

Week 6 – Lesson 2

If ...

Could I have added 2 even numbers? Explain why or why not?

81

Could I have multiplied a whole number by 2? Explain why or why not?

Is my answer ... Then what was my question?



Learning Question:

How can I interpret and present discrete data using pictograms and bar charts?

Success Criteria:

- Collect discrete data in a frequency table.
- Present data in a pictogram or bar chart.
- Interpret and answer questions about data presented in a pictogram or bar chart.

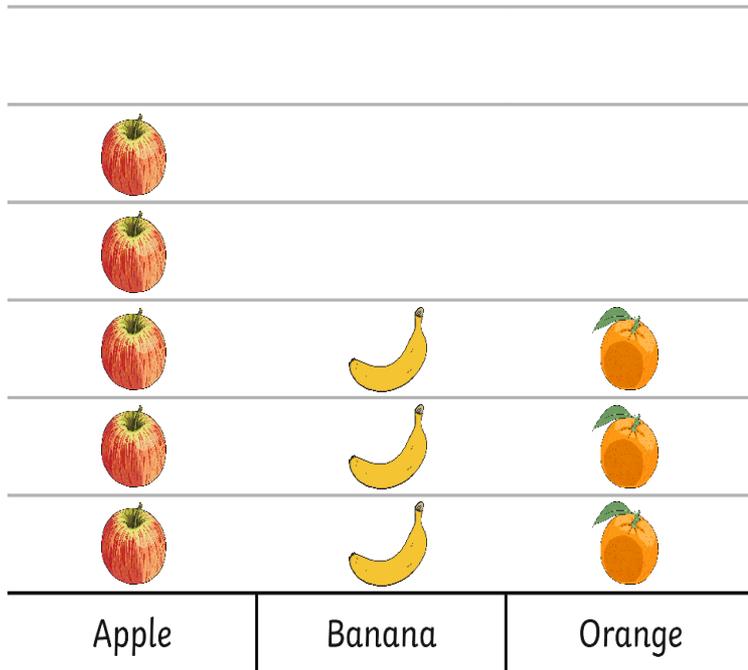
Vocabulary

- Data
- Frequency
- Pictogram
- Bar Chart
- Discrete Data
- Axis
- Tally
- Key
- Title

Pictograms

A pictogram uses pictures or symbols to represent data. The simplest form of pictogram uses one picture or symbol to represent one value.

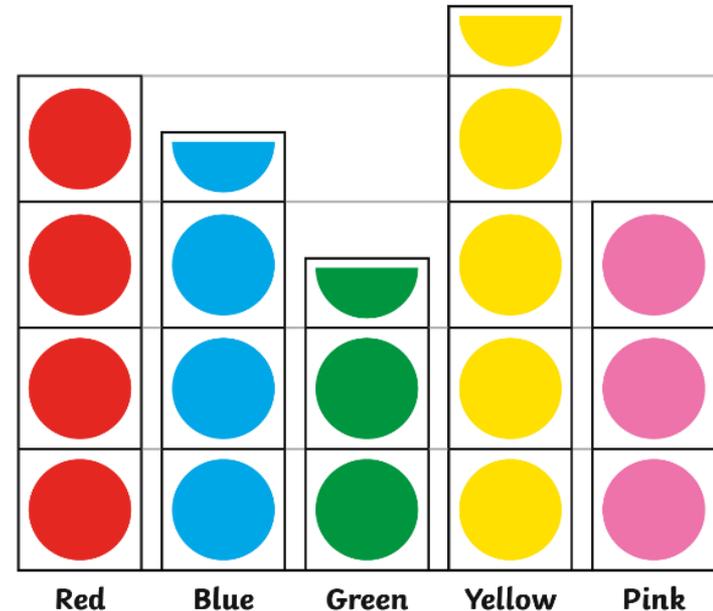
The favourite fruit of children



Scaled Pictograms

A pictogram uses pictures or symbols to represent data. The scaled pictogram uses one picture or symbol to represent two or more values.

The favourite colours of some children

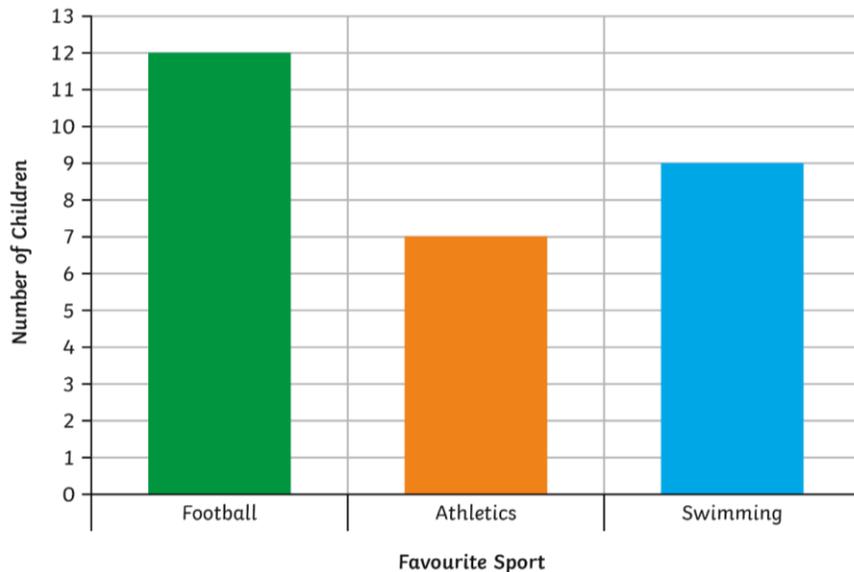


 = 2 children

Simple Bar Charts

Bar charts use bars on a grid or scale to represent the data. The simplest bar chart has a scale of one place on a grid representing one value. Bar charts can be horizontal or vertical.

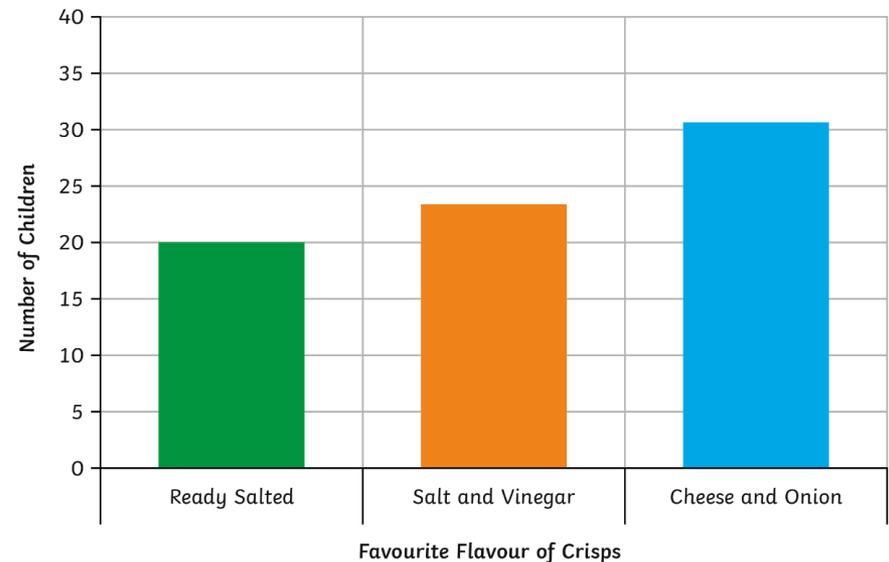
Children's favourite sports



Scaled Bar Charts

Bar charts use a bar to represent the data. Scaled bar charts have a scale of one place on a grid representing two or more. Bar charts can be horizontal or vertical.

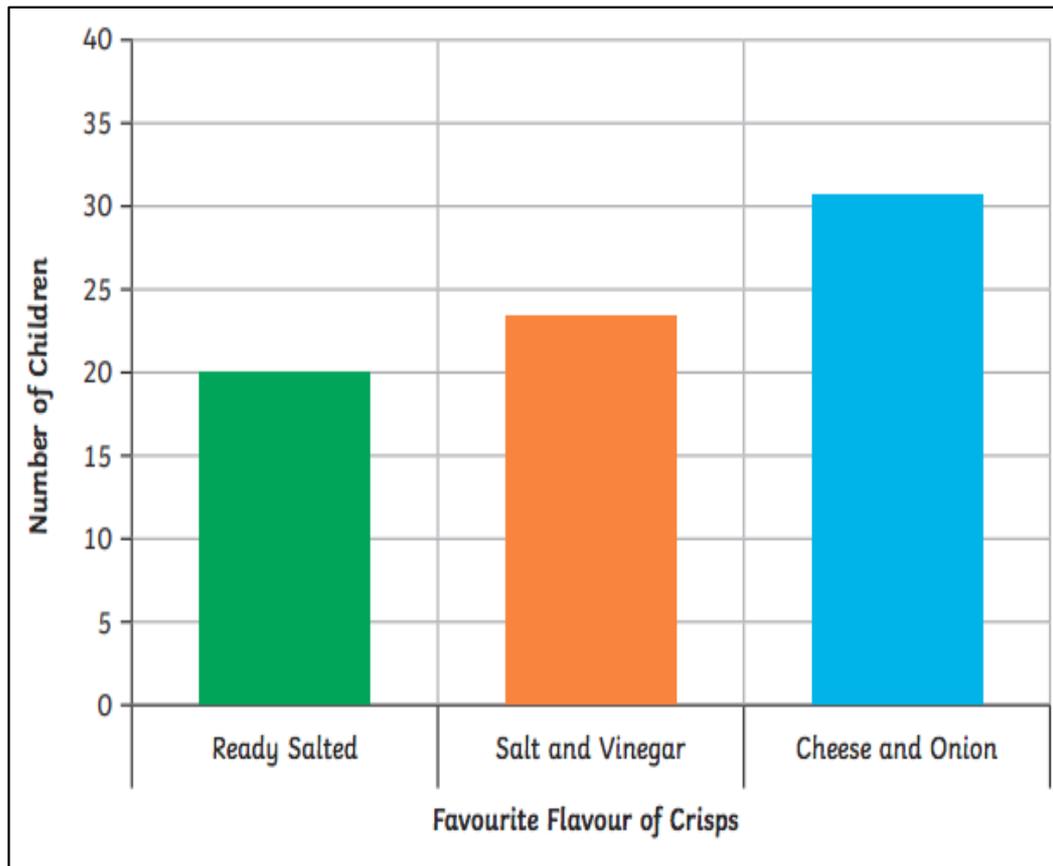
Children's favourite flavours of Crisps



Discrete Data

Data that is counted in whole numbers is discrete.

In discrete data, values between whole numbers cannot be counted.



In this example the data is **discrete** because you can't count 0.5 or 0.25 of a child.

Collecting Data

Data that is counted and has no in between value is called discrete data.

The colours of cars that pass by the front of school

Colour	Tally	Frequency
Red		12
Blue		8
Black		5
Silver		2
Other		15

E.g. you can't have half a car

Using the data answer these questions

Colour	Tally	Frequency
Red		12
Blue		8
Black		5
Silver		2
Other		15

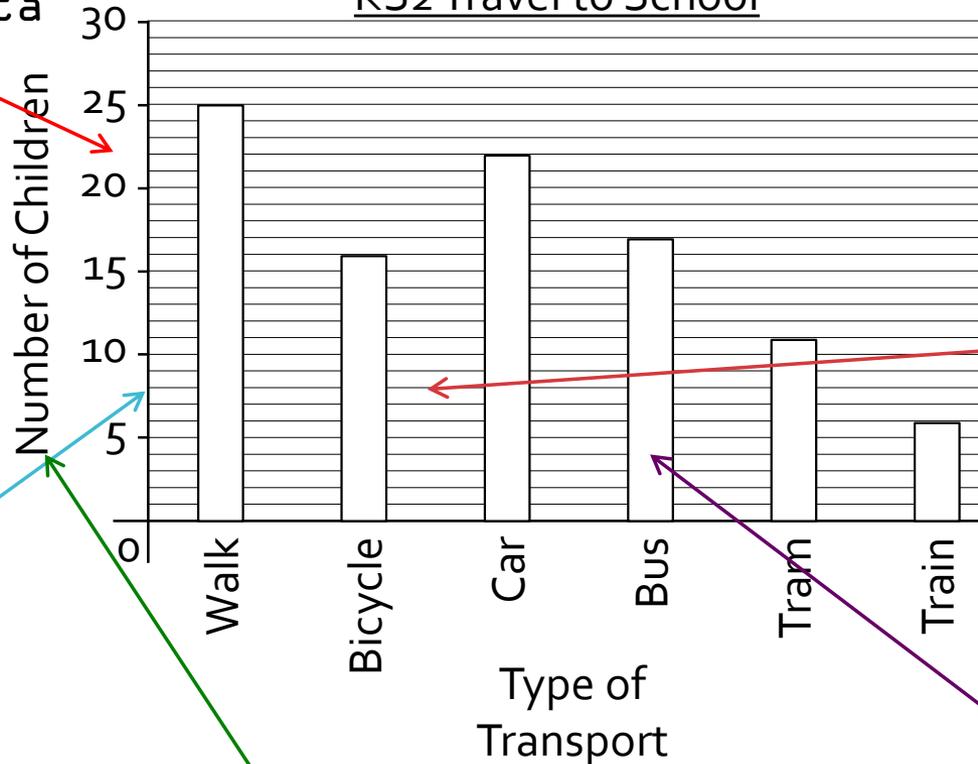
- What colour car passed by the most?
- How many cars passed by altogether?
- How many more red cars passed by than black cars?

Bar Charts

A bar chart must have an underlined title explaining what it shows.

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A Bar Chart to Show How the Children in KS2 Travel to School



There must be a gap between each bar.

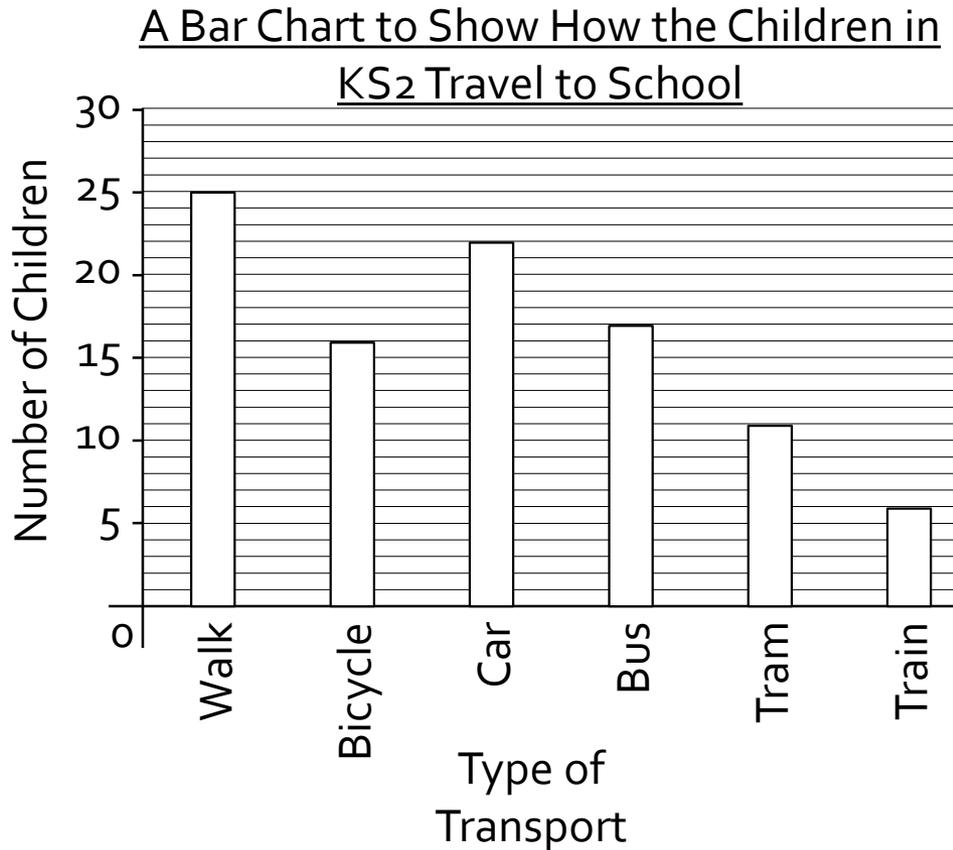
Bars are carefully drawn with a ruler.

The scale of this number line is chosen based on the data range.

A number line is marked on the vertical axis.

Each axis must have a label explaining what it shows.

Use the bar chart to answer these questions on your whiteboard



- How many children in KS2 travel to school by train or car?
- How many fewer children in KS2 travel to school by tram than bus?
- How many more children in KS2 walk to school than cycle?
- How many children in KS2 travel to school by bus?

For your task today you will find it easier to use squared/graph paper.

There is squared/graph paper available to download and print on the Year 4 Home Learning page with this task.

If you do not have access to a printer please just try your best to draw your graph on any paper you have at home.

Hard : Using this data create a pictogram using pictures where each picture represents 1 vehicle. Remember to include **labels**, a **title** and a **key**.

Here is a table of data that shows the number of different vehicles that passed by a school over half an hour.

Type of Vehicle	Car	Bus	Bicycle	Van	Other
Number That Passed By	12	4	5	7	6

Harder : Using this data create a pictogram using symbols and a scale and then answer the questions.

Eg 1 circle = 2 vehicles. Remember to include **labels**, a **title** and a **key**.

Here is a table of data that shows the number of different vehicles that passed by a school over half an hour.

Type of Vehicle	Car	Bus	Bicycle	Van	Other
Number That Passed By	12	4	5	7	6

What type of data is the number of vehicles?

How many cars passed by?

How many bicycles, vans and buses passed by in total?

How many more cars passed by than vans?

How many vehicles passed by altogether?

Hardest : Using this data draw a bar chart and answer the following questions?

Type of Vehicle	Car	Bus	Bicycle	Van	Motorbike	Other
Number That Passed By	23	10	9	12	5	17

What type of data is the number of vehicles?

How many more cars passed by than buses?

How many bicycles, vans and motorbikes passed by in total?

How many more buses and bicycles passed by than vans?

How many vehicles passed by altogether?

Herculean: Using this data draw a bar chart and answer the following questions?

Type of Vehicle	Car	Bus	Bicycle	Van	Motorbike	Other
Number That Passed By	37	18	12	25	6	23

What type of data is the number of vehicles?

How many more cars passed by than buses?

How many more vans passed by than buses?

How many buses, vans and motorbikes passed by in total?

How many more buses and bicycles passed by than vans?

How many vehicles passed by altogether?

Answers

Hard	N/A
Harder	<ol style="list-style-type: none">1. This data is discrete data.2. 12 cars passed by in total.3. 16 bicycles, vans and buses passed by in total.4. 5 more cars passed by than vans.5. In total 34 vehicles passed by the school.
Hardest	<ol style="list-style-type: none">1. This data is discrete data.2. 13 more cars passed by than buses.3. There are 26 bicycles, vans and motorbikes in total.4. There were 7 more buses and bicycles than vans.5. In total 76 vehicles passed by the school.
Herculean	<ol style="list-style-type: none">1. This data is discrete data.2. 19 more cars passed by than buses.3. There were 7 more van pass by than buses.4. In total there were 49 buses, vans and motorbikes that passed by.5. There were 5 more buses and bicycles pass by than vans.6. In total there were 121 vehicles pass by the school.