

Prior learning (Y5): Learners look at how a flat-file database can be used to organise data in records. Learners will use tools within a database to order and answer questions about data. They will create graphs and charts from their data to help solve problems. They will also use a real-life database to answer a question, and present their work to others.

Year 6

Data and Information: Introduction to spreadsheets

Future learning (Y7): This unit for takes learners from having very little knowledge of spreadsheets to being able to confidently model data with a spreadsheet. The unit uses engaging activities to progress learners from using basic formulas to writing their own COUNTIF statements. This unit will give learners a good set of skills that they can use in computing lessons and in other subject areas.

Current learning (Y6): Learners are introduced to spreadsheets and are supported in organising data into columns and rows to create their own data set. Learners will be taught the importance of formatting data to support calculations, while also being introduced to formulas and will begin to understand how they can be used to produce calculated data. Learners will be taught how to apply formulas that include a range of cells, and apply formulas to multiple cells by duplicating them. Learners will use spreadsheets to plan an event and answer questions. Finally, learners will create charts, and evaluate their results in comparison to questions asked.

Key vocabulary: Spreadsheet, Data, Heading, Cells, Data, Columns and Rows, Data, Format, Common Attribute, Formula, Calculation, Cell, Reference, Operation, Range, Graph, Chart, Evaluate, Results, Comparison

Overview

Spreadsheets



-Data is raw numbers and figures. Information is what we can understand from analysing data.

-There are lots of different ways that we can collect, log and interpret data, including by using spreadsheets.



-Spreadsheets organise and store data in meaningful ways so that it can be easily accessed and analysed. Computer spreadsheets are particularly useful for powerful calculations, graphs and charts.

What are Spreadsheets?

-A spreadsheet is a computer application that allows users to organise, analyse and store data in a table. Programs such as Microsoft Excel and Google Docs help users to make spreadsheets.

-A spreadsheet can be made up of multiple worksheets. They can be reordered and renamed. Each cell has a unique reference, made up of a number (the row) and letter (the column).

-Data headings allow data to be stored in a meaningful way.

-To select a cell, we click on it. To enter data, we double click on it. Data can be typed directly into a cell or into the formula bar.

-By clicking on a column or row, we can sort information in different ways (e.g. alphabetically, 0-9, etc).

Product	Cost	Price	Profit
Chocolate Raisins	25.95	35.95	10
Chocolate Box	25.95	35.95	10
White Chocolate Bar	25.95	45.95	20
Assorted Chocs	45.95	75.95	30
Chocolate Cake	28.95	29.95	7

Item	Price	Quantity	Total
Copy paper	£2.49	20	£49.80
Post-it Notes	£5.99	10	£59.90
Stapler	£7.99	5	£39.95
Paper punch	£11.90	15	£178.50
Highlighter pen	£1.99	50	£99.50
TOTAL COST OF ORDER			£427.65
AVERAGE PRICE			1.66.07

Formulas, Calculating and Duplicating

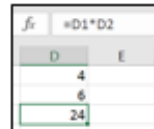
Formulas: A formula can tell a computer which mathematical operation to use for a calculation: add, multiply, divide, or subtract. It also tells the computer which data to use.

+ = add - = subtract * = multiply / = divide

Select your cell. Use cell references to create your formula.

All formulas must begin with the = sign.

E.g. In D3, you enter the formula =D1*D2. The answer will appear in D3.



fx	
D	E
4	
6	
24	

-Calculations: Sometimes there are large amounts of data that require multiple or complex sums. The 'fx' or 'sigma' icons (see below, depending on the program you are using) can help you to find averages (AVERAGE) add many cells together (SUM) and many other calculations.



-Duplicating: Duplicating allows you to create copies of the same data, without having to type it out multiple times. The copy and paste function (Ctrl+C and then Ctrl+V) can duplicate individual cells. You can duplicate whole worksheets by clicking on the worksheet name and selecting 'move or copy' then tick 'create a copy.'

Other Functions

-Formatting makes a spreadsheet easier to read. Hovering the mouse between two columns/ rows allows the user to drag them to the desired size. Right-clicking on a cell and selecting 'format cells' presents a number of options, including fonts, borders, fill etc.

-Charts and graphs can be created using the data in the spreadsheet. Select the charts icon (see below) and which fields to display in the x-axis and y-axis.



Using Spreadsheets

-Spreadsheets are commonly used by individuals and businesses across the world. They are most commonly used for organising and presenting finances, for example budgets and finance reports.

-Spreadsheets may be used by businesses to look back on past income and expenditure and to forecast future performance. They are also used for calculating taxes and deductions.

- Data is often presented in tables or graphs.

