

# YEAR 7

## MODELLING DATA

### SPREADSHEETS

**Spreadsheets** are used to model data.  
That means that they can be used to perform calculations on data and make predicts.

Spreadsheets use data which is held in cells.

**Data and information** are not the same.

- **Data:** facts and figures in their raw form
- **Information:** data that has been given structure or meaning

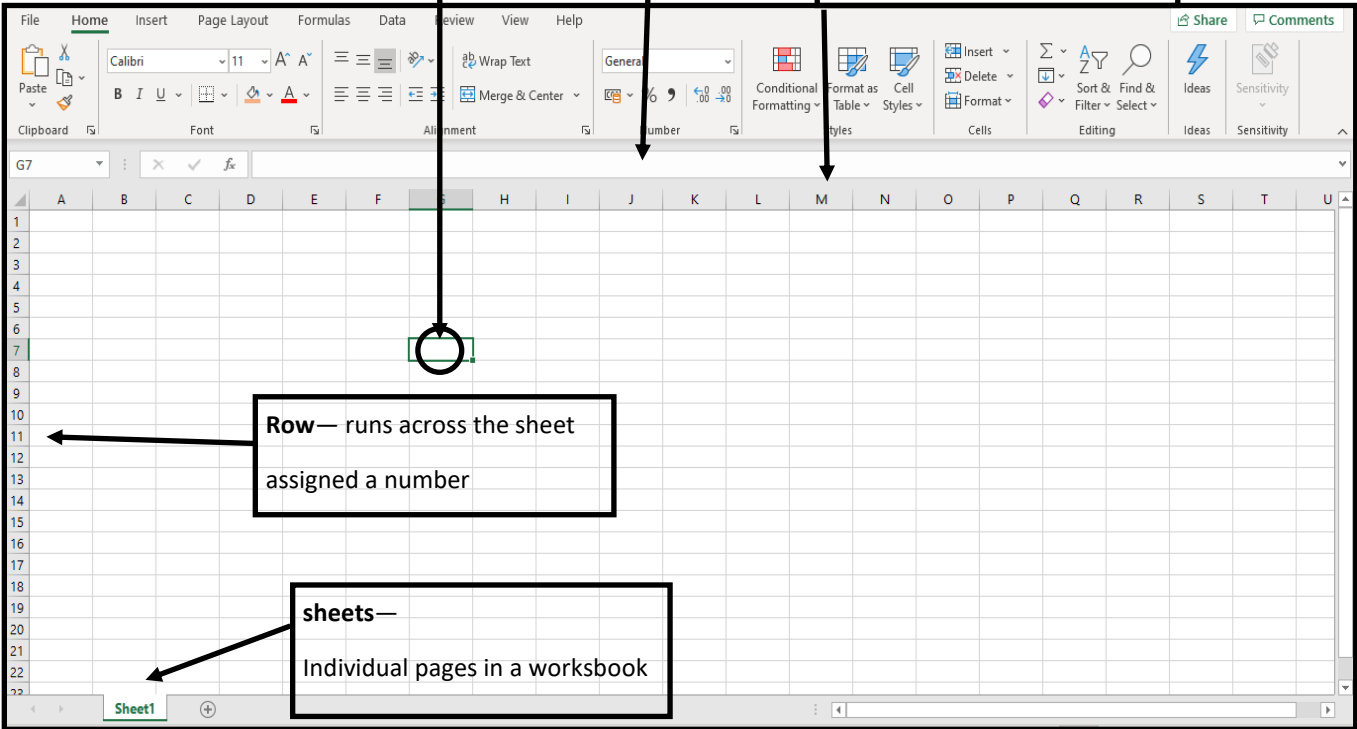
For example:  
**Data**—10, 2107, 18  
**Information**—Time 10am, date 21st July, temperature 18°

Data can be gathered from different sources

- **Primary** source: collecting data yourself
- **Secondary** source: someone else collects the data

Each box on a spreadsheet is called a **cell** and they hold data.  
 Each **cell** has a unique **cell reference** to identify its location.  
 Example G7

In order to complete calculations spreadsheets make use of **formula**.  
 A formula uses the following basic symbols  
 The = symbol is always at the start of a formula  
 The + symbol is used for addition  
 The - symbol is used for subtraction  
 The \* symbol is used for multiply  
 The / symbol is used for divide  
 Functions are also used which are predefined formula.



**Column**— runs down a sheet assigned a letter

**Cell reference**

**Formula bar**

**Row**— runs across the sheet assigned a number

**sheets**—  
Individual pages in a workbook

Common **functions** are  
**SUM**—adds a range of cells  
**MAX**—returns the largest value from selected cells  
**MIN**—returns the smallest value from selected cells  
**AVERAGE**—provides the arithmetic mean (average) of selected cells  
**COUNTIF**—counts the number of cells in a range that meet the given criteria  
**IF**— allows logical comparisons  
**COUNTA**—counts cells that are not empty

The tool bar at the top allows for **formatting** of the data. Changing colour, size, style etc  
 There is a **sort** and **filter** tool that allows for data to be arranged in ways that is most useful for the user e.g. alphabetical, highest first etc.  
**Conditional formatting** can be set to allow the cell **formatting** to **automatically** change if certain criteria is met. For example a cell might turn red if there was a negative number