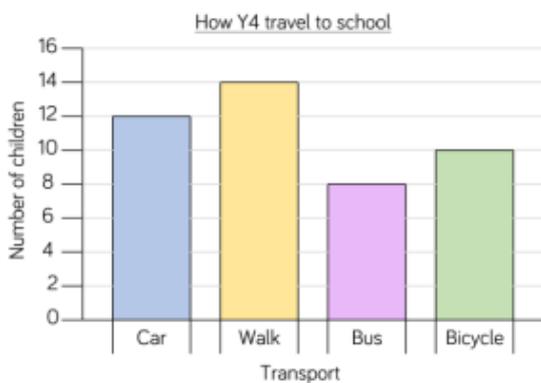
Tally marks are used to help count things. Each vertical line represents one unit. The fifth tally mark goes down across the first four to make it easier to count. The frequency column is completed after all the data has been collected.

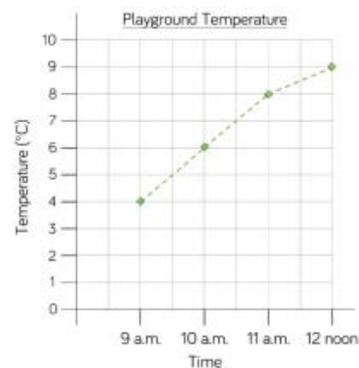| Eye Colour	Tally	Frequency
brown	IIII I	6
blue	IIII III	8
green	III	3
grey	IIII	4
hazel	IIII	5

Pictograms	Line Graphs

Pictograms use symbols or pictures to represent data. This pictogram used one symbol to present 20 points. Using this key, we can see that Sycamore team have 70 house points.

Line graphs are used in the context of time. This graph shows the temperature in the playground during a morning in April.

Keywords and Definitions	
Bar chart	A diagram in which the numerical values of variables are represented by the height or length of lines or rectangles of equal width.
Pictogram	A chart that uses pictures to represent data. Pictograms are set out in the same way as bar charts, but instead of bars they use columns of pictures to show the numbers involved.
Frequency table	A table that lists items and shows the number of times the items occur.
Tally chart	A table with tally marks to show a valuable data set. Tally marks are frequencies, occurrences, or total numbers being measured for a specific category in a data set.
Line graph	A line graph (also known as a line plot or line chart) is a graph which uses lines to connect individual data points that display quantitative values over a specified time interval. Line graphs use data point "markers" that are connected by straight lines to aid in visualisation.
Axis	One of the lines that is used to form a graph. There is the horizontal x-axis and the vertical y-axis in a two-dimensional graph.
Comparison	To examine the differences between numbers, quantities or values to decide if it is greater than, smaller than or equal to another quantity.
Interpret	Interpreting a mathematical function means obtaining meaningful information from a line graph or a given symbolic representation.

Make a Whole	Partitioning Tenths and Hundredths

Ordering Decimals	Comparing Decimals

Pupils to apply their understanding of place value to order numbers with decimals with up to two decimal places. They will consolidate and deepen their understanding of 0 as a place holder, the inequality symbols and language such as ascending and descending.

' Write down the decimals represented in the place value grid and then place them in ascending order.

Ones	Tenths	Hundredths

Ones	Tenths	Hundredths

Ones	Tenths	Hundredths

Ones	Tenths	Hundredths

' Place the numbers in descending order.

46.2	9.64	46.02	40.46

The understanding of place value is used to compare numbers with decimals with up to two decimal places. Pupils will consolidate and deepen their understanding of 0 as a place holder when making a comparison.

Write the numbers shown and compare using < or >

Ones	Tenths	Hundredths

Ones	Tenths	Hundredths

5.5	◯	5.7
0.14	◯	0.29
1	◯	0.64
3.32	◯	3.23

Keywords and Definitions	
Part-whole model	The Part-whole reasoning or model is the concept of how numbers can be split into parts. Children using this model will see the relationship between the whole number and the component parts.
Place value	The numerical value that a digit has by virtue of its position in a number.

Decimal point	A full point or dot placed after the figure representing units in a decimal fraction.
Integer	A number which is not a fraction; a whole number.
Ascending	Increasing in size or importance.
Descencing	Decreasing in size or importance.