Maths

Lesson 1

LO: To draw and read a line graph.

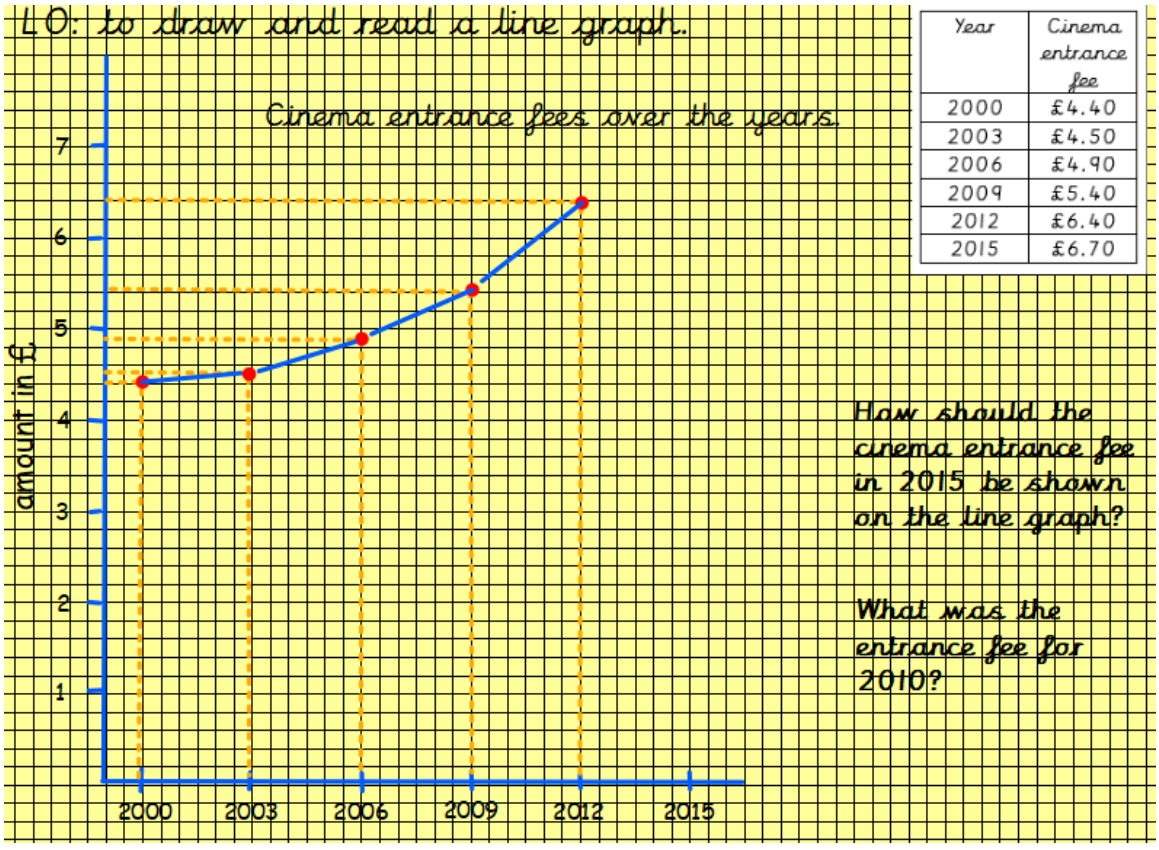
What is a line graph used for?

It is used to show how a quantity changes over time.

Year	Cinema entrance fee
2000	£4.40
2003	£4.50
2006	£4.90
2009	£5.40
2012	£6.40
2015	£6.70

What is the table above showing you?
It is telling you how the price of cinema entrance fees changed over the years.

Have a look at the line graph below, representing the cinema entrance fee table.



Activity: Using the table below, draw a line graph to show the price changes over the years.

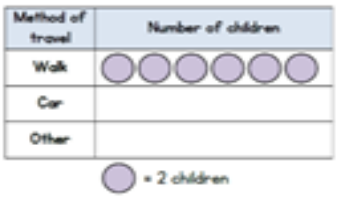
Year	2005	2007	2009	2011	2013	2015
Price	£2.50	£2.00	£2.50	£3.00	£3.50	£4.00

Remember to label the Y axis with the price (going up in 50p) and to label the X axis with the year.

Lesson 2
LO: To draw and interpret a line graph.

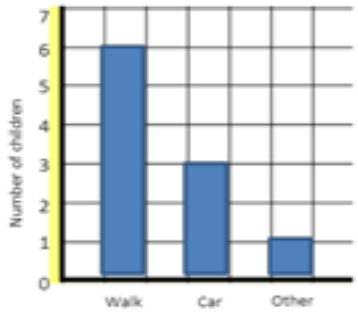
Can you spot the mistake on the bar graph?

- Class 2 are doing a survey.
  They ask 20 children this question.
  "How do you travel to school?"
  Some results are shown in the pictogram.



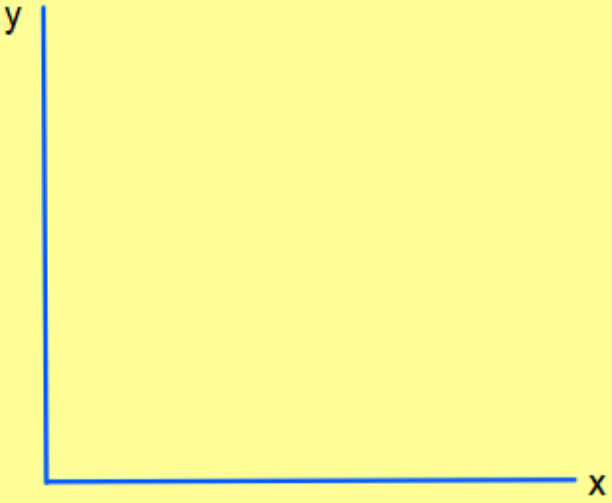
  The number of children who travel by car is half the number who walk to school.
  Complete the pictogram.

- Here is a bar graph showing the same data as above.
  Explain what mistake has been made.



Look at the table. What information would go on each axis?

Time (minutes)	Temperature (°C)
0	10
1	20
2	30
3	50
4	60
5	60



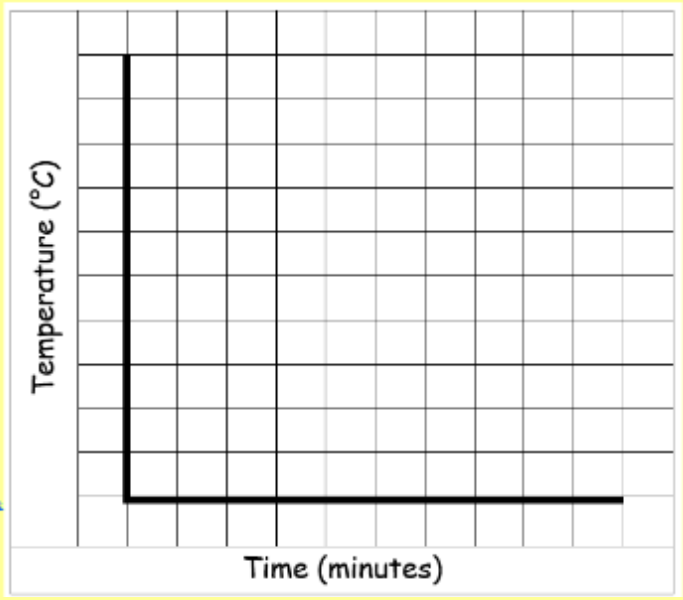
Success criteria

I can:

- label my axis
- Evenly space my numbers along the Y axis
- Use a ruler to draw the line

Use the information from the table and plot on the line graph.

Time (minutes)	Temperature (°C)
0	10
1	20
2	30
3	50
4	60
5	60



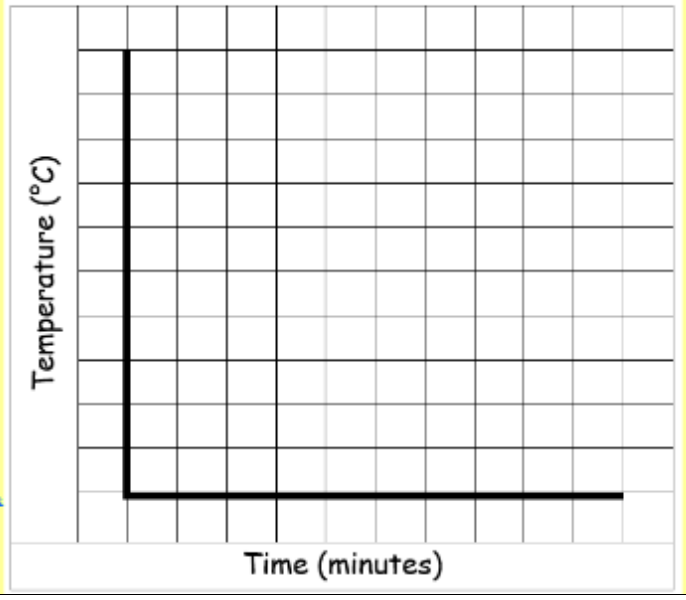
Success criteria

I can:

- label my axis
- Evenly space my numbers along the Y axis
- Use a ruler to draw the line
- Include a title for the line graph

Use the information from the table and plot on the line graph.

Time (minutes)	Temperature (°C)
0	10
1	20
2	30
3	50
4	60
5	60

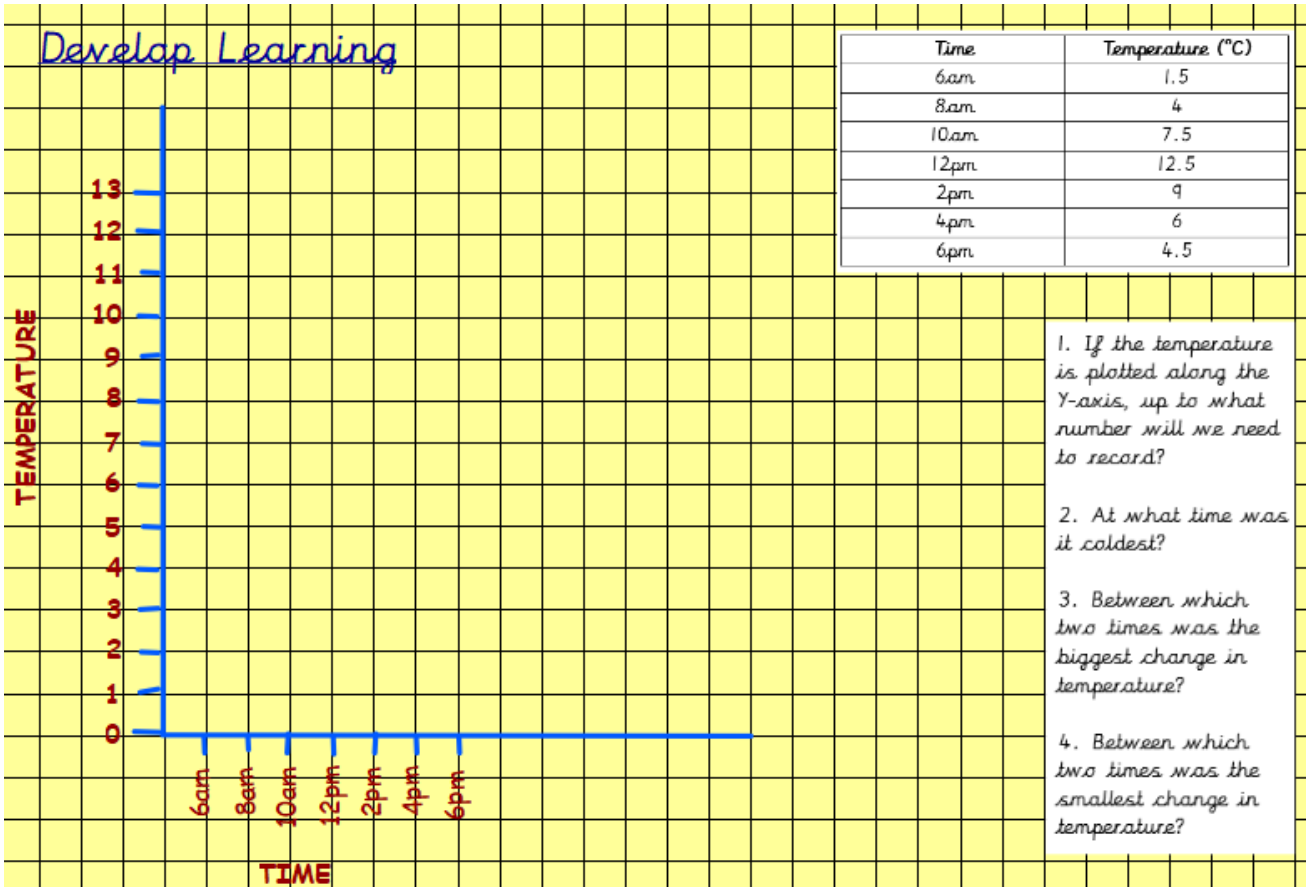


Success criteria

I can:

- label my axis
- Evenly space my numbers along the Y axis
- Use a ruler to draw the line
- Include a title for the line graph

Activity: Using the table, plot the temperature on the line graph and answer the questions below.



Time	Temperature (°C)
6am	1.5
8am	4
10am	7.5
12pm	12.5
2pm	9
4pm	6
6pm	4.5

1. If the temperature is plotted along the Y-axis, up to what number will we need to record?

2. At what time was it coldest?

3. Between which two times was the biggest change in temperature?

4. Between which two times was the smallest change in temperature?

Lesson 3

LO: To compare data.

What does the data below tell us?

All Data	Percentage of all pupils	Percentage of primary school pupils	Percentage of secondary school pupils
Total	100.00	100.00	100.00
Walk	37.90	43.31	33.60
Bus	22.55	8.05	34.10
Car	34.87	46.72	25.43
Cycle	1.89	1.17	2.47
Train/Tube/Tram/Metro	1.79	0.21	3.06
Other	0.99	0.54	1.35

This table shows the mode of transport children take to school in England, Wales and Northern Ireland.

Using the table answer the following questions:

Which is the most popular way of getting to school for primary pupils?
How about for secondary pupils?
Can you think of any reasons why these might be different?
Which is the most common way of travelling to school overall?
Can you explain why this answer is different again?
What do you think the "Other" category means?

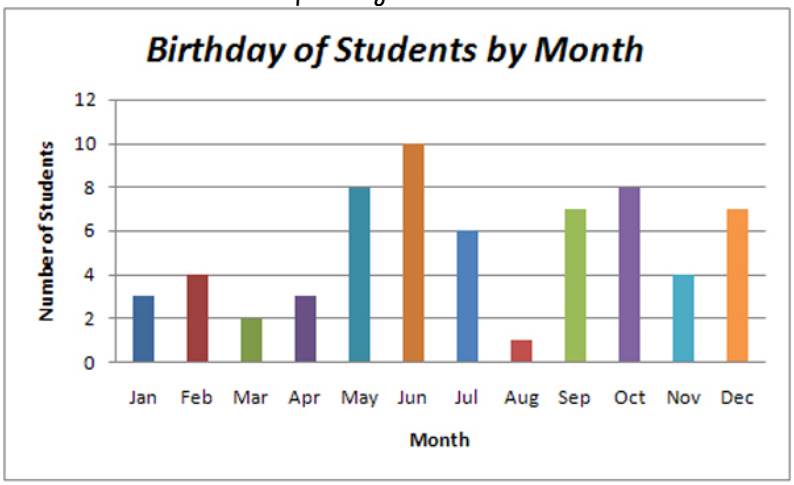
Activity: As we cannot ask the children in our class how they travel to school I have created a table about a made up class and how they travel to school.

How we get to school	Number of children
Walk	7
Bus	4
Car	15
Cycle/scooter	3
taxi	2
other	1

What type of table would be most appropriate for this information?

Yes! A bar chart.

Here is an example of one:



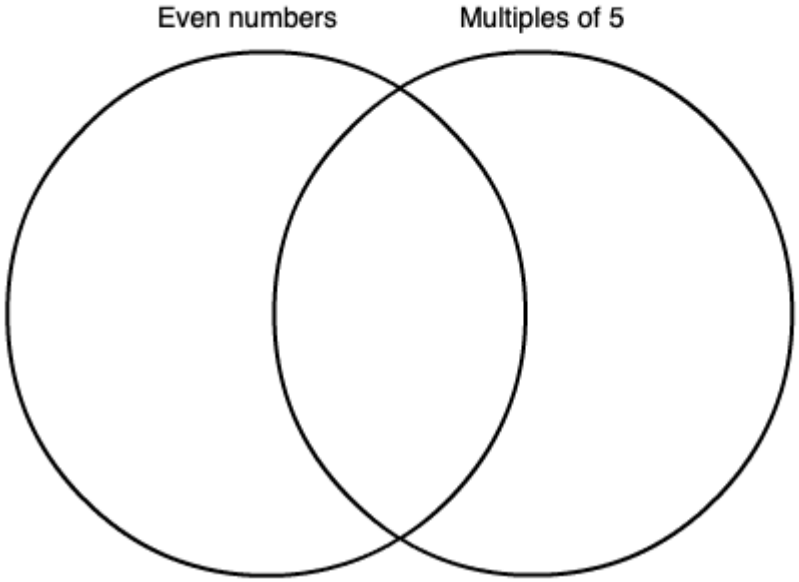
What information will be on the Y axis? Number of children. Think about whether it is most appropriate for the numbers to go up in 1's or 2's.

What information will be on the X axis? Mode of transport.

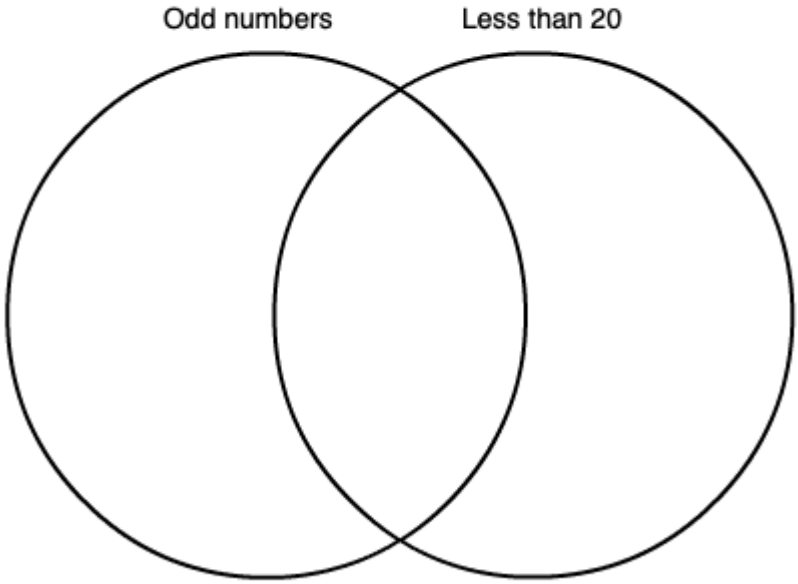
Lesson 4

Problem solving question

Can you place the numbers from 1 to 40 into this Venn diagram?
How do you know where to put each number?



Here is another one for you to try:



Have a go at creating your own Venn diagram challenge.

Week 8 Maths Activities