

# Excel explorers

A beginner course with illustrated steps, computer tasks and pencil-and-paper practice.

Name: \_\_\_\_\_ Class: \_\_\_\_\_

Week beginning: \_\_\_\_\_

## Your mission

Turn small lists of information into tidy tables, useful totals and a clear chart. Work for about 40 minutes each day.

| Day | Lesson                 | You will make            | Pages |
|-----|------------------------|--------------------------|-------|
| 1   | Meet cells             | A school-supplies list   | 3-4   |
| 2   | Make a tidy table      | A reading log            | 5-6   |
| 3   | Try simple formulas    | A marble score table     | 7-8   |
| 4   | Find totals with SUM   | A weekly reading total   | 9-10  |
| 5   | Make and print a chart | A classroom-games report | 11-13 |

## A simple daily routine

8 minutes: watch and try the example.

20 minutes: complete the computer activity.

8 minutes: answer the paper questions.

4 minutes: check your work and save it.

## What you need

A computer with Excel, this printed pack and a pencil. Ask an adult to help you open Excel and choose a folder for your work. All example data are made up for practice.

## For the adult

Print on A4, portrait, at Actual size / 100%. Black-and-white printing is fine. The separate answer guide is for checking after the child tries. Pages 14-16 are optional review and reference.

# Find your way around Excel

Read this page with an adult. The drawing is a simplified worksheet, not a screenshot.

| Word         | What it means                                            |
|--------------|----------------------------------------------------------|
| Workbook     | The Excel file you save. It can contain worksheets.      |
| Worksheet    | One sheet of cells inside a workbook.                    |
| Cell         | One box where you can enter text, a number or a formula. |
| Row / column | A row goes across. A column goes down.                   |

Column letters sit above the cells. Row numbers sit beside them.

|   | A       | B     | C       |
|---|---------|-------|---------|
| 1 | Fruit   | Votes | Note    |
| 2 | Apples  | 4     | Example |
| 3 | Mangoes | 7     |         |

Find B3

Read the letter first: column B. Then read the number: row 3. The outlined cell B3 contains 7. A cell address is also called a cell reference.

| Part of Excel | Look for it                                                                  |
|---------------|------------------------------------------------------------------------------|
| Ribbon        | The tool area near the top: Home, Insert and other tabs.                     |
| Name Box      | The box near the formula bar that shows the selected cell address.           |
| Formula bar   | The long box above the grid that shows the selected cell content or formula. |
| Sheet tab     | The worksheet name near the bottom, such as Sheet1.                          |

A range is a group of cells. A1:B3 means all six cells in the rectangle from A1 to B3.

# Meet cells

Today I can find a cell, type information and save a workbook.

Excel keeps information in a grid. In this lesson, the item names are text and the quantities are numbers.

|   | A         | B      |
|---|-----------|--------|
| 1 | Item      | Number |
| 2 | Pencils   | 8      |
| 3 | Erasers   | 3      |
| 4 | Rulers    | 4      |
| 5 | Notebooks | 6      |

Type only the contents inside the grid. Excel already shows the column letters and row numbers.

## Follow the steps

1. Open Excel. Choose **Blank workbook**. Click cell A1.
2. Type **Item**. Press Enter. Click B1 and type **Number**. Press Enter.
3. Click each cell shown above and type its contents. For example, type **Pencils** in A2 and **8** in B2.
4. Click B4. Find its address in the Name Box. The cell should show 4.
5. Double-click the Sheet1 tab. Type **Supplies** and press Enter.
6. Choose **File > Save As**. Use the folder your adult chooses. Name the file **Day1\_Supplies.xlsx** and save as an Excel Workbook.

### Small keyboard helpers

Enter finishes your entry. Click another cell to move there. Ctrl + S saves later changes. Ctrl + Z undoes the last action.

# Cell detective

Use the printed table on page 3 for questions 1-5. Write first, then check in Excel.

1. What is in cell B2?

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2. What is the address of the cell containing Rulers?

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3. Cell B5 is in column \_\_\_\_\_ and row \_\_\_\_\_.

4. Write one cell address containing text and one containing a number.

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5. A cell is in column C, row 4. Write its address.

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## Now do it on the computer

1. Open your Supplies sheet. Click B3. Type **5** and press Enter to replace 3.
2. Add a new item: type **Glue** in A6 and **2** in B6.
3. Try Undo: replace B6 with 20 and press Enter. Press **Ctrl + Z** once. B6 should return to 2.
4. Press **Ctrl + S**. With an adult, close the workbook and open it again from its saved folder.

- ☐ I can point to a row and a column.
- ☐ My reopened file has 5 in B3 and 2 in B6.
- ☐ I can say where my file was saved.

One thing I learnt today:

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# Make a tidy table

Today I can select a range, format headings and make all my words visible.

|   | A         | B       |
|---|-----------|---------|
| 1 | Day       | Minutes |
| 2 | Monday    | 15      |
| 3 | Tuesday   | 20      |
| 4 | Wednesday | 10      |
| 5 | Thursday  | 25      |
| 6 | Friday    | 20      |

## Follow the steps

1. Start a new blank workbook. Type the table into A1:B6. Rename the sheet **Reading**.
2. Select the headings: click A1, hold the mouse button and drag to B1. This range is **A1:B1**.
3. On **Home**, choose **Bold** (the B button). Use **Fill Color** to give these two cells a very light grey background.
4. Select **A1:B6**. On Home, open the **Borders** arrow and choose **All Borders**.
5. At the top of the grid, double-click the line between column letters A and B. Column A fits its longest entry. Repeat between B and C for column B.
6. Save as **Day2\_Reading.xlsx**. Check that Wednesday and Minutes are fully visible.

What changed?

Formatting changes how the table looks. It does not change the reading minutes. A1:B6 includes both columns A and B and rows 1 through 6.

# Reading-log designer

Read the original table on page 5 to answer questions 1-3.

1. On which day was the reading time longest? How many minutes?

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2. On which day was the reading time shortest? How many minutes?

---

3. Write the range that includes the headings and all five days.

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## Now improve your workbook

1. In your Reading sheet, change Wednesday to **18 minutes**. Replace the number in B4.

2. Select A1:B1. On Home, change the font size to **14**. Keep the headings readable.

3. Fit columns A and B again. Check that the borders surround every cell in A1:B6. Save your work.

4. What number should be in B4 now?

---

5. Does changing a cell background change its number? Explain.

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- ☐ My headings are easy to read.
- ☐ My full table has borders.
- ☐ No day name is cut off, and I saved the changed file.

# Let Excel calculate

Today I can write a formula and use a cell reference.

A formula is an instruction to calculate

Start it with **=**. Excel shows the answer in the cell. Select that cell to see the formula in the formula bar.

|   | A      | B     | C     | D   |
|---|--------|-------|-------|-----|
| 1 | Player | Start | Added | Now |
| 2 | Mia    | 6     | 3     |     |
| 3 | Arun   | 8     | 4     |     |
| 4 | Jo     | 5     | 2     |     |

## Try one together

1. Start a blank workbook. Enter the table in A1:D4. Leave D2:D4 empty. Rename the sheet **Marbles**.
2. Click D2. Type **=B2+C2** and press Enter. Mia has 6 + 3 marbles, so D2 shows **9**.
3. Click D2 again. Find **=B2+C2** in the formula bar. B2 and C2 tell Excel which numbers to add.
4. Save as **Day3\_Marbles.xlsx**. Finish the other two rows on page 8.

| Job      | Excel symbol | Worked example |
|----------|--------------|----------------|
| Add      | +            | =7+2 gives 9   |
| Subtract | -            | =9-4 gives 5   |
| Multiply | *            | =3*4 gives 12  |
| Divide   | /            | =12/3 gives 4  |

For multiplication, type the star \* rather than the letter x. Keep these examples separate: use one operation at a time.

# Formula workshop

Use the Marbles table from page 7. Leave the numbers in their original cells.

## Complete the computer task

- 1. In D3, write a formula that adds B3 and C3. Press Enter.
- 2. In D4, write a formula that adds B4 and C4. Press Enter.
- 3. Change Mia's Added value in C2 from 3 to **5**. Look at D2. Then change C2 back to **3** and save.

| Cell | Formula I typed | Result |
|------|-----------------|--------|
| D3   |                 |        |
| D4   |                 |        |

- 1. What did D2 show while C2 was 5? Why did it change?

## Pencil practice: work out the answers

| Formula | Answer |
|---------|--------|
| =7+5    |        |
| =18-6   |        |
| =4*3    |        |
| =16/4   |        |

- 2. A learner types 5+2 and expects 7. What symbol must go first?

- ☐ My formulas begin with =.
- ☐ My formula uses the cell addresses from the same row.

# Add a group with SUM

Today I can total a range of numbers and check the result.

|   | A         | B     |
|---|-----------|-------|
| 1 | Day       | Pages |
| 2 | Monday    | 8     |
| 3 | Tuesday   | 12    |
| 4 | Wednesday | 10    |
| 5 | Thursday  | 6     |
| 6 | Friday    | 14    |
| 7 | Total     |       |

## Follow the steps

1. Start a blank workbook. Enter the table into A1:B7. Leave B7 empty. Rename the sheet **Pages**.
2. Click B7. Type =SUM(B2:B6) and press Enter.
3. B7 should show **50**. Check by adding  $8 + 12 + 10 + 6 + 14$  on paper.
4. Add borders to A1:B7. Make the headings easy to read, fit the columns and save as **Day4\_Pages.xlsx**.

Read the formula in parts

= begins the formula. SUM means add. The brackets contain the cells to add. B2:B6 means B2 through B6, including both ends.

Keep the total outside the range being added. In B7, do not use B2:B7: that would ask the total to include itself.

# Total it, then test it

A good spreadsheet total changes when one of its input numbers changes.

1. List all the cell addresses in the range B2:B6.

2. In the Pages sheet, what exact formula belongs in B7?

## Test your total in Excel

Before changing anything, predict the new total if Thursday rises from 6 to 9 pages.

My prediction: \_\_\_\_\_ pages

1. Change B5 from 6 to **9**. Check the result in B7.

2. Write the result here: \_\_\_\_\_ pages.

3. Restore B5 to **6**. Check that B7 returns to 50. Save your workbook.

## Another range: fruit votes

|   | A       | B     |
|---|---------|-------|
| 1 | Fruit   | Votes |
| 2 | Apples  | 4     |
| 3 | Mangoes | 7     |
| 4 | Bananas | 3     |
| 5 | Oranges | 6     |
| 6 | Total   |       |

3. Write a SUM formula for B6 in this fruit table.

4. What total should the fruit table show?

☐ I included every number once.

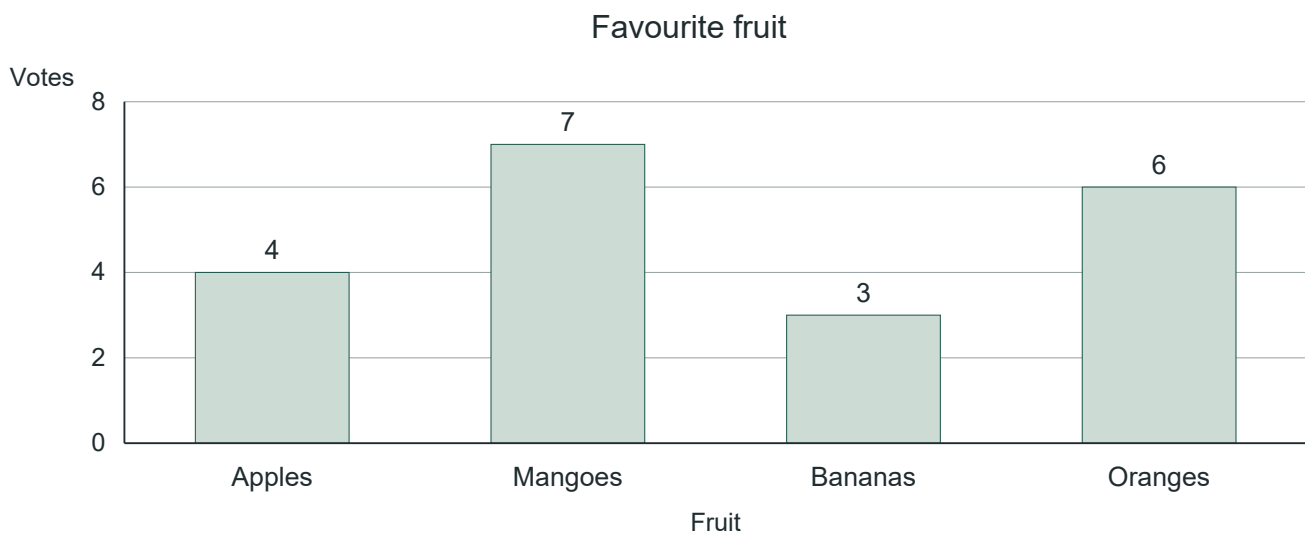
☐ I kept the total cell outside the range I added.

# Turn numbers into a chart

Today I can compare categories with a column chart.

Worked example: fruit votes. Start a new workbook and enter the fruit table from page 10 into A1:B5 only. Do not enter its Total row.

1. Select **A1:B5**, including the headings Fruit and Votes.
2. Choose **Insert > Insert Column or Bar Chart > 2-D Column > Clustered Column**.
3. Click the chart title and change it to **Favourite fruit**.
4. With the chart selected, use **Chart Design > Add Chart Element > Axis Titles**. Add a horizontal title **Fruit** and a vertical title **Votes**.
5. Move the chart away from the table by dragging its outer border. Save as **Day5\_FruitExample.xlsx**.



This is an illustrated example. Your Excel chart may use different colours. Numbers above the columns are optional.

## Read the chart

The names along the bottom are categories. The vertical scale shows votes. Mangoes has the tallest column because 7 is the largest number. Each column starts at zero.

# Our classroom games

Make your own small report. Use the made-up votes below.

|   | A         | B     |
|---|-----------|-------|
| 1 | Game      | Votes |
| 2 | Chess     | 6     |
| 3 | Football  | 8     |
| 4 | Skipping  | 4     |
| 5 | Badminton | 2     |
| 6 | Total     |       |

## Build the report in Excel

1. Start a new workbook. Enter the table in A1:B6 and leave B6 empty. Rename the sheet **Games**.
2. Use **SUM** in B6 to add the four vote numbers. Check the answer on paper.
3. Format the headings, add borders and fit both columns.
4. Select **A1:B5 only**. Create a 2-D clustered column chart. Leave the Total row out: it is not a game.
5. Use the chart title **Our classroom games**, horizontal axis title **Game** and vertical axis title **Votes**. Save as **Day5\_Games.xlsx**.

1. Which game has the most votes? How many?

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2. How many more votes does Football have than Badminton?

---

3. What is the total number of votes?

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# Give your report a final check

Use your Games workbook from page 12. Ask an adult to help with print settings.

## Does your report respond to a change?

1. Change Skipping in B4 from 4 to **7**. The Skipping column should become taller. Write the new total: \_\_\_\_\_.
2. Change B4 back to **4**. Check that the chart changes back, then save.

## Prepare one A4 page in Excel for Windows

1. Move the chart below the table. Drag its outer border near A9. Resize it with a corner handle so the table and chart fit inside **A1:F24**.
  2. Click outside the chart. Select **A1:F24**. On **Page Layout > Print Area**, choose **Set Print Area**.
  3. On Page Layout, set **Size: A4** and **Orientation: Portrait**. In Scale to Fit, set **Width: 1 page** and **Height: 1 page**.
  4. Open **File > Print**. Choose **Print Active Sheets**. Check the preview: the whole table, title and chart must be visible and readable.
  5. If anything is too small or cut off, return to the sheet and resize the chart or columns. Preview again. Save the workbook. Print only when your adult says it is ready.
- ☐ The total adds exactly four vote numbers.
  - ☐ The chart has four columns; Total is not one of them.
  - ☐ The table and chart fit on one readable A4 page.

If you are using Excel on the web

Use Excel's own File > Print command. Its print options and chart menus can look different. An adult can help choose the current selection and A4 in the print preview. You can check the preview without using a printer.

# My end-of-week check

Try without help first. Each question is worth 1 mark. Total: 10 marks.

|   | A       | B      |
|---|---------|--------|
| 1 | Item    | Number |
| 2 | Pens    | 4      |
| 3 | Pencils | 6      |
| 4 | Rulers  | 2      |

- 1. Write the cell address containing Pencils: \_\_\_\_\_
- 2. What is in B4? \_\_\_\_\_
- 3. B3 is in column \_\_\_\_\_ and row \_\_\_\_\_.
- 4. Which symbol starts an Excel formula? \_\_\_\_\_
- 5. Write a formula that adds B2 and B3: \_\_\_\_\_
- 6. What answer will that formula give? \_\_\_\_\_
- 7. What answer does =3\*4 give? \_\_\_\_\_
- 8. Use SUM to add B2 through B4: \_\_\_\_\_
- 9. Which keyboard shortcut saves changes? \_\_\_\_\_
- 10. Which item would have the tallest column in a chart? \_\_\_\_\_

Score: \_\_\_\_\_ / 10 One skill I will practise again: \_\_\_\_\_

# Plan your own table

Choose a small topic: toy cars, books read, game scores or pretend fruit votes.

My topic: \_\_\_\_\_

Use row 1 for headings. Choose one column for names and one for numbers. Use small whole numbers. Write a total formula below your numbers.

|    | A | B | C | D | E |
|----|---|---|---|---|---|
| 1  |   |   |   |   |   |
| 2  |   |   |   |   |   |
| 3  |   |   |   |   |   |
| 4  |   |   |   |   |   |
| 5  |   |   |   |   |   |
| 6  |   |   |   |   |   |
| 7  |   |   |   |   |   |
| 8  |   |   |   |   |   |
| 9  |   |   |   |   |   |
| 10 |   |   |   |   |   |
| 11 |   |   |   |   |   |
| 12 |   |   |   |   |   |

My total formula will be:

My chart title will be:

- ☐ My headings explain what the data mean.
- ☐ My formula adds the correct cells.
- ☐ I can describe one thing my chart shows.

# My Excel quick guide

Use this page when you need a small reminder.

| I want to...            | What to do                                           |
|-------------------------|------------------------------------------------------|
| Find a cell             | Read the column letter, then the row number: B3.     |
| Select a range          | Drag from the first cell to the last, such as A1:B5. |
| Replace a value         | Click the cell, type the new value and press Enter.  |
| Save changes            | Press Ctrl + S. Use Save As to name a new file.      |
| Undo a mistake          | Press Ctrl + Z.                                      |
| Make headings stand out | Select them. Use Home > Bold and a light Fill Color. |
| Fit a long word         | Double-click the right edge of its column heading.   |
| Add borders             | Select the range. Use Home > Borders > All Borders.  |

## Four useful formula patterns

| Formula     | Meaning                      |
|-------------|------------------------------|
| =B2+C2      | Add the values in B2 and C2. |
| =B2-C2      | Subtract C2 from B2.         |
| =B2*C2      | Multiply B2 by C2.           |
| =SUM(B2:B6) | Add B2, B3, B4, B5 and B6.   |

If something looks wrong

Check the cell address, the starting = sign and the formula range. Use \* for multiplication. If a word is cut off or you see #####, try widening the column. Ask an adult if it still looks wrong.

Menu guide: English Excel for Windows (Microsoft 365 / Excel 2021 or 2024). Excel on the web has similar core tools but some menus differ. This is an original beginner course, not a board-specific syllabus.