

# COMPUTING LONG TERM PLAN CYCLE A

	<b>YEARS 1 &amp; 2</b>	
<b>AUTUMN</b>	<b>Y1 Everyone Can Create: Light and Shadows in Photography</b> <ul style="list-style-type: none"> <li>Light is needed to see an object. Shadows are formed by objects blocking the light.</li> <li>Light can be used to create different views and perspectives of an object.</li> </ul>	<b>Y1 Everyone Can Code Early Learners: Functions and Loops</b> <ul style="list-style-type: none"> <li>Function: A named set of commands that can be run whenever needed</li> <li>Toggle: To switch on or off</li> <li>Loop: A block of code that repeats a certain number of times</li> </ul>
	<b>YEARS 3 &amp; 4</b>	
	<b>Y3 Everyone Can Create: Your First Movie</b> <ul style="list-style-type: none"> <li>The key skills of recording, editing, selecting background footage, building a storyline and creating their own short movie about themselves with the Clips app.</li> </ul>	<b>Y3 Scratch: Using Loops and Repetition</b> <ul style="list-style-type: none"> <li>sprites and backdrops are parts of a Scratch game</li> <li>an algorithm in Scratch can include hide, move and sound blocks</li> <li>Scratch code can be copied from one sprite to another</li> <li>a Scratch game should meet requirements of the task and be evaluated.</li> </ul>
	<b>YEARS 5 &amp; 6</b>	
	<b>Y5 Augmented Reality: Ancient Greek Civilisation</b> <ul style="list-style-type: none"> <li>Augmented Reality is abbreviated to AR</li> <li>AR is using technology to overlay visual and auditory objects on the real world</li> <li>The elements of a documentary-style video</li> </ul>	<b>Y5 Everyone Can Code: For Loops and Variables</b> <ul style="list-style-type: none"> <li>A 'For loop' runs a block of code over and over again for a set number of times</li> <li>An iterator is a value that references which item of a list is being used by the code</li> <li>A variable is a named container that stores a value. The value can change over time</li> </ul>

# CYCLE A

## YEARS 1 & 2

### Y1 Online Safety: Smartie the Penguin

- Function: A named set of commands that can be run whenever needed
- Toggle: To switch on or off
- Loop: A block of code that repeats a certain number of times

### Y1 Scratch Jr: Creating a Quiz

- the basics of block-based coding, including starting the program and selecting blocks
- how to design an animation and match the sequence of blocks to achieve it
- how to move between two levels of abstraction: 'code' and 'running the code'.
- the 'design' is the task of designing artwork and algorithms. An algorithm is part of the design - a precise set of ordered instructions which can be turned into code.

## YEARS 3 & 4

### Y3 Be Internet Legends: Online Reputation, Passwords & Behaviour and Opinions and Differences

- how to protect their online reputation
- how to work out whether information online is true and reliable
- how to make strong passwords to secure the pupils' information online
- how to make strong passwords to secure the pupils' information online
- ways in which they can be kind to others online
- how to identify situations of harassment or bullying online
- how to evaluate what it means to be a bystander or helper
- Specific ways to respond to bullying when you see it
- how to behave if you experience harassment.

### Y3 Scratch: Selection in Quizzes

- how selection is used in computer programs
- that a conditional statement connects a condition to an outcome
- how selection directs the flow of a program
- how to design a program that uses selection
- how to create a program that uses selection
- how to evaluate my program.



**SPRING**

## YEARS 5 & 6

### **Y5 Be Internet Legends: Positive Digital Footprints, Spotting Fake Information Online and Sharing, Settings & Password**

- what having a positive digital footprint means
- ways in which they can start to build a positive digital footprint
- how to be a critical consumer while online • about different online scams, including what 'phishing' means
- specific ways to respond to bullying when you see it
- how to behave if you experience harassment
- different ways to step in and be a helper in a specific situation
- how to recognise upsetting content and strategies for refusing it
- strategies for upsetting content, including reporting to an adult.

### **Y5 Everyone Can Code: Conditional Code and Types + Initialisation**

- Boolean logic involves a condition that can be either true or false
- conditional code is a block of code that will only run if something is true
- to execute is to run a program
- an If statement is a code structure used to run code based on the value of one or more conditions



# CYCLE A

## YEARS 1 & 2

### Y1 Technology Grouping data

- that the term 'object' is used to describe anything that can be labelled with properties, e.g. animals, pencils or trees.
- a label is a property used to describe an object, e.g. 'green'. This is the data that is collected about the object.
- objects can be grouped by different properties, so there are multiple ways of grouping the same objects
- that the term 'property' is used to describe objects.
- a 'Data set' is a term used to describe a collection of related data.

### Y1 Everyone Can Create: Patterns and Shapes

- that drawings can be created using technology, such as, an iPad
- that drawings can include lines and shapes in expressive art and design
- that lines and shapes can be combined to create patterns
- that shapes can be combined to create drawings of objects from the world around us
- labels can add extra information.

## YEARS 3 & 4

### Y3 Data and information - Branching databases

- a branching database is a collection of data organised in a tree structure using yes/no or true/false questions. In computer science, these are known as binary trees
- the term 'attributes'. An attribute includes its name and a value. For example, a ball will have a colour, which might be red. 'Colour' is the attribute name, and 'red' is the attribute value
- questions can enable objects to be uniquely identified
- databases need testing to ensure they correctly sort the information.

### Y3 Everyone Can Create: Artistic Adjectives

- word art is a way to communicate ideas
- text styles are important to convey information
- basic sketching techniques can be combined into word art
- emojis can convey emotion to another person
- the Sketches app has a range of tools to accomplish presenting information.

## YEARS 5 & 6

### Y5 Data and Information - Flat-File Databases

- that a flat-file database is a collection of data organised in a single table
- the term 'database' means 'a collection of organised data that is stored on a computer'
- databases allow people to search and sort large quantities of data to find information. • Data can be letters, words, numbers, dates, images and sounds.
- A 'record' is a set of data on a particular object. Records are formed from one or more 'fields' of data. A field is one specific piece of data in a database record.

### Y5 Everyone Can Create: Podcasts

- a podcast is an audio recording, often an interview, discussion or verbal blog
- a podcast can be part of a series or programme, following a similar format
- audio loops can enhance the mood of a story
- audio can be edited to trim and cut parts to create a final podcast.

SUMMER

