

Maths

This week, we're looking at **statistics**. That's a fancy word that basically means dealing with data (or information). Statistics is sometimes known as data handling.

I'm afraid there are no videos from White Rose for this topic, but I've added some pictures with short explanations that should help and some links to BBC Bitesize.

You might hear some of these words when we're dealing with data, so I've tried to quickly explain what they mean.

Data: In maths, information is called data.

Collecting: There are lots of ways to collect data, but the simplest way is by counting.

Sorting: Sorting data is when you put things into groups (or sets) of things that are alike in some way. We've done this in class when we've sorted things using Venn and Carroll diagrams. You also did some shape sorting a few weeks ago.

Presenting: Presenting data means how you show it to other people. There are lots of ways to present data; for example, pictograms and graphs.

Interpreting: Pictograms, charts and graphs can tell us lots of information quickly. Finding that information is called interpreting data. It can also be called analysing data.

These are some of the things we're going to be learning how to use:

Tally charts: Making marks (called tallies) can help you record data that you are counting. A tally chart is a list of tallies against each thing you are counting. There's a video here showing how to use tallies: [BBC Bitesize - How to collect data](#).

Using tallies

You can use marks called tallies to keep track as you count things.

1. For each thing you count, draw a line like this:
|
2. As you say "five", draw a line across the others, like this:
||||
3. When you have finished, count the tallies to find out how many things there are.

You could ask your friends if they like raspberry, strawberry or orange ice lollies best, and use tallies to help you keep count.

Ice lollies

Raspberry ||||| ||

Orange ||||

Strawberry ||||| |||||

These tallies show that 7 out of 20 people liked raspberry lollies best.
4 people preferred orange ones.
9 people liked strawberry lollies best.

Tables: A table is a list that shows data in rows and columns, to make it easier to read. Tables in maths aren't made of wood. There's a video here about tables in maths: [BBC Bitesize - Data Tables](#).

Tables

A table is a list that shows data in rows and columns. It makes data easier to read.

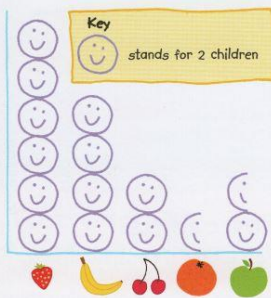
This table shows how many of 20 people liked each kind of ice cream best.

| Ice cream choices | |
|-------------------|------------------|
| Ice cream | Number of people |
| Chocolate | 9 |
| Strawberry | 7 |
| Vanilla | 4 |

Pictograms

A pictogram uses pictures to show data. Each picture stands for an amount.

Fruit we like best



To find out how many children liked each fruit best, count the faces above each fruit and multiply the number by 2.

Pictograms: A pictogram uses pictures to show data. Each picture stands for an amount.

Key: A key in maths won't open a door but it will tell you how much each picture is worth in a pictogram.

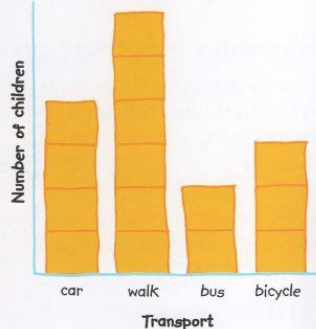
Pictograms can tell you lots of information quickly. Here are some things this pictogram shows.

Strawberries were most popular with this group of children.
Oranges were least popular.
The fruits that are liked best by 3 children are apples.
12 children liked strawberries best.
There are 4 more children who like bananas best than who like cherries best.

Block graphs

A block graph uses blocks to show data. Each block stands for an amount.

Transport to school



Block diagrams: These can also be called block graphs. They use blocks to show data. Each block stands for an amount.

Count the blocks for each type of transport to find out how many children come to school each way. Here are some of the things this graph shows.

6 children walk to school.
3 children cycle to school.
Twice as many children go to school by car as by bus.

Axes: The lines at the bottom and side of a graph are called axes (each one is an axis).

Axes

The lines at the bottom and side of a chart or graph are called axes (say "ak-sees"). Each line is called an axis.

You'll need the booklet which has the first page 'Make tally charts'. I've gone a little bit crazy and given you six (yes, that's right - six) activities for you to try.

1. Make tally charts

Here's the video link again in case you need it: [BBC Bitesize - How to collect data](#)

2. Draw pictograms (1-1)

3. Interpret pictograms (1-1)

4. Draw pictograms (2, 5 and 10)

5. Interpret pictograms (2, 5 and 10)

6. Block diagrams

Extra Challenges

Although it's important that children can work with data that they're given, it's much more fun (and arguably a much more effective learning experience) for them to collect and present their own data.

Here are some ideas for data that you could collect and present:

- Types of birds visiting your garden.
- Minibeasts found on a minibeast hunt.
- Colours of cars passing your house.
- Favourite fruit (you'll have to ring people to ask them and you if you wanted you could change fruit to tv show, game, film, vegetable...anything, although it sometimes helps to give people a list to choose from).

Tally charts are usually the easiest way to collect your data.

Then, when it comes to presenting your information using a pictogram or block graph, think about whether you want to make it by drawing, using real objects, using cut out pictures, using a computer...again, it's up to you! You could make a huge, colourful pictogram or a small, Lego block diagram - use your imagination and have fun.

Remember to include a key if you've made a pictogram!

PS - If you want to make your pictogram or block graph on a computer, there's a program on School 360 that you can use (**j2e > JiT** then choose the **chart** or the **pictogram** tab).