

Scheme of Learning: Year 7 Computing

Topic Sequence:

1	2	3	4	5	6
Messaging in digital media	Networks from semaphores to the Internet	Programming essentials in Scratch – part I	Modelling data using spreadsheets	Programming essentials in Scratch – part II	Using media – Gaining support for a cause

Topic Overview:

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.

Lesson Sequence:

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.

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.

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.

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.

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.

Lesson 6: Assessment: In this lesson, learners will discover how to use conditional formatting, whereby the appearance of a cell changes automatically depending on the data it contains, according to rules the learners themselves set. They then complete an end-of-unit summative assessment.

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

Sequence of Lessons:

1	Getting to know a spreadsheet
2	Quick calculations
3	Collecting data
4	Become a data master!
5	Level up your data skills!
6	Assessment

Topic Resources:

Knowledge Map:	7.4 - Spreadsheets	Any other Resources:	Excel
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Assessment:

Knowledge:	Set out the number of knowledge questions for this topic
Application of Knowledge:	A description of how the pupil will be expected to apply the knowledge here – see example summary for reference

Supportive Reading:

BBC Bite Size	How spreadsheets work - Spreadsheets - KS3 ICT Revision - BBC Bitesize
KS3 Computing Complete Revision & Practice - CGP	Chapter 3 Available from: KS3 Computing Complete Revision & Practice CGP Books