

COMMUNICATION

Analysing a graph in detail

LEVEL

Upper-Intermediate
(B2)

NUMBER

EN_B2_2094X

LANGUAGE

English



Learning outcomes

- I can understand and recall a range of language used to describe a graph in detail.
- I can explain the information displayed on a graph.



Warm-up

**What are graphs
used for?**

Why are they useful?





Matching

1. **Read** the information in the yellow boxes.
2. **Match** the types of graphs with what you've read.

1 bar graph

2 pie chart

3 line graph

A

- Represents categories of data in segments.
- Represented as circles.
- Reflects the proportion of each category in relation to the entire data set.
- Segments are valued in terms of percentages.
- Used to compare small numbers of categories.

B

- An excellent way to map data.
- Each point on the graph represents a piece of data—the horizontal line represents the time that has passed.
- Commonly used to show change in data over time.
- Utilises the x and y-axes.

C

- Can be used to present and compare data.
- Different vertical and horizontal bars differ in height or length depending on their value.
- Useful for comparing the amount or magnitude of something.
- Utilises the x and y-axes.
- Show the relative size or amount of something.



Pie charts reflect the proportion of each category **in relation to** the entire data set.

In relation to (something) can mean *in connection with something*. But it can also mean *compared with*.



Matching

Match the words on the left with their definition.

1

x-axis

a

a graph which represents the direction or trend of data over time

2

y-axis

b

an image which represents data

3

bar chart

c

a circular graph which reflects percentages and categories of a whole data set

4

line graph

d

the vertical axis in a bar or line graph

5

pie chart

e

a graph representing data in vertical or horizontal columns

6

diagram

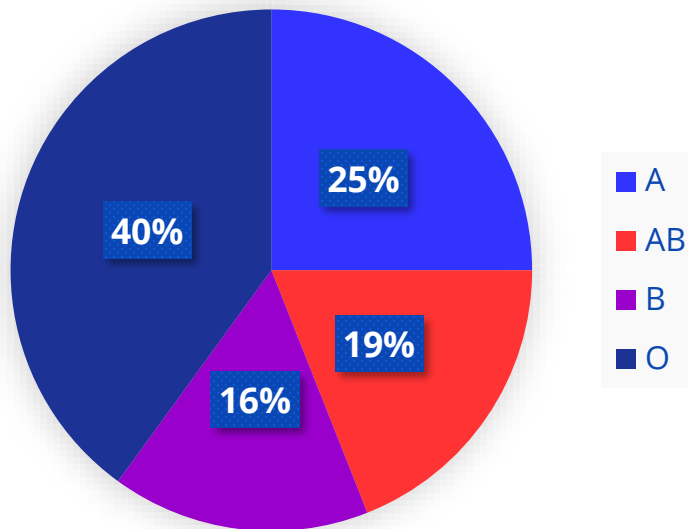
f

the horizontal axis in a bar or line graph

Pie chart analysis

1. **Study** the pie chart. It shows the percentages of blood types of **400 people** taken by a medical laboratory.
2. **Answer** the questions.

Analysis of Blood Types



What portion of people have the blood type AB? The blood type O?

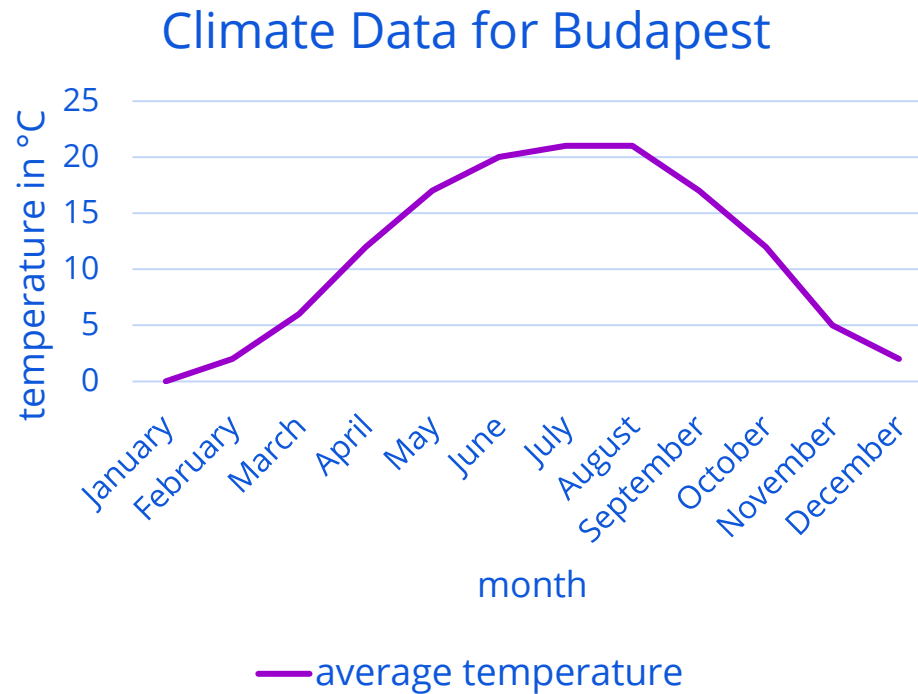
What portion of people have either the blood type A or B?

What are the advantages of displaying data as a pie chart?

How would you improve the pie chart?

Line graph analysis

1. **Study** the line graph.
2. **Answer** the questions



How might this data have been collected?

Why might someone be interested in this kind of data?

What data is represented by the x and y-axes?

What does the chart tell you about the climate in Budapest?



Categorise

Categorise the words into one of the three boxes.

1 rose

2 fell

3 dropped

4 increased

5 remained constant

6 decreased

7 dipped

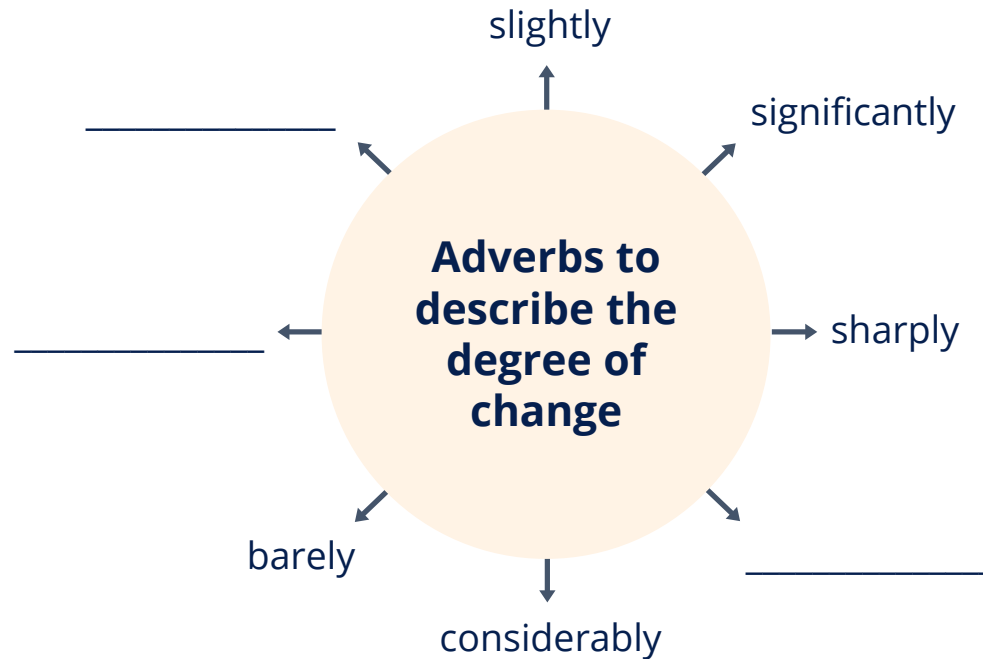
8 levelled off





Brainstorm

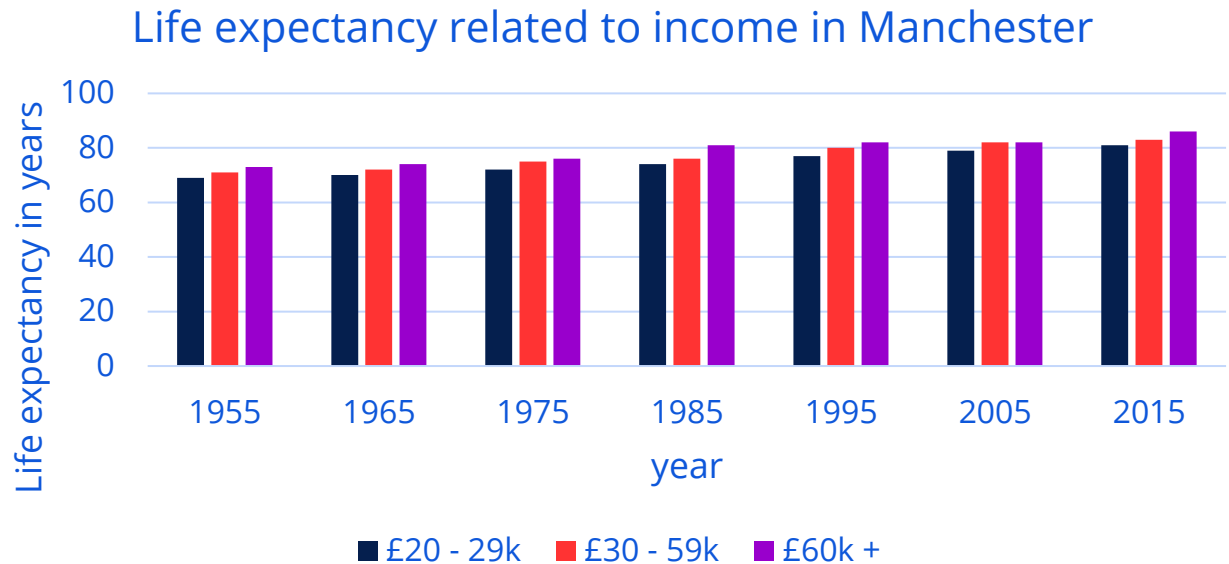
1. **Read** the adverbs below.
2. Can you **think of any others**?
3. Which adverbs describe a **big change**? A **small change**?



Fill in the blanks

1. **Study** the bar graph.
2. Fill in the blanks.

- 60
- 1955-2015
- gender
- income
- increase
- informative
- lifestyle
- shows
- x-axis
- y-axis



This graph ____1.____ the life expectancy for people living in Manchester from ____2.____. The ____3.____ represents years while the ____4.____ shows age.

The graph shows the ____5.____ in life expectancy in Manchester in relation to ____6.____ over the last ____7.____ years.

What the graph doesn't tell us is the ____8.____ of the participants. This information, as well as more data about their ____9.____ and habits, could have made the graph more ____10.____.



Discuss

In breakout rooms or together as a class, **answer** the questions below.

Which types of graphs are most effective for you? Why?



**‘Numbers don’t lie.’
Do you agree or disagree with this statement.**



End of the lesson

Idiom

off the charts

Meaning: at a very high level, or, extremely popular

Example: 1. Your blood pressure is off the charts!
2. This new album is off the charts!



Additional practice



Categorise

1. **Categorise** the adverbs.

1 slightly

2 significantly

3 barely

4 sharply

5 considerably

6 scarcely

Big change

Small change



True or false?

- 1. **Read** the statements below.
- 2. **Decide** if they are *true* or *false*.

		true	false
1	Line graphs represent categories of data in segments.		
2	Bar graphs utilise the x and y-axes.		
3	The x-axis is the horizontal axis.		
4	The adverb 'barely' describes a large change.		
5	Pie charts are represented as circles.		





Discuss

Answer the questions below.

**When was the last time
you used a graph?**



**Can you think of any
graphs you might
encounter on a day-to-
day basis?**

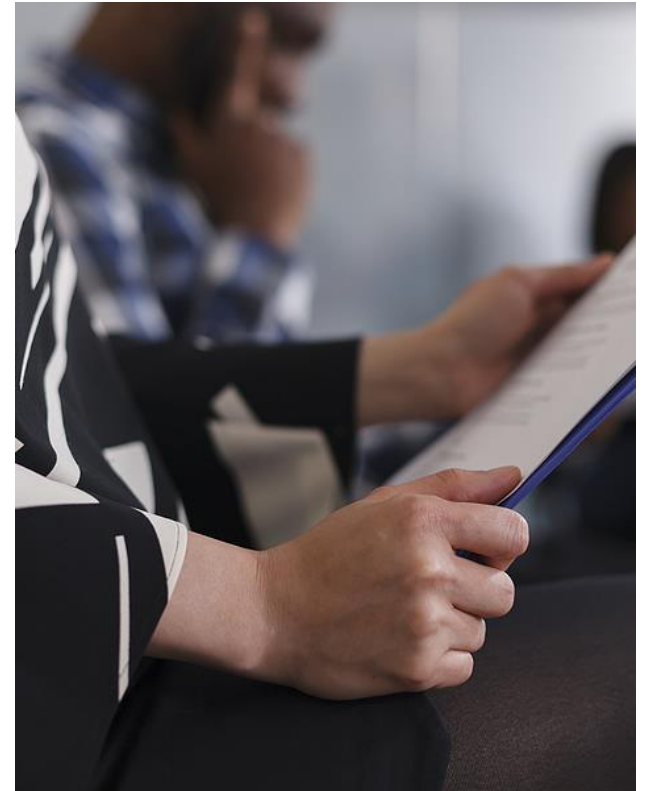


Discuss

Answer the question below.

**How might graphs
inaccurately
present data?**

**Share your ideas with the rest
of the class!**





Answer key

P.4: **A** – pie chart; **B** – line graph; **C** – bar graph

P. 6: 1.) f 2.) d 3.) e 4.) a 5.) c 6.) b

P.7:

- AB blood type: 19%
- O blood type: 40%
- A or B blood type: 41%
- It's easy to quickly compare data, clearly labelled, easy to understand
- Accept any thoughtful answer

P.8:

- **x-axis:** months of the year
- **y-axis:** temperature
- The average temperature increases in the summer months in Budapest

P9:

Top box: 1.) rose 4.) increased

Middle box: 5.) remained constant 8.) levelled off

Bottom box: 2.) fell 3.) dropped 6.) decreased 7.) dipped



Answer key

P.10: Some suggestions: dramatically, tremendously, steeply, substantially, noticeably, moderately, partly, hardly, minimally, marginally

P.11: 1.) shows 2.) 1955-2015 3.) x-axis 4.) y-axis 5.) increase 6.) income 7.) 60 8.) gender 9.) lifestyle 10.) informative

P.16:

Big change: significantly, sharply, considerably

Small change: slightly, barely, scarcely

P.17: 1.) false 2.) true 3.) true 4.) false 5.) true



Summary

Describing a graph

- *in relation to; x-axis; y-axis; bar chart; line graph; pie chart; diagram*
- **Pie charts** reflect the proportion of each category **in relation to** the entire data set.
- A **line graph** can show change over time.

Explaining information on a graph

- *rose; fell; dropped; increased; remained constant; decreased; dipped; levelled off*
- Sales **rose** initially then began to fall after the winter.
- Income **remained constant** throughout the year.

Useful adverbs

- *slightly; significantly; sharply; considerably; barely*
- The temperature tends to fall **sharply** at night.
- Market share **barely** rose, despite our marketing campaign.



Vocabulary

in relation to

x-axis

y-axis

bar chart

line graph

pie chart

diagram

to dip

to level off

