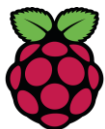


Unit introduction

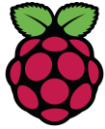
The spreadsheet unit for Year 7 takes learners from having very little knowledge of spreadsheets to being able to confidently model data with a spreadsheet. The unit uses engaging activities to progress learners from using basic formulas to writing their own COUNTIF statements. This unit will give learners a good set of skills that they can use in computing lessons and in other subject areas.

Overview of lessons

Lesson	Brief overview	Learning objectives
Lesson 1: Getting to know a spreadsheet	This lesson introduces learners to the concept of spreadsheets and why spreadsheets are useful. They will learn how to navigate a spreadsheet via its rows and columns, and become familiar with the cell referencing system. They will locate and select ranges of cells and change cells' background colour and border properties.	<ul style="list-style-type: none">• Identify columns, rows, cells, and cell references in spreadsheet software• Use formatting techniques in a spreadsheet
Lesson 2: Quick calculations	In this lesson, learners will practise entering text into cells of a spreadsheet and then learn how to perform calculations on the data using basic formulas and cell references. They will learn how to use the autofill tool to duplicate cells and continue a linear pattern, and then combine the autofill tool with basic formulas to quickly populate a results column with calculations.	<ul style="list-style-type: none">• Use basic formulas with cell references to perform calculations in a spreadsheet (+, -, *, /)• Use the autofill tool to replicate cell data



Lesson 3: Collecting data	This lesson begins with a recap of the previous lesson's content and some further practise of using formulas. Then learners will discover the difference between data and information, and between primary and secondary sources of data. They will then design a survey to collect some data of their own for use in the next lessons.	<ul style="list-style-type: none"> • Explain the difference between data and information • Explain the difference between primary and secondary sources of data • Collect data
Lesson 4: Become a data master!	In this lesson, learners will discover how to use functions to analyse data in a spreadsheet. As well as learning how to automatically create charts from data, they will be introduced to four functions: SUM, MAX, MIN, and COUNTA. Functions allow you to very quickly calculate results. The functions covered in this lesson are used to calculate totals, find the maximum and minimum values in a range, and count populated (i.e. non-blank) cells.	<ul style="list-style-type: none"> • Analyse data • Create appropriate charts in a spreadsheet • Use the functions SUM, COUNTA, MAX, and MIN in a spreadsheet
Lesson 5: Level up your data skills!	This lesson will introduce learners to three more functions – COUNTIF, AVERAGE, and IF – and to how they can sort and filter a spreadsheet. Learners will work on a larger data set to get a feel for analysing real-world data using spreadsheets.	<ul style="list-style-type: none"> • Analyse data • Use a spreadsheet to sort and filter data • Use the functions AVERAGE, COUNTIF, and IF in a spreadsheet
Lesson 6: Assessment	In this lesson, learners will discover how to use conditional formatting, whereby the appearance of a cell changes automatically depending on	<ul style="list-style-type: none"> • Use conditional formatting in a spreadsheet



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	the data it contains, according to rules the learners themselves set. They then complete an end-of-unit summative assessment.	<ul style="list-style-type: none">• Apply all of the spreadsheet skills covered in this unit
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Progression

This unit progresses learners' knowledge and understanding of modelling data using a spreadsheet. Due to the transitional nature of Year 7, the unit assumes that learners have little to no experience of using spreadsheets.

Please see the learning graph for this unit for more information about progression.

Curriculum links

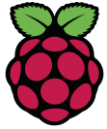
[National curriculum links](#)

- Design, use, and evaluate computational abstractions that model the state and behaviour of real-world problems and physical systems
- Undertake creative projects that involve selecting, using, and combining multiple applications, preferably across a range of devices, to achieve challenging goals, including collecting and analysing data and meeting the needs of known users

Assessment

Summative assessment

- Assessment is covered by Lesson 6 of this unit.



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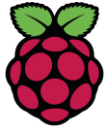
Subject knowledge

This unit focuses on spreadsheet skills. To teach this unit, you will need to know how to:

- Use cell references
- Use the autofill tool
- Format data
- Create formulas for add, subtract, divide, and multiply
- Create functions for SUM, COUNTA, AVERAGE, MIN, MAX, and COUNTIF
- Sort and filter data
- Create graphs
- Use conditional formatting

The most common spreadsheet applications in schools are Microsoft Excel (Office 365) and Google Sheets (G Suite). If your school uses these applications and you are unsure of how to use them, both companies provide free online courses (certification requires a fee):

- [The Google Education: Teacher Center](#) (G Suite account required)
- [Microsoft Certified Educator](#) (Office 365 account required)



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Face-to-face and live remote CPD

We offer a range of professional development courses, designed to help you teach computing. The following courses have been identified to offer support with teaching spreadsheets:

- [Maths in computer science \(face to face\)](#)
- [Maths in computer science \(remote\)](#)

Resources are updated regularly — the latest version is available at: ncce.io/tcc.

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