STM Knowledge Organiser Year: 7 Subject: Maths Topic: Representing Data

Core Knowledge

Core Knov Topic/Skill	Definition/Tips	Example		
1. Frequency	A record of <b>how often each value</b> in a set	Number of marks	Tally marks	Frequency
Table	of data occurs.	1	JH 11	7
		2	1111	5
		3	HH 1	6
		4	1111	5
		5 Total	III	3 <b>26</b>
2. Bar Chart	Democrate data as anaticallabella	10(4)		20
2. Bar Chart	Represents data as vertical blocks.  x - axis shows the type of data y - axis shows the frequency for each type of data Each bar should be the same width There should be gaps between each bar Remember to label each axis.	14 12 10 8 6 4 2 0 1 2 3 4		
		Number of pets owned		
3. Types of Bar Chart	Compound/Composite Bar Charts show data stacked on top of each other.  Comparative/Dual Bar Charts show data side by side.	30 cm 20 Jan Fet	Rainfall  Sample  Rainfall  Mar Apr May  Month  Bar Chart	Key: London Bristol
4. Pie Chart	Used for showing how data breaks down into its constituent parts.  When drawing a pie chart, divide 360° by the total frequency. This will tell you how many degrees to use for the frequency of each category.	Tennis 40	144°	
	Remember to <b>label</b> the category that each sector in the pie chart represents.	If there are 40 people in a survey, then each person will be worth $360 \div 40 = 9^{\circ}$ of the pie chart.		

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5. Pictogram	Uses <b>pictures</b> or symbols to <b>show the value</b> of the data.	Black A A A
	A pictogram must have a <b>key</b> .	Green • = 4 cars  Others • • • • • •
6. Line Graph	A graph that uses <b>points connected by straight lines</b> to show how data changes in values.  This can be used for <b>time series data</b> , which is a series of data points spaced over uniform time intervals in <b>time order</b> .	14 12 10 8 6 4 2 0 1 2 3 4 5 6 7 8 9
7. Two Way Tables	A table that <b>organises data</b> around <b>two</b> categories.	Question: Complete the 2 way table below.           Left Handed         Right Handed         Total           Boys         10         58           Girls         58           Total         84         100
	Fill out the information step by step using the information given.	Answer: Step 1, fill out the easy parts (the totals)   Left Handed   Right Handed   Total
	Make sure all the totals add up for all columns and rows.	Answer: Step 2, fill out the remaining parts           Left Handed         Right Handed         Total           Boys         10         48         58           Girls         6         36         42           Total         16         84         100

Links to comparing and interpreting information given in different diagrams, working out averages