



Excel Workplace Essentials



CMG Training

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EXCEL

WORKPLACE ESSENTIALS

Student Manual

Build confidence. Work accurately. Save time.

Andi Reid



Welcome

This manual is designed for people who are new to Excel or who want a clearer, more confident way to use it at work. It follows the demonstrations and exercises in the Excel Workplace Essentials Student Tasks workbook. Each module explains the feature, shows the steps, provides a workplace example and points you to the matching practice sheet.

A useful way to think about Excel

A workbook is the whole filing cabinet. A worksheet is one drawer. A cell is one labelled space inside the drawer. Formulas are instructions that tell Excel what to calculate.



Contents

Welcome	2
Contents.....	3
Getting started and navigating.....	4
Entering data and managing worksheets	5
Formulas and basic calculations	7
Functions and summary calculations.....	9
Absolute cell references	10
Formatting numbers, dates and cells	11
Copy, paste, AutoFill and Flash Fill.....	12
Tables, sorting and filtering	14
Text tools and data cleaning.....	15
Lookups with VLOOKUP.....	17
Charts and worksheet management.....	18
Page layout, printing, headers and footers	19
Importing, exporting and saving safely	21
Appendix A: Formula and function quick reference	23
Appendix B: Keyboard shortcuts	24
Appendix C: Troubleshooting and glossary	25

The manual covers the workbook’s demonstration sheets, standard exercises and advanced exercises. The advanced activities are optional and can be used for extension or follow-up practice.



Getting started and navigating

Move around Excel confidently and understand the workbook window.

Learning outcomes

- By the end of this module, you will be able to identify the main parts of the Excel window.
- By the end of this module, you will be able to move quickly between cells and worksheets.
- By the end of this module, you will be able to adjust zoom and customise the Quick Access Toolbar.

The Excel window

Part	What it does
Ribbon	Groups commands under tabs such as Home, Insert, Data, Formulas and Page Layout.
Name Box	Shows the active cell address. Type a cell reference such as A200 and press Enter to jump there.
Formula Bar	Shows or edits the value or formula in the active cell.
Worksheet grid	The working area made from columns, rows and cells.
Sheet tabs	Switch between worksheets in the workbook.
Status bar	Shows useful information and includes the zoom control.
Quick Access Toolbar	Keeps frequently used commands such as Save, Undo, Redo and Spelling close at hand.

Moving around

Method	Result
Arrow keys	Move one cell at a time.
Tab / Shift+Tab	Move right / left.
Enter / Shift+Enter	Move down / up.
Ctrl+Home	Go to cell A1.
Ctrl+End	Go to the last used cell.
Ctrl+Arrow	Jump to the edge of the current data region.
Ctrl+Page Down / Page Up	Move to the next / previous worksheet.
F5 or Ctrl+G	Open Go To and jump to a cell or named range.

Zoom and screen position

- Use the zoom slider at the bottom-right of the window.
- Zoom changes what you see on screen. It does not change the printed size.
- Use Freeze Panes when headings need to stay visible while you scroll: View > Freeze Panes.



Entering data and managing worksheets

Create a reliable structure before adding calculations.

Learning outcomes

- By the end of this module, you will be able to enter and edit data.
- By the end of this module, you will be able to insert and delete rows, columns and worksheets.
- By the end of this module, you will be able to rename, move, copy and colour worksheet tabs.

Good spreadsheet structure

- Use one clear heading row.
- Put one type of information in each column.
- Keep each row as one complete record.
- Avoid blank rows and blank columns inside a data list.
- Do not type totals into the middle of source data.
- Use clear worksheet names, for example Sales, Staff Records or Bookings Chart.

Entering and editing data

1. Click a cell and type the value.
2. Press Enter to accept it and move down, or Tab to move right.
3. To replace a value, select the cell and type the new value.
4. To edit part of a value, double-click the cell or press F2.
5. Use Delete to clear the contents without deleting the cell itself.

Managing rows and columns

Insert before the selection

When a row is inserted, Excel places the new row above the selected row. When a column is inserted, Excel places the new column to the left of the selected column.

- Right-click a row number or column letter and choose Insert or Delete.
- Drag a boundary between column letters to change width. Double-click the boundary to AutoFit.
- Use Wrap Text when a heading needs to stay within a sensible column width.

Managing worksheet tabs

Task	Steps
Rename	Double-click the tab, type a new name and press Enter.
Move	Drag the tab left or right.
Copy	Right-click the tab > Move or Copy > Create a copy.



Delete	Right-click the tab > Delete. Check carefully because deleted sheets may not be recoverable.
Colour	Right-click the tab > Tab Color > choose a colour.
Add	Select the plus sign beside the worksheet tabs.



Formulas and basic calculations

Turn worksheet values into useful results.

Learning outcomes

- By the end of this module, you will be able to write formulas using cell references.
- By the end of this module, you will be able to use the four mathematical operators.
- By the end of this module, you will be able to copy formulas safely.
- By the end of this module, you will be able to understand the order of operations.

How formulas work

Every Excel formula begins with an equals sign. A formula should normally refer to cells rather than retyping the numbers. This means the result updates when the source values change.

=C2+D2

Operator	Meaning	Example
+	Add	=B2+C2
-	Subtract	=B2-C2
*	Multiply	=B2*C2
/	Divide	=B2/C2

Create a formula

- Select the cell where the answer should appear.
- Type =.
- Select the first cell or type its reference.
- Type the operator, such as + or *.
- Select the next cell or type its reference.
- Press Enter.

Order of operations

Excel follows the standard order of operations: brackets, exponents, division and multiplication, then addition and subtraction. Use brackets to make the calculation clear.

=(B2+C2)*D2

Common issue

If Excel displays the formula instead of the answer, the cell may be formatted as Text. Change it to General, press F2 and then press Enter.



Workplace examples

Result required	Formula pattern
Weekly wages	Daily Rate * 5
Total wages	Weekly Wages + Bonus
Take home pay	Total Wages - Pension Deduction
Total cost	(Cost per Unit + Packaging per Unit) * Quantity
Total sales	Sales Price per Unit * Quantity
Profit	Total Sales - Total Cost

Functions and summary calculations

Use ready-made formulas to summarise a list.

Learning outcomes

- By the end of this module, you will be able to use common functions.
- By the end of this module, you will be able to select a range correctly.
- By the end of this module, you will be able to count numbers, non-blank cells and blanks.
- By the end of this module, you will be able to interpret summary results.

What is a function?

A function is a built-in calculation. It saves time and reduces typing. The range C8:C18 means every cell from C8 through C18.

Function	Purpose	Example
SUM	Adds numbers	=SUM(C8:C18)
AVERAGE	Finds the mean	=AVERAGE(C8:C18)
MAX	Finds the highest value	=MAX(C8:C18)
MIN	Finds the lowest value	=MIN(C8:C18)
COUNT	Counts cells containing numbers	=COUNT(C8:C18)
COUNTA	Counts non-blank cells	=COUNTA(A2:A20)
COUNTBLANK	Counts blank cells	=COUNTBLANK(C8:C18)
TODAY	Shows the current date	=TODAY()

AutoSum

- Select the cell below or beside the values.
- Choose Home > AutoSum, or press Alt+=.
- Check the suggested range.
- Press Enter.

Check the range

AutoSum usually guesses correctly, but not always. Before pressing Enter, confirm that the moving border surrounds the intended cells.

Counting paid and unpaid invoices

- COUNT counts numbers, not words.
- COUNTA counts cells containing numbers or text.
- COUNTBLANK counts empty cells.
- For the Paid? column, COUNTBLANK can count records where the status has not been entered.



Absolute cell references

Lock a fixed rate while copying a formula.

Learning outcomes

- By the end of this module, you will be able to distinguish relative and absolute references.
- By the end of this module, you will be able to create an absolute reference with dollar signs.
- By the end of this module, you will be able to use a fixed VAT or bonus rate in copied formulas.

Relative references

A normal reference such as B2 is relative. When the formula is copied down one row, Excel changes B2 to B3. This is usually helpful.

Absolute references

An absolute reference such as \$N\$2 stays fixed when the formula is copied. Use it for a rate or value stored in one cell, such as VAT, commission, exchange rate or bonus percentage.

=D2*\$N\$2

- Select the result cell.
- Type the formula and select the fixed-rate cell.
- Press F4 after selecting the fixed-rate reference. Excel adds dollar signs.
- Press Enter.
- Copy the formula down and check that the fixed reference has not moved.

Reference	What is locked
N2	Nothing. Row and column can change.
\$N\$2	Column N and row 2.
\$N2	Column N only.
N\$2	Row 2 only.



Formatting numbers, dates and cells

Make information clear without changing the underlying value.

Learning outcomes

- By the end of this module, you will be able to apply text and cell formatting.
- By the end of this module, you will be able to use appropriate number formats.
- By the end of this module, you will be able to format dates and times.
- By the end of this module, you will be able to avoid common formatting problems.

Formatting does not change the value

Formatting controls how a value appears. For example, 0.2 can display as 20%, and the date serial number 45383 can display as 1 April 2024. The stored value remains usable in calculations.

Data	Suitable format	Example appearance
Salary or price	Currency or Accounting	£50,000.00
Large count	Number with thousands separator	1,000,000
Rate	Percentage	9.00%
Precise measurement	Number with decimals	0.10
Date	Short or Long Date	20/06/2024 or Thursday, 20 June 2024
Interview time	Time	09:00 or 9:00 AM
Invoice number	Text if leading zeros matter	INV0032

Text and cell formatting

- Use bold for headings and totals.
- Use font colour and fill colour with good contrast.
- Use borders to separate sections, not to decorate every cell heavily.
- Use alignment to improve readability.
- Use Wrap Text for long headings.
- Prefer Center Across Selection rather than Merge & Center inside working data tables. Merged cells can make sorting and selecting harder.

Format Cells

- Select the cell or range.
- Press Ctrl+1, or right-click and choose Format Cells.
- Choose Number, Alignment, Font, Border, Fill or Protection.
- Select the required options and choose OK.

**Dates showing as numbers**

Excel stores dates as serial numbers. If you see a number such as 45383, apply a Date format. Do not retype the date unless the stored value is incorrect.

MODULE 7

Copy, paste, AutoFill and Flash Fill

Reuse content and patterns without unnecessary retyping.

Learning outcomes

- By the end of this module, you will be able to copy and move data.
- By the end of this module, you will be able to choose an appropriate paste option.
- By the end of this module, you will be able to continue patterns with AutoFill.
- By the end of this module, you will be able to use Flash Fill carefully.

Cut, copy and paste

Command	Shortcut	Use
Cut	Ctrl+X	Move content.
Copy	Ctrl+C	Duplicate content.
Paste	Ctrl+V	Insert copied or cut content.
Undo	Ctrl+Z	Reverse the last action.
Redo	Ctrl+Y	Repeat or restore an action.

Paste options

Option	What is pasted
Paste	Values, formulas and formatting.
Values	Displayed results only. Useful before deleting source formulas.
Formulas	Formulas without replacing all destination formatting.
Formatting	Appearance only.
Transpose	Switches rows and columns.

AutoFill

- Enter the first item, or the first two values if Excel needs a pattern.
- Select the starting cell or cells.
- Point to the small square at the bottom-right of the selection.
- Drag the fill handle.
- If needed, use Auto Fill Options to choose Copy Cells, Fill Series, Fill Weekdays or Fill Formatting Only.



Flash Fill

Flash Fill recognises an example pattern and fills the remaining rows. Start typing the required result in the adjacent column, provide a clear example and press Ctrl+E. Always check the results because Flash Fill creates fixed values, not formulas.



Tables, sorting and filtering

Organise a list so it is easier to manage and analyse.

Learning outcomes

- By the end of this module, you will be able to convert a range to an Excel table.
- By the end of this module, you will be able to sort records.
- By the end of this module, you will be able to filter records.
- By the end of this module, you will be able to protect the integrity of a dataset.

Create an Excel table

- Click anywhere inside the data.
- Choose Home > Format as Table, or press Ctrl+T.
- Choose a style.
- Confirm the range and make sure My table has headers is selected.
- On Table Design, type a meaningful table name, for example Salary.

Why tables help

- Filter arrows are added automatically.
- New rows inherit the table formatting and formulas.
- Banded rows improve readability.
- Structured table names can make formulas easier to understand.
- The table expands as records are added next to it.

Sort and filter

Action	Example
Sort A to Z / Smallest to Largest	Names alphabetically or salary from low to high.
Sort Z to A / Largest to Smallest	Most recent date or highest sales first.
Filter by selection	Show one department or status.
Number filter	Show salaries greater than 55,000.
Date filter	Show records within a month or after a chosen date.
Clear filter	Restore all records.

Keep rows together

Sort the whole table, not a single column. A single-column sort can separate names from their correct salary, date or department.

Text tools and data cleaning

Standardise inconsistent workplace data.

Learning outcomes

- By the end of this module, you will be able to clean extra spaces and inconsistent case.
- By the end of this module, you will be able to join and split text.
- By the end of this module, you will be able to find and replace values.
- By the end of this module, you will be able to remove duplicates.
- By the end of this module, you will be able to use Text to Columns and Flash Fill.

Useful text functions

Function	Purpose	Example
TRIM	Removes extra spaces except single spaces between words	=TRIM(A2)
UPPER	Changes text to uppercase	=UPPER(A2)
LOWER	Changes text to lowercase	=LOWER(A2)
PROPER	Capitalises the first letter of each word	=PROPER(A2)
LEFT	Takes characters from the left	=LEFT(A2,2)
RIGHT	Takes characters from the right	=RIGHT(A2,2)
MID	Takes characters from the middle	=MID(A2,3,5)
LEN	Counts characters	=LEN(A2)
CONCAT / &	Joins text	=CONCAT(E2," ",F2) or =E2&" "&F2
SUBSTITUTE	Replaces text inside a value	=SUBSTITUTE(A2,"twitter","X")

Clean, then lock in the results

- Create a new column beside the original data.
- Enter the cleaning formula.
- Copy the formula down.
- Check several results, including unusual entries.
- Copy the cleaned results.
- Use Paste Special > Values over the original column if appropriate.
- Only then remove the temporary formula column.

Text to Columns

- Select the column to split.
- Choose Data > Text to Columns.



- Choose Delimited for separators such as comma, underscore or space, or Fixed Width for aligned text.
- Select the delimiter and review the preview.
- Choose a destination that will not overwrite existing data.
- Choose Finish and inspect the results.

Find, Replace and Remove Duplicates

- Ctrl+F finds a value. Ctrl+H opens Replace.
- Use Replace All carefully. Check the scope, case and whether Excel is looking in formulas or values.
- Data > Remove Duplicates permanently removes repeated records from the selected columns. Keep a backup first.

Lookups with VLOOKUP

Retrieve related information using an invoice number.

Learning outcomes

- By the end of this module, you will be able to explain a lookup.
- By the end of this module, you will be able to write an exact-match VLOOKUP.
- By the end of this module, you will be able to lock the lookup cell.
- By the end of this module, you will be able to diagnose common lookup errors.

What a lookup does

A lookup searches for a key, such as an invoice number, in the first column of a table and returns related information from another column in the same row.

=VLOOKUP(\$L\$3,Shop,2,0)

Part	Meaning
\$L\$3	The invoice number to find. It is locked so the reference does not move.
Shop	The named table or range containing the data.
2	Return the value from the second column of the lookup table.
0	Use an exact match.

Workbook lookup formulas

Product: =VLOOKUP(\$L\$3,Shop,2,0)

Unit Price: =VLOOKUP(\$L\$3,Shop,3,0)

Sales Person: =VLOOKUP(\$L\$3,Shop,8,0)

Common problems

Problem	Likely cause / fix
#N/A	The invoice number was not found, or text and number formats do not match.
#REF!	The requested column number is outside the lookup table.
Wrong answer	Exact match was not used. Use 0 or FALSE for this task.
Formula breaks when copied	Lock the lookup cell or range where required.
Lookup cannot search left	VLOOKUP can only return from a column to the right of its first lookup column.



Charts and worksheet management

Turn a small summary into a clear visual message.

Learning outcomes

- By the end of this module, you will be able to choose an appropriate chart.
- By the end of this module, you will be able to create and format a chart.
- By the end of this module, you will be able to add useful chart elements.
- By the end of this module, you will be able to manage the chart worksheet.

Choose the chart for the message

Chart	Best used for
Column or bar	Comparing categories, for example monthly bookings.
Line	Showing a trend over time.
Pie	Showing a small number of parts of one whole. Avoid when there are many categories.
Scatter	Showing the relationship between two numerical variables.

Create a chart

- Select the headings and values.
- Choose Insert and select a chart type, such as Clustered Column.
- Move and resize the chart using its border and corner handles.
- Add a clear chart title.
- Use the plus icon or Chart Design to add or remove elements such as data labels, legend and axis titles.
- Apply a simple colour scheme with good contrast.

Use summaries, not raw detail

Charts are clearest when built from a small, well-labelled summary table. Avoid charting an entire detailed transaction list unless that is truly the intended message.

Quick chart shortcut

Select the data and press F11 to create a chart on a separate chart sheet. This is useful for a quick view, although you may still need to change the chart type and title.

Page layout, printing, headers and footers

Prepare a worksheet so it prints clearly and professionally.

Learning outcomes

- By the end of this module, you will be able to set print area, orientation, margins and scaling.
- By the end of this module, you will be able to centre data on a printed page.
- By the end of this module, you will be able to add page numbering.
- By the end of this module, you will be able to use Print Preview to prevent wasted pages.

Prepare before printing

- Select the table and choose Page Layout > Print Area > Set Print Area.
- Choose Portrait or Landscape orientation.
- Choose paper size and margins.
- Set scaling only if necessary. Use Fit All Columns on One Page with care because text may become too small.
- Open File > Print or press Ctrl+P.
- Review every preview page before printing.

Centre on the page

- Open the Page Setup dialog using the small launcher arrow in the Page Setup group.
- Choose the Margins tab.
- Under Center on page, select Horizontally and, if suitable, Vertically.

Headers and footers

Headers and footers can show a title, date, file name, worksheet name, page number or total number of pages. They normally appear in Page Layout view and on printed pages rather than in Normal view.

- Open Page Setup and choose Header/Footer, or use Insert > Header & Footer.
- Choose a built-in option or Custom Footer.
- Insert the current page number and total pages, for example Page 1 of 3.
- Return to Print Preview and check the result.

Useful print settings

Setting	Use
Print Titles	Repeat heading rows or columns on every printed page.
Gridlines	Print cell gridlines if required. Often borders give a cleaner result.
Print Selection	Print only the currently selected cells.
Active Sheets	Print the selected worksheet or grouped worksheets.



Entire Workbook	Print every worksheet. Check carefully before using.
Page Break Preview	See where pages will divide and adjust the print area.

Importing, exporting and saving safely

Move data between systems while protecting accuracy.

Learning outcomes

- By the end of this module, you will be able to save in an appropriate file format.
- By the end of this module, you will be able to import delimited text.
- By the end of this module, you will be able to export a worksheet carefully.
- By the end of this module, you will be able to avoid losing formulas or formatting.

Common file formats

Format	Use	Important limitation
.xlsx	Standard Excel workbook.	Does not store VBA macros.
.xlsm	Excel workbook containing macros.	Only use trusted macro-enabled files.
.csv	Plain text, one worksheet, values separated by commas.	No formulas, formatting, charts, multiple sheets or most Excel features.
.pdf	Fixed layout for sharing or printing.	Not intended for continued spreadsheet editing.
.txt	Plain text, often tab-delimited.	No formatting or workbook features.

Import text or CSV data

- Choose Data > From Text/CSV.
- Select the file.
- Check the delimiter, file origin and data preview.
- Check that dates, invoice numbers and leading zeros will be interpreted correctly.
- Choose Load, or Transform Data if more cleaning is required.

Export safely

- Save the working workbook as .xlsx first.
- If exporting to CSV, decide which worksheet should be exported.
- Expect only the active worksheet's values to be saved to CSV.
- Check the exported file before sending it to another system.
- Keep the original workbook so formulas, formatting and multiple worksheets are preserved.

Saving and version control

- Use a meaningful name such as Excel Workplace Essentials - Andrea - Practice.xlsx.
- Use Save As when making a new version.



- Save regularly with Ctrl+S.
- If the file is stored in OneDrive or SharePoint, check the correct account and folder before closing.
- Avoid overwriting the original student task workbook.



Appendix A: Formula and function quick reference

Need	Example
Add	=B2+C2
Subtract	=B2-C2
Multiply	=B2*C2
Divide	=B2/C2
Total	=SUM(B2:B20)
Average	=AVERAGE(B2:B20)
Highest	=MAX(B2:B20)
Lowest	=MIN(B2:B20)
Count numbers	=COUNT(B2:B20)
Count non-blanks	=COUNTA(B2:B20)
Count blanks	=COUNTBLANK(B2:B20)
Today's date	=TODAY()
Remove extra spaces	=TRIM(A2)
Proper case	=PROPER(A2)
Join names	=E2&" "&F2
Exact-match lookup	=VLOOKUP(\$L\$3,Shop,2,0)
Apply fixed rate	=D2*\$N\$2

Formula checklist

Does the formula start with =? Are the cell references correct? Are brackets needed? Should any reference be absolute? Did you copy the formula far enough, but not into totals or headings?



Appendix B: Keyboard shortcuts

Shortcut	Action
Ctrl+S	Save
Ctrl+Z / Ctrl+Y	Undo / Redo
Ctrl+C / Ctrl+X / Ctrl+V	Copy / Cut / Paste
Ctrl+1	Format Cells
Ctrl+F / Ctrl+H	Find / Replace
Ctrl+T	Create a table
Ctrl+P	Print
Ctrl+Home	Go to A1
Ctrl+End	Go to last used cell
Ctrl+Arrow	Jump to edge of data
Ctrl+Page Up / Page Down	Previous / next worksheet
F2	Edit active cell
F4	Change reference locking while editing a formula
F5 or Ctrl+G	Go To
F11	Create a chart sheet from selected data
Alt+=	AutoSum
Ctrl+E	Flash Fill



Appendix C: Troubleshooting and glossary

Common problems

What you see	What to try
#### in a cell	Widen the column. For dates, also check that the result is valid.
#DIV/0!	The formula is dividing by zero or by a blank cell.
#N/A	A lookup could not find the requested value.
#REF!	A formula refers to a deleted or invalid cell.
Formula displayed instead of answer	Change Text format to General, press F2, then Enter. Also check whether Show Formulas is active.
Wrong date	Check the regional date order and the cell's date format.
Filter seems to hide records	Clear filters from the table or Data tab.
Copied formula gives wrong result	Check the relative and absolute references.
Print preview has extra blank pages	Check print area, page breaks, hidden formatting and scaling.

Glossary

Term	Meaning
Active cell	The currently selected cell.
Cell reference	A cell address such as B4.
Formula	An instruction beginning with = that calculates a result.
Function	A built-in formula such as SUM or AVERAGE.
Range	A group of cells, for example A2:D20.
Relative reference	A reference that adjusts when copied.
Absolute reference	A locked reference such as \$N\$2.
Workbook	The Excel file containing one or more worksheets.
Worksheet	A single sheet or tab inside the workbook.
Table	A structured Excel data range with headers and filters.
Delimiter	A character used to separate text fields, such as a comma.
Print area	The part of the worksheet chosen for printing.

End-of-course confidence check

- ☐ I can navigate a workbook and manage worksheets.
- ☐ I can write and copy basic formulas.
- ☐ I can use SUM, AVERAGE, MAX, MIN and COUNT.
- ☐ I can use an absolute reference for a fixed rate.



- ☐ I can format numbers, currency, percentages, dates and times.
- ☐ I can use paste options, AutoFill and Flash Fill.
- ☐ I can create, sort and filter an Excel table.
- ☐ I can clean text and split or join values.
- ☐ I can use an exact-match VLOOKUP.
- ☐ I can create a clear chart.
- ☐ I can prepare a worksheet for printing.
- ☐ I understand the risks of CSV and can save safely.

You do not need to remember every command. You need to know what is possible, where to look and how to check your result.