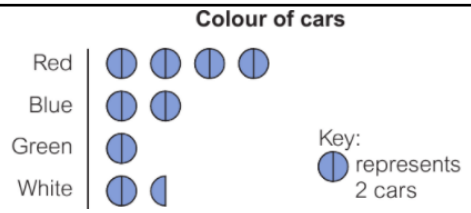
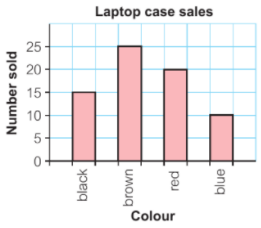
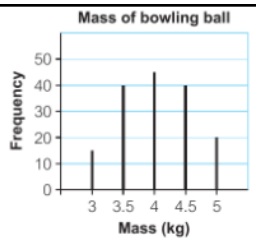
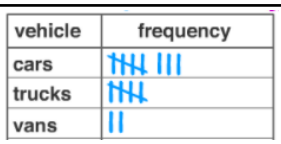
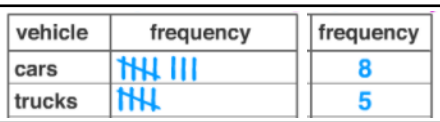
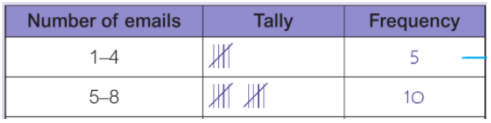
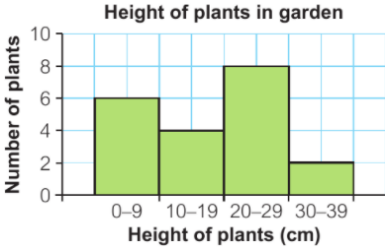
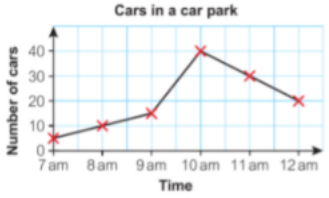
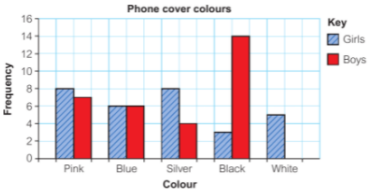
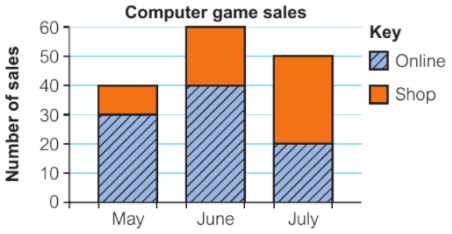
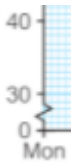
**KS3 1: Unit 1 Analysing and displaying data** **Knowledge Organiser**

| Core Knowledge | | | |
|---|---|---|---|
| 1 | Data | | A set of information |
| 2 | Range | range = largest - smallest | The difference between the largest and smallest values |
| 3 | Mode | 3, 4, 5, 5, 5, 6, 6, 7, 8, 8, 9<br>mode = 5 | The most common value (also called the modal value) |
| 4 | Median | 1, 3, 3, **6**, 7, 8, 9<br>Median = 6<br>1, 2, 3, **4**, **5**, 6, 8, 9<br>Median = (4 + 5) ÷ 2<br>= 4.5 | The middle value when the data is written in **order**.<br>If there are an even number of values, the median is the middle of the two middle values. |
| 5 | Pictogram |  | A chart which uses pictures to represent quantity.<br>A pictogram always has a **key.** |
| 6 | Key | | Labels that identify how to read a chart. In a pictogram the key shows what each picture represents. |
| 7 | Bar chart |  | Bars of equal width show the data.<br>Bars are equally spaced and there are labels on each axis. |
| 8 | Bar-line chart |  | Like a bar chart but uses lines instead of bars |
| 9 | Tally chart |  | Tallies record counting, use groups of 5. |
| 10 | Frequency |  | The number of times a particular item appears in a data set. |
| 11 | Grouped data |  | Data can be grouped into classes |
| 12 | Modal class | | The modal class is the class with the highest frequency. |
| 13 | Continuous data |  | Data that is measured, it can have any value (infinite). On a bar chart this data is shown with no gaps between the bars. |
| 14 | Discrete data | eg shoe size, days of the week | Data that has distinct values |

| | | | |
|---|---|---|---|
| 15 | Mean | $\frac{\text{sum of amounts}}{\text{number of amounts}}$ | The total of a set of values, divided by the number of values. |
| 16 | Average | | A typical value or a measure of central tendency. Mode, median and mean are types of average. |
| 17 | Comparing data sets | *"Paul's jumps are less consistent than Daniel's because his jumps have a greater range. Daniel jumps further on average than Paul because his jumps have a greater mean."* | Find an average and the range, then write 2 sentences comparing the data. |
| 18 | Line graph |  | Shows how quantities change. Plot points with a cross and join with a straight line. |
| 19 | Minimum | | The lowest or least amount or value |
| 20 | Maximum | | The highest or greatest amount or value |
| 21 | Dual bar chart |  | Shows 2 sets of data on the same graph, must include a key. |
| 22 | Compound bar chart |  | Combines different sets of data in each bar, must include a key. |
| **Depth Knowledge** | | | |
| 23 | Anomaly | 18, 24, 16, 20, 21, 18, 21, 100<br>100 is an anomaly, it's much larger than the rest of the data | A value that doesn't fit with the rest of the data. Also called an outlier. |
| 24 | Comparative bar chart | | A bar chart that shows more than one dataset e.g. dual bar charts and compound bar charts |
| 25 | Axis break |  | This shows that some values have been left off the axis. It can save space where there is no relevant data and enhance readability. |
| 26 | Bimodal | 3, 4, 5, 5, 5, 6, 6, 6, 8, 8, 9<br>modes = 5 and 6<br>two modes are called bimodal | 2 modes |
| 27 | Multi modal | | More than 2 modes |