**Computing Phase Overview**
**UKS2**

**Cycle A**

| Systems and searching | Flat-file databases | Communication and collaboration | Webpage creation | Introduction to spreadsheets | Sensing Movement. |
|---|---|---|---|---|---|
| **E1, E2, E4, E5** | **E3, E4, C2** | **S4, C7, E2, E4** | **C2, E3, E4, E5** | **C4, E4** | **S4, S5, S6, S7, E4** |
| **Subject Specific Vocabulary** | | | | | |
| **system, input, process, output, search engine, web crawlers, index, rank** | **database, group, sort, order, values, criteria, filter, compare** | **internet, data, device, transfer, media, public, private,** | **website, media, HTML, layout, copyright, content, web page, navigation path, link, hyperlink** | **spreadsheet, data, cell, format, formula, input, output, duplicate** | **program, emulator, transfer, variable, value, operand, algorithm, debug** |
| **I will…** | | | | | |
| • explain that computers can be connected together to form systems<br>• recognise the role of computer systems in our lives<br>• identify how to use a search engine<br>• describe how search engines select results<br>• explain how search results are ranked<br>• recognise why the order of results is important, and to whom | • use a form to record information<br>• compare paper and computer-based databases<br>• outline how you can answer questions by grouping and then sorting data<br>• explain that tools can be used to select specific data<br>• explain that computer programs can be used to compare data visually<br>• use real-world databases to answer questions | • explain the importance of internet addresses<br>• recognise how data is transferred across the internet<br>• explain how sharing information online can help people work together<br>• evaluate different ways of working together online<br>• recognise how we communicate using technology<br>• evaluate different methods of online communication | • review an existing website and consider its structure<br>• plan the features of a web page<br>• consider ownership and use of images (copyright)<br>• recognise the need to preview pages<br>• outline the need for a navigation path<br>• recognise the implications of linking content owned by other people | • create a data set in a spreadsheet<br>• build a data set in a spreadsheet<br>• explain that formulas can be used to produce calculated data<br>• apply formulas to data<br>• create a spreadsheet to plan an event<br>• choose suitable ways to present data | • create a program run on a controllable device<br>• explain that selection can control the flow of a program<br>• update a variable with a user input<br>• use a conditional statement to compare a variable to a value<br>• design a project that uses inputs and outputs on a controllable device.<br>• develop a program to use inputs and output on a controllable device |

**Computing Phase Overview**
**UKS2**

**Cycle B**

| Video production | Selection in physical computing | Selection in quizzes | Variables in games | Introduction to vector graphics | 3D modelling |
|---|---|---|---|---|---|
| **C1, E4, E5** | **S1, S4, S5, S6, E4** | **S4, S5, S6, S8, E4** | **S2, S4, S5, S6, E4, E5** | **C5, E4** | **C6, E4, E5** |
| **Subject Specific Vocabulary** | | | | | |
| visual media, features, record, microphone, edit | circuit, microcontroller, LED, infinite loop, count-controlled loop, condition, algorithm, debug | condition, modify, infinite loop, outcome, algorithm, program, | variable, placeholder, program, algorithm, | vector drawings, shape, line, move, resize, rotate, duplicate, alignment, | Three dimensional (3D), perspectives, resize, recolour, lift/lower, duplicate, rotate, placeholder, combine |
| **I will …** | | | | | |
| • explain what makes a video effective<br>• use a digital device to record video<br>• capture video using a range of techniques<br>• create a storyboard<br>• identify that video can be improved through reshooting and editing<br>• consider the impact of the choices made when making and sharing a video | • control a simple circuit connected to a computer<br>• write a program that includes count-controlled loops<br>• explain that a loop can stop when a condition is met<br>• explain that a loop can be used to repeatedly check whether a condition has been met<br>• design a physical project that includes selection<br>• create a program that controls a physical computing project | • explain how selection is used in computer programs<br>• relate that a conditional statement connects a condition to an outcome<br>• explain how selection directs the flow of a program<br>• design a program that uses selection<br>• evaluate my program | • define a 'variable' as something that is changeable<br>• explain why a variable is used in a program<br>• choose how to improve a game using variables<br>• design a project that builds on a given example<br>• use my design to create a project<br>• evaluate my project | • identify that drawing tools can be used to produce different outcomes<br>• create a vector drawing by combing shapes<br>• use tools to achieve a desired effect<br>• recognise that vector drawings consist of layers<br>• group objects to make them easier to work with<br>• apply what I have learned about vector drawings | • recognise that you can work in three dimensions on a computer<br>• identify that digital 3D objects can be modified<br>• recognise that objects can be combined in a 3D model<br>• create a 3D model for a given purpose<br>• plan my own 3D model<br>• create my own digital 3D model |