Maths - Year 5

Measurement 2: Interpreting charts and graphs

Key Vocabulary

Pie chart	A way of presenting data as a 'whole' using fractions of a circle.
Bar chart	A way of representing data using bars.
Line graph	A way of presenting data of continuously changing measures, e.g. temperature, water usage.
Axis/axes	The lines that frame a coordinate grid. The x-axis is the horizontal axis and the y-axis is vertical.
coordinates	Pairs of numbers describing a position on a grid.

Mathematical Skills

- Understand that data can be presented in different ways .
- Read, interpret and present data in tally charts, timetables, bar charts and pie charts.
- Select a method of presenting data which is appropriate to the type of data and the question to be answered.
- Read temperature for a thermometer, in degrees Celsius, including negative values.
- Explain that as temperature rises the magnitude of negative values decreases and that of positive values increases and vice versa.

### Mathematical Methods

- Analysing data presented in different ways.

Zone score	Hits		Score
	Tally	Number	
1	IIII	4	4
3	II	2	6
5	JHT JHT	10	50
7	JHT JHT	10	70
9	JHT IIII	9	81
		Total score	211

Round	Arrow scores						Round score	Total score
1	9	9	7	3	1	1	30	30
2	7	7	5	5	5	3	32	62
3	9	7	7	5	5	0	33	95
4	9	7	7	5	5	1	34	129
5	9	9	9	7	5	1	40	169
6	9	9	7	7	5	5	42	211

- Using a line graph to present data.

Line Graph Showing Water Used by Three Types of Shower and a Bath
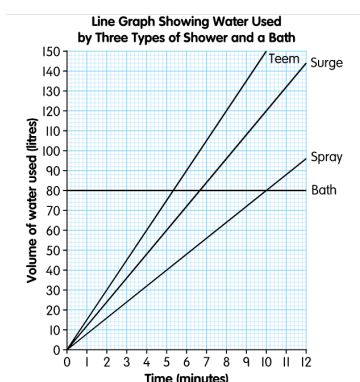
- Using a line graph to compare and predict measurements.
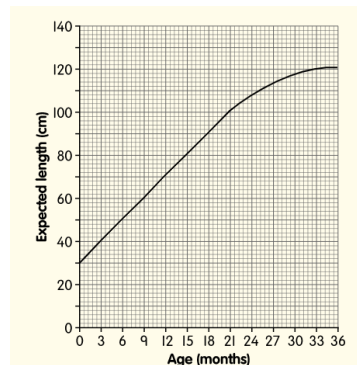
Age (months)	0	3	6	9	12	15	18	21	24	27	30	33	36
Length (cm)	26	37	48	58	68	79		101	109	116	120	121	121

- Measuring temperature over time.

Line Graph Showing Temperature of Salted Ice Left in Warm Room
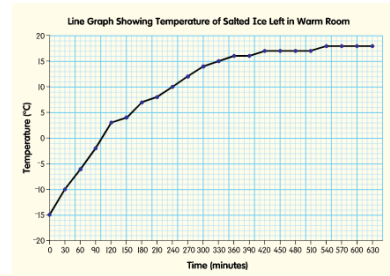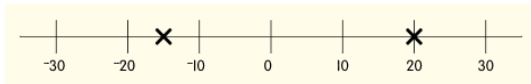
Temperature (°C)	⁻15	⁻10	⁻6	⁻2	3	4	7	8	10	12	14	15	16	16	17	17	17	17	18	18	18	18
Time (minutes)	0	30	60	90	120	150	180	210	240	270	300	330	360	390	420	450	480	510	540	570	600	630

- Reading and using information from timetables.

Bus station	0800	0815	0830		1630	1645	1700		2200
South Street	0808	0823	0838	then every 30 min until	1638	1653	1708	then every 30 min until	2208
Library	0819	0834	0849		1649	1704	1719		2219
Leisure centre	0844	0859	0914		1714	1729	1744		2244
Train station	0851	0906	0921		1721	1736	1751		2251

- Presenting and comparing data in pie charts and bar charts.

Colour	Number	Angle in pie chart	Percentage
Silver	24	90°	25
Black	25	94°	26
Blue	11	41°	11
Red	19	71°	20
Green	2	8°	2
White	12	45°	13
Other	3	11°	3
Total	96	360°	100
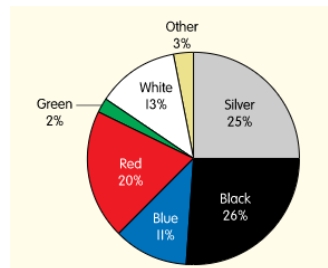
Can you..?

- Draw a line graph to show how much water the Splash Pump can pump in 4 hours.
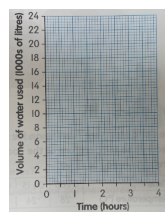
- Which type of graph would be most appropriate for this Sports Day data? Explain why.

	100 m	400 m	Long jump	Tennis ball throw
Ethan	14 s	68 s	2 m	10 m
Mia	14·5 s	67 s	2 m 30 cm	10 m 40 cm
Lizzie	15·5 s	82 s	2 m 40 cm	9 m 60 cm
Ahmed	17 s	80 s	1 m 95 cm	12 m