

## Topic 1 - using computers safely

We begin studying in Year 7 by giving pupils access to the Office 365 suite of software. Pupils will also be given their username and password for the school systems.

**1. Binary** – What do you know? What do you not know? This initial base line test will assess how much you already know about IT and computing so we can tailor lessons to individual student ability.

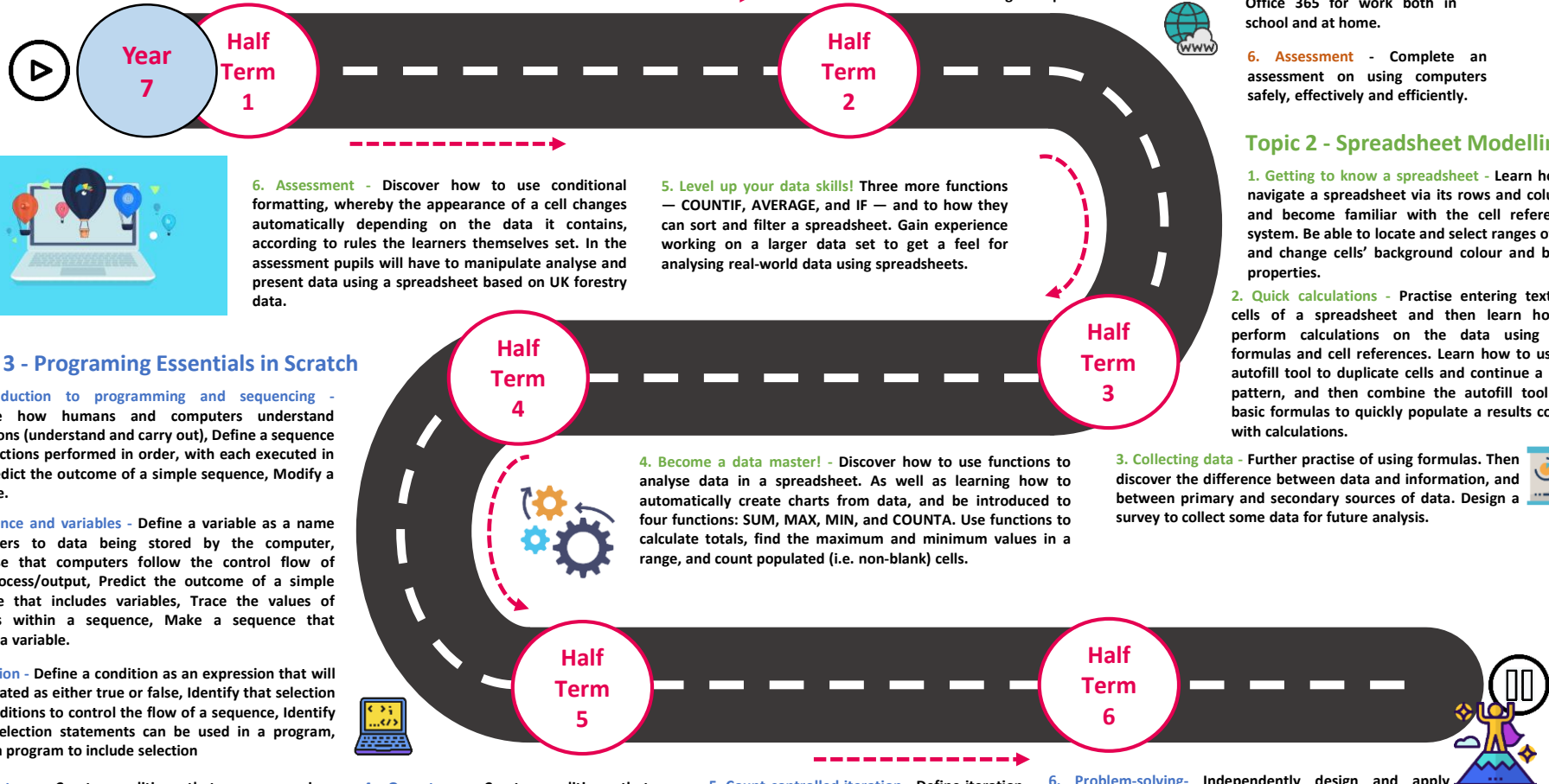
**2. E-Safety** – Learn how to log and use the school's IT system efficiently. Understand how to search for accurate and reliable information and know what to do to report concerns and stay safe online.

**3. The Internet** - What is the difference between the World Wide Web and the Internet? How does the internet work? How can you be sure information online is reliable? How can you search efficiently.

**4. Searching the web** - How you locate accurate information on the Internet? Learn advanced search techniques and how to spot "fake news". Understand how search engines operate.

**5. Microsoft Office** - Which Office application is right for the job? Learn how to use Office 365 for work both in school and at home.

**6. Assessment** - Complete an assessment on using computers safely, effectively and efficiently.



**6. Assessment** - 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. In the assessment pupils will have to manipulate analyse and present data using a spreadsheet based on UK forestry data.

**5. Level up your data skills!** Three more functions – COUNTIF, AVERAGE, and IF – and to how they can sort and filter a spreadsheet. Gain experience working on a larger data set to get a feel for analysing real-world data using spreadsheets.

## Topic 3 - Programming Essentials in Scratch

**1. Introduction to programming and sequencing** - Compare how humans and computers understand instructions (understand and carry out), Define a sequence as instructions performed in order, with each executed in turn, Predict the outcome of a simple sequence, Modify a sequence.

**2. Sequence and variables** - Define a variable as a name that refers to data being stored by the computer, Recognise that computers follow the control flow of input/process/output, Predict the outcome of a simple sequence that includes variables, Trace the values of variables within a sequence, Make a sequence that includes a variable.

**3. Selection** - Define a condition as an expression that will be evaluated as either true or false, Identify that selection uses conditions to control the flow of a sequence, Identify where selection statements can be used in a program, Modify a program to include selection

**4. Operators** - Create conditions that use comparison operators (>,<,<=), Create conditions that use logic operators (and/or/not), Identify where selection statements can be used in a program that include comparison and logical operators



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**4. Become a data master!** - Discover how to use functions to analyse data in a spreadsheet. As well as learning how to automatically create charts from data, and be introduced to four functions: SUM, MAX, MIN, and COUNTA. Use functions to calculate totals, find the maximum and minimum values in a range, and count populated (i.e. non-blank) cells.

**3. Collecting data** - Further practise of using formulas. Then discover the difference between data and information, and between primary and secondary sources of data. Design a survey to collect some data for future analysis.



**5. Count-controlled iteration** - Define iteration as a group of instructions that are repeatedly executed, Describe the need for iteration, Identify where count-controlled iteration can be used in a program, Implement count-controlled iteration in a program, Detect and correct errors in a program (debugging)

**6. Problem-solving** - Independently design and apply programming constructs to solve a problem (subroutine, selection, count-controlled iteration, operators, and variables)  
**Assessment** - Summative assessment task where pupils are required to independently work through tasks to complete a dance move game.

