What is a bar chart?

A **bar chart** displays information (data) using rectangular bars of equal width and differing heights.
Depending on the comparison you are making, the bars will be displayed horizontally or vertically.
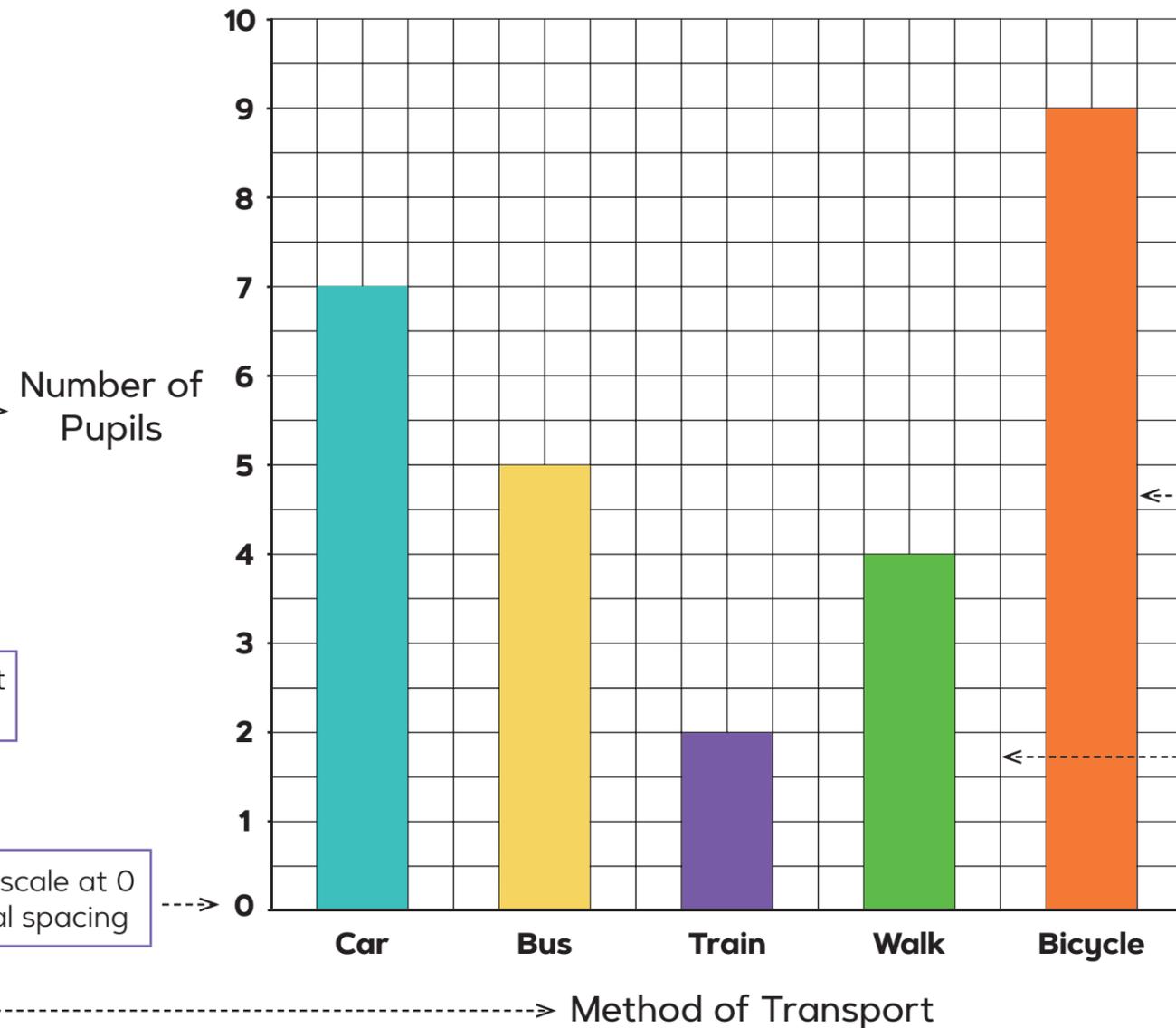
Why use a bar chart?

We use a **bar chart** to effectively compare categories of data. These categories can be **qualitative** or **quantitative**.

Bar charts are commonly used in business and the media to display data.

How to draw a bar chart

How Pupils Get To School

Number of Pupils

Both axes must be labelled

Start the scale at 0 with equal spacing

Method of Transport

Car   Bus   Train   Walk   Bicycle

Types of Data

Qualitative data is non-numerical, for example hair colour or method of transport.

Quantitative data is numerical. It can be **discrete** (whole values only) or **continuous** (any value).

Bars have an equal width

Bars must have gaps between them of equal width

Level 3

Complete a bar chart, where the axes are given: label the axes, include a scale and draw the missing bars.

Level 4

Construct a bar chart by drawing and labelling axes and drawing the bars. **(Axes are not given.)**

What is a bar chart?

A **bar chart** displays information (data) using rectangular bars of equal width and differing heights.
Depending on the comparison you are making, the bars will be displayed horizontally or vertically.
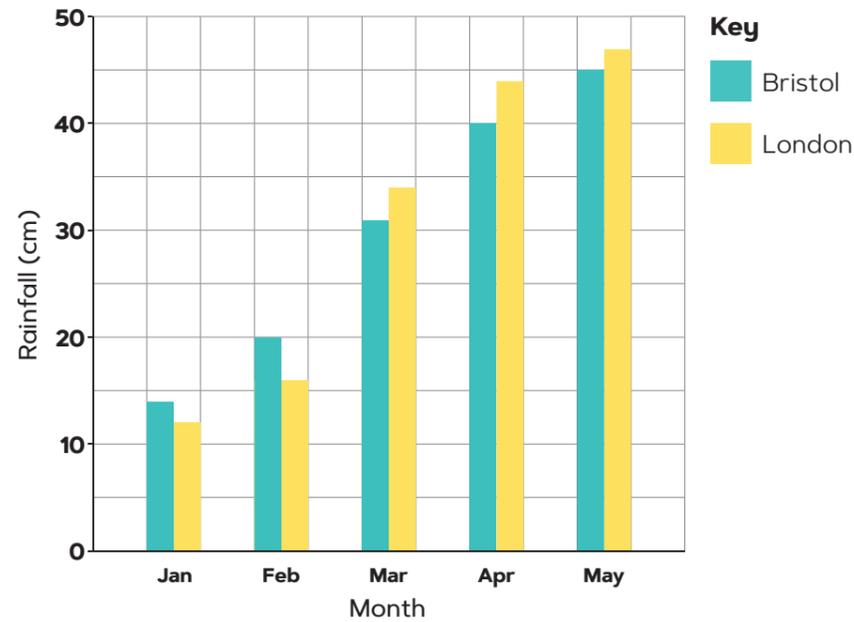
Why use a bar chart?

We use a **bar chart** to effectively compare categories of data. These categories can be **qualitative** or **quantitative**.

Bar charts are commonly used in business and the media to display data.

How to draw bar charts

Dual Bar Chart
Average Monthly Rainfall

Key
- Bristol
- London

Stacked Bar Chart
Plant Growth: Inside versus Outside

Key
- Plants in Garden
- Plants in Greenhouse

Dual and **stacked** bar charts can be used to compare two or more sets of data.

A key **must** be included for both dual and stacked bar charts.

Discrete data can only have certain definite whole values, for example number of people.

Continuous data can have any value including decimals, for example weights in kg.
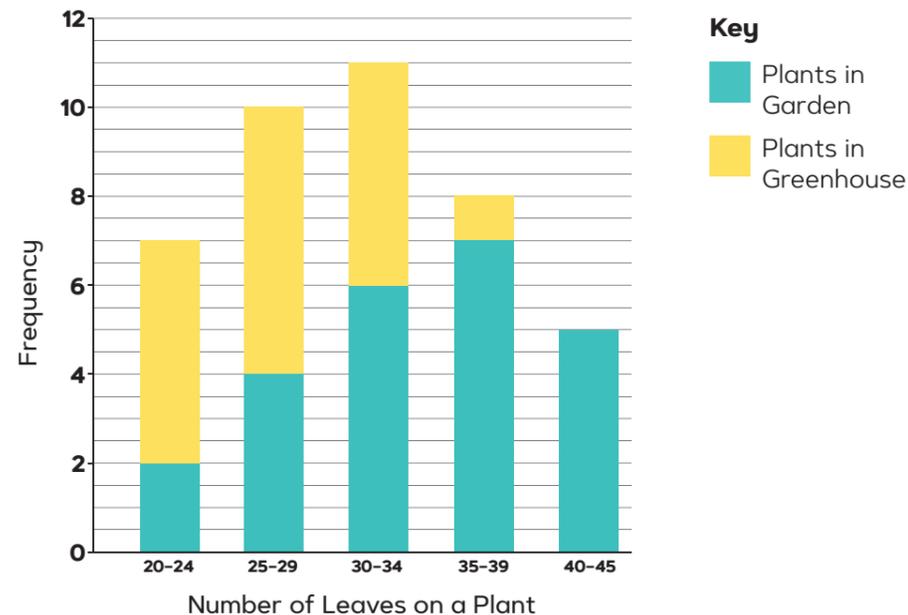
Data can be grouped into **class intervals.**
The class intervals should be equal in width.

Example of class intervals for **discrete** data:
20–24, 25–29, 30–34, 35–39, 40–45

Example of class intervals for **continuous** data:
0 < T ≤ 5, 5 < T ≤ 10, 10 < T ≤ 15, 15 < T ≤ 20

Frequency Diagram

Waiting time (mins)	Frequency
0 < T ≤ 5	40
5 < T ≤ 10	48
10 < T ≤ 15	32
15 < T ≤ 20	14

Waiting Time for Patients
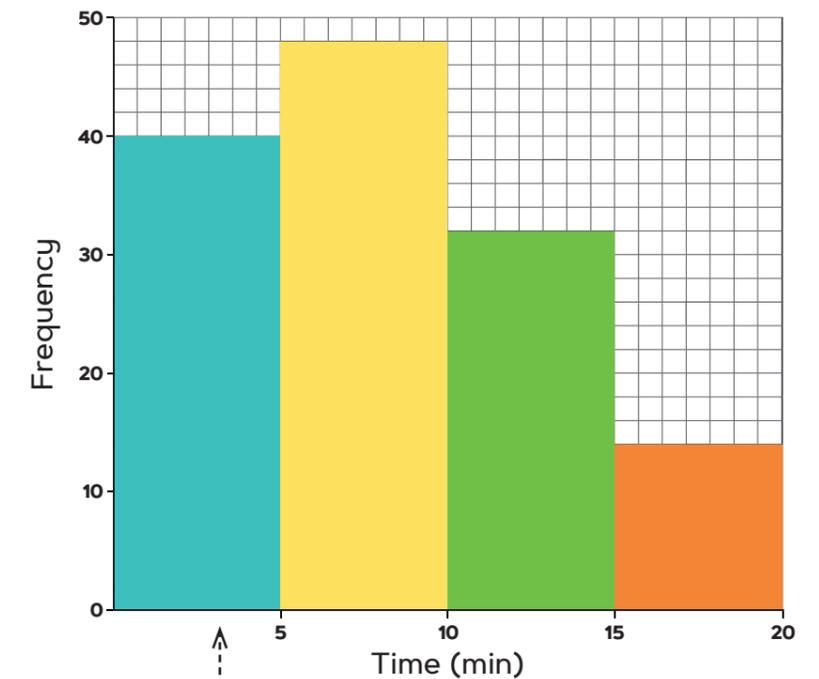
For **continuous** data the horizontal axis should be scaled like this with **no gaps** between the bars.

Level 5

Construct a dual or stacked bar chart by drawing and labelling axes and drawing the bars.
Also include a key.

Level 6

Construct frequency diagrams for continuous grouped data.