



# Copplestone Computing Curriculum

## Year 5

### Overview and Small Steps

Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
<p>Computing systems and networks – Systems and searching (<i>IT and DL</i>)</p> <ol style="list-style-type: none"> <li>1. To explain that computers can be connected together to form systems</li> <li>2. To recognise the role of computer systems in our lives</li> <li>3. To experiment with search engines</li> <li>4. To describe how search engines select results</li> <li>5. To explain how search results are ranked</li> <li>6. To recognise why the order of results is important, and to whom</li> </ol>	<p>Creating media – Video production (<i>DL and IT</i>)</p> <ol style="list-style-type: none"> <li>1. To explain what makes a video effective</li> <li>2. To identify digital devices that can record video</li> <li>3. To capture video using a range of techniques</li> <li>4. To create a storyboard</li> <li>5. To identify that video can be improved through reshooting and editing</li> <li>6. To consider the impact of the choices made when making and sharing a video</li> </ol>	<p>Programming A – Selection in physical computing (<i>CS and IT</i>)</p> <ol style="list-style-type: none"> <li>1. To control a simple circuit connected to a computer</li> <li>2. To write a program that includes count-controlled loops</li> <li>3. To explain that a loop can stop when a condition is met</li> <li>4. To explain that a loop can be used to repeatedly check whether a condition has been met</li> <li>5. To design a physical project that includes selection</li> <li>6. To create a program that controls a physical computing project</li> </ol>	<p>Data and information – Flat-file databases (<i>IT and DL</i>)</p> <ol style="list-style-type: none"> <li>1. To use a form to record information</li> <li>2. To compare paper and computer-based databases</li> <li>3. To outline how you can answer questions by grouping and then sorting data</li> <li>4. To explain that tools can be used to select specific data</li> <li>5. To explain that computer programs can be used to compare data visually</li> <li>6. To use a real-world database to answer questions</li> </ol>	<p>Creating media – Introduction to vector graphics (<i>IT</i>)</p> <ol style="list-style-type: none"> <li>1. To identify that drawing tools can be used to produce different outcomes</li> <li>2. To create a vector drawing by combining shapes</li> <li>3. To use tools to achieve a desired effect</li> <li>4. To recognise that vector drawings consist of layers</li> <li>5. To group objects to make them easier to work with</li> <li>6. To apply what I have learned about vector drawings</li> </ol>	<p>Programming B – Selection in quizzes (<i>CS and IT</i>)</p> <ol style="list-style-type: none"> <li>1. To explain how selection is used in computer programs</li> <li>2. To relate that a conditional statement connects a condition to an outcome</li> <li>3. To explain how selection directs the flow of a program</li> <li>4. To design a program which uses selection</li> <li>5. To create a program which uses selection</li> <li>6. To evaluate my program</li> </ol>



# Copplestone Computing Curriculum

## Year 5

<a href="https://teachcomputing.org/curriculum/key-stage-2/computing-systems-and-networks-sharing-information">https://teachcomputing.org/curriculum/key-stage-2/computing-systems-and-networks-sharing-information</a>	<a href="https://teachcomputing.org/curriculum/key-stage-2/creating-media-video-editing">https://teachcomputing.org/curriculum/key-stage-2/creating-media-video-editing</a>	<a href="https://teachcomputing.org/curriculum/key-stage-2/programming-a-selection-in-physical-computing">https://teachcomputing.org/curriculum/key-stage-2/programming-a-selection-in-physical-computing</a>	<a href="https://teachcomputing.org/curriculum/key-stage-2/data-and-information-flat-file-databases">https://teachcomputing.org/curriculum/key-stage-2/data-and-information-flat-file-databases</a>	<a href="https://teachcomputing.org/curriculum/key-stage-2/creating-media-vector-drawing">https://teachcomputing.org/curriculum/key-stage-2/creating-media-vector-drawing</a>	<a href="https://teachcomputing.org/curriculum/key-stage-2/programming-b-selection-in-quizzes">https://teachcomputing.org/curriculum/key-stage-2/programming-b-selection-in-quizzes</a>
---	---	---	---	---	---

### National Curriculum links

**Computer Science (CS)** – **foundation understanding** – How computers and computer systems work and how they are designed and programmed.

**Information Technology (IT)** – **using their understanding, applying**- The purposeful use of existing programs to develop products and solutions.

**Digital Literacy (DL)** – **implications**- The skills, knowledge and understanding needed in order to participate fully and safely.

**Computational Thinking** – threaded throughout computer science, information technology and digital literacy.

### Vocabulary For Year Group

*Red is new vocabulary for year group.*

**Algorithm** - A precise set of ordered steps that can be followed by a human or a computer to achieve a task.

**Attribute** – A word or a phrase that can be used to describe an object such as its colour, size, or price.

**Code** - The commands that a computer can run.

**Code snippet** – A section of a program viewed in isolation.

**Command** - A single instruction that can be used in a program to control a computer.

**Computer** - A programmable machine that accepts and processes inputs and produces outputs (input, process, output; IPO).

**Computer Network** – A group of interconnected computing devices.



# Copplesstone Computing Curriculum

## Year 5

Computer systems - A combination of hardware and software that can have data input to it, which it then processes and outputs. It can be programmed to perform a variety of tasks.

**Condition – A statement that can be either True or False.**

**Condition-controlled loop - A command that repeatedly runs a defined section of code until a condition is met.**

Count-controlled loop - A command that repeatedly runs a defined section of code a predefined number of times.

Data - A letter, word, number etc. that has been collected for a purpose, but stored without context.

Data set – A collection of related data.

Debugging - The process of finding and correcting errors in a program.

Decompose – To break down a task into smaller, more achievable steps.

Digital Device - A computer or a device with a computer inside that has been programmed for a specific task.

**HTML (HyperText Markup Language) - A standardised language used to define the structure of web pages.**

Infinite loop - A command that repeatedly runs a defined section of code indefinitely.

Information - Data put into a context that provides meaning.

Input – Data that is sent to a program to be processed.

Internet – The global systems of interconnected computer networks.

Loop - (Count-controlled, condition-controlled, or infinite) Commands that repeatedly run a defined section of code.

Output – The result of data processed by a computer.

Procedure - A named set of commands that can be called multiple times throughout a program. This type of subroutine does not return a value.



# Copplesstone Computing Curriculum

## Year 5

Process- A program, or part of a program, that is running on a computer.

Program - A set of ordered commands that can be run by a computer to complete a task.

Repetition - Part of a program where one or more commands are run multiple times in a loop.

Run (execute) – To action the commands in a program.

Selection - Part of a program where if a condition is met, then a set of commands is run.

URL (Uniform Resource Locator) - The address of a file on the internet.

Web browser - A program used to view, navigate, and interact with web pages.

Web page - A HTML document viewed using a web browser

Website – A collection of interlinked web pages, stored under a single domain.

WiFi - A technology that allows devices to wirelessly access a network and transfer data.

WWW (World Wide Web) - A service provided via the internet that allows access to web pages and other shared files.