## Stonelaw High School

## Faculty of Science

Tables

Tables are used to record raw data and present results for an investigation.
They can have many rows and columns.

## Columns

- Each column should have a unit in brackets
- The columns are used to make the labels for the axes on a graph
- The first column is always the independent variable and what you changed/controlled in the experiment e.g. pH, temperature, concentration
- The second column is always the dependent variable and what you observed/measured and recorded in the experiment e.g. height of foam, absorbance, volume


## Rows

- Each row is a data entry for the independent and dependent variable
- If there are units in the headings, each entry does not require units


## Example

A student wanted to investigate the effect of pH on the activity of catalase. They added a pH buffer, hydrogen peroxide, detergent and yeast in a test tube and measured the height of foam produced for each pH buffer.

The height of foam produced was 2 cm for $\mathrm{pH} 4,3 \mathrm{~cm}$ for $\mathrm{pH} 5,6 \mathrm{~cm}$ for $\mathrm{pH} 7,4 \mathrm{~cm}$ for pH 8 and 0 cm for pH 10.

| $p H$ | Height of foam (cm) |
| :---: | :---: |
| 4 | 2 |
| 5 | 3 |
| 7 | 6 |
| 8 | 4 |
| 10 | 0 |

The student was investigating pH so this is the independent variables and should be the first column heading. pH does not have units so they are not required

The student measured the height of foam in centimetres so this is the dependent variable and the second column heading. The unit symbol is in brackets (cm)

If an experiment is repeated, there are two ways the average column can be included.
Extended table

| Temperature $\left({ }^{\circ} \mathrm{C}\right)$ | Height of foam (cm) |  |  | Average height of <br> foam (cm) |
| :---: | :---: | :---: | :---: | :---: |
|  | Trial 1 | Trial 2 | Trial 3 | 2.7 |
| 20 | 2 | 3 | 3 | 4 |
| 30 | 3 | 4 | 5 | 6 |
| 40 | 7 | 5 | 6 | 1.3 |
| 60 | 1 | 2 | 1 |  |

The average column has been added onto the table so it must have a full heading to include average and height of foam (units)

## Overarching heading

This table has an overarching heading across all the columns so it only has to average for the last column

| Temperature $\left({ }^{\circ} \mathrm{C}\right)$ | Height of foam (cm) |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | Trial 1 | Trial 2 | Trial 3 | Average |
| 20 | 2 | 3 | 3 | 2.7 |
| 30 | 3 | 4 | 5 | 4 |
| 40 | 7 | 5 | 6 | 6 |
| 60 | 1 | 2 | 1 | 1.3 |

The averages have been rounded to one decimal place.

Remember to round up for .5 upwards and .4 downwards

