## Year 4 Statistics

## Bar Chart

A bar chart is used to clearly display results and information.

Types of items are shown on the $x$-axis, which is horizontal.

The number of items are shown on the $y$-axis, which is vertical.
One block represents one item. It is quicker to compare results using a block diagram than a table or tally chart.


## Carroll Diagram

A Carroll diagram is a table used for sorting objects based on whether they do or do not meet two given criteria.

Carroll diagrams were invented by Lewis Carroll, the author of 'Alice in Wonderand'.


## Table

A table is used to record information and collect results.

The information can then be used to make pictograms or block diagrams to display results clearly.

A table needs to have headings to show what you are measuring or recording.

| Favourite Animal | Number of Children |
| :---: | :---: |
| Dog | 10 |
| Cat | 8 |
| Snake | 2 |
| Bear | 4 |
| Horse | 6 |
| Goose | 0 |

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## Tally Chart

A tally chart is used for counting how many of something you are recording.

1 tally mark shows you that there is 1 item.

4 tally marks with a diagonal line through them show you that there are 5 items.

In this example, the tally marks show how many children chose each of the animals as their favourite in a survey.

Making a tally chart is faster than writing out words or numbers.

| Favourite <br> Animal | Number of <br> Children | Frequency |
| :--- | :--- | :---: |
| Dog | HI HI | 10 |
| Cat | HI III | 8 |
| Snake | II | 2 |
| Bear | IIII | 4 |
| Horse | HI I | 6 |
| Goose |  | 0 |

## Pictogram

A pictogram uses pictures to represent data.
It is quicker and easier to
interpret the results in a pictogram than in a table or tally chart.

Pictograms are set out in a similar way to bar charts, but instead of bars they use columns of pictures to show specific amounts.

$=2$ children

## Venn Diagram

A Venn diagram is a diagram used to sort objects based on different criteria.

A Venn diagram is made up of two or more overlapping circles.

Objects placed in the section where the circles cross over meet both criteria.

Objects outside of the circles don't meet either set of criteria.


## Year 4 Statistics

Time Graph

Time graphs show the changing of data over time.

Here is a bar chart which shows the change in temperature over five days.


A Line Graph to Show the Average Monthly Temperature in the Borneo Rainforest


