# Statistics: Overview

♫ Windy, rainy, sunny, cloudy – what's the weather today?

Which type of weather have we had the most?

Day	Number of ice lollies sold
Monday	🍭🍭🍭
Tuesday	🍭🍭🍭
Wednesday	🍭
Thursday	🍭🍭
Friday	🍭🍭🍭🍭🍭
Saturday	🍭🍭🍭🍭🍭🍭
Sunday	🍭🍭🍭🍭🍭

🍭 = 1 ice lolly

Were there more ice lollies sold on Saturday or Sunday?

There were more ice lollies sold on Saturday than Sunday.

Modes of transport used to get to school on Monday morning
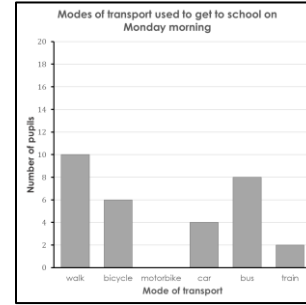
What is the difference between the number of children who walked to school and got the train to school?

Reception and Year 1

- Use everyday routines and Maths Meeting time to begin to collect and discuss simple data e.g. recording the type of weather or pupils' birthdays.

Year 2

- Interpret and construct simple pictograms, tally charts, block diagrams and simple tables
- Ask and answer simple questions by counting the number of objects in each category and sorting the categories by quantity
- Ask and answer questions about totalling and comparing categorical data

Year 3

- Interpret and present data using bar charts, pictograms and tables
- Solve one-step and two-step questions [for example, 'How many more?' and 'How many fewer?'] using information presented in scaled bar charts and pictograms and tables.

Approximately 40% of people own a dog.

Approximately a third of people own a cat.

Pets owned by 150 people
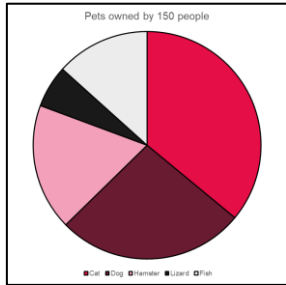
Use the timetable to answer the questions.

Trains from Swansea to Reading			
	Train A	Train B	Train C	Train D
Swansea	10:29	10:58	-	11:28
Cardiff	11:26	-	11:55	12:25
Bristol	12:03	12:00	12:32	13:01
Bath Spa	-	12:12	-	13:15
Swindon	-	12:39	12:57	-
Reading	13:02	13:08	13:36	14:06

Adam gets the fastest train from Cardiff to Bristol, which train does he get?

Leo's bike ride
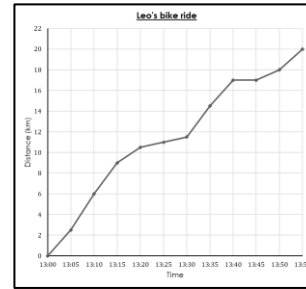
At what time did Leo stop for a rest?

Year 6

- Interpret and construct pie charts and line graphs and use these to solve problems
- Calculate and interpret the mean as an average

Year 5

- Complete, read and interpret information in tables, including timetables.
- Solve comparison, sum and difference problems using information presented in a line graph

Year 4

- Interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs.
- Solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs

Statistics: Concept breakdown

Reception and Y1 ➡	Year 2 ➡	Year 3 ➡	Year 4 ➡	Year 5 ➡	Year 6
Presenting and interpreting data					
Whilst there are no statutory requirements for statistics in Reception and Year 1, pupils should begin to explore the collection and interpretation of data in their Maths Meetings and everyday routines. E.g. recording birthdays, school meals, types of weather.	**Iinterpret and construct simple pictograms, tally charts, block diagrams and simple tables** *Pupils should progress from using one-to-one correspondence to exploring examples with many-to-one correspondence with simple ratios: e.g. one object represents 2, 5 or 10*	**Interpret and present data using bar charts, pictograms and tables** *Pupils understand and use simple scales (for example, 2, 5, 10 units per cm) in pictograms and bar charts with increasing accuracy* Unit 3	**Interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs** *Pupils understand and use a greater range of scales in their representations.* *Pupils begin to relate the graphical representation of data to recording change over time.* Unit 4	**Complete, read and interpret information in tables, including timetables.** *Pupils connect their work on coordinates and scales to their interpretation of time graphs* *Pupils begin to decide which representations of data are most appropriate and why* Unit 3	**Interpret and construct pie charts and line graphs and use these to solve problems** *Pupils both encounter and draw graphs relating two variables, arising from their own enquiry and in other subjects.* Unit 9
Solving problems					
In number and addition and subtraction units, pupils will be developing their confidence with comparative problems, (for example, who has the most/least, finding the difference) and this will prepare them for solving problems related to data in Year 2.	**Ask and answer simple questions by counting the number of objects in each category and sorting the categories by quantity** **Ask and answer questions about totalling and comparing categorical data**	**Solve one-step and two-step questions [for example, 'How many more?' and 'How many fewer?'] using information presented in scaled bar charts and pictograms and tables** Unit 3	**Solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs** Unit 4	**Solve comparison, sum and difference problems using information presented in a line graph** Unit 3	**Calculate and interpret the mean as an average** Unit 9