Computing End Points of Learning

Year 5/6 Cycle A Area of Learning (Block)	End points of learning
Systems and Searching	• Understand that computers can be connected together to form systems • Recognise the role of computer systems in our life • Know how to use a search engine, and understand how search engines select results • Explain how search results are ranked and understand why the order of results is important
Video Production	• Explain what makes a video effective • Be able to use a digital advice to record video using a range of techniques • Know how to create a storyboard • Identify that video can be improved through reshooting and editing • Know how to select the correct tools to make edits • Be able to evaluate the final outcome
Selection in Physical Computing	• Be able to control a simple circuit connected to a computer • Know how to write a program that includes count-controlled loops • Understand that a loop can stop when a condition is met • Explain that a loop can be used to repeatedly check whether a condition has been met • Be able to create a program that controls a physical computing project •
Flat File Database	• Be able to use a form to record information and compare paper and computer- based databases • Explain how you can answer questions by grouping and then sorting data • Understand that tools can be used to select specific data (using 'AND' and 'OR') • Use a database to compare data visually • Be able to use a real-world database to answer questions •
Introduction to Vector Graphics	• Identify that drawing tools can can be used to produce different outcomes • Be able to create a vector drawing by combining shapes • Know how to use tools to achieve a desired effect • Understand that vector drawings consist of layers • Be able to group objects to make them easier to work with •
Selection in Quizzes	• Explain how selection is used in computer programs • Know that a conditional statement connects a condition to an outcome • Explain how selection directs the flow of a program • Be able to design, create and evaluate a program that uses selection •

Year 5/6 Cycle B Area of Learning (Block)	End points of learning
Communication and Collaboration	• Explain the importance of internet addresses • Explain how sharing information online helps people to work together • Evaluate different ways of working together online and different methods of online communication • Recognise how we communicate using technology
Web page Creation	• To be able to review an existing website considering its structure and then plan the features of a web page. • Understand ownership and use of images (copyright) • Recognise the need to preview pages. • Understand the need for a navigation path and use hyperlinks • Be able to make multiple websites and link them. • Understand the implications of linking to content owned by other people.
Variables	• Be able to define a 'variable' as something that is changeable • Understand that variables can hold numbers or letters • Understand why a variable is used in a program • Use knowledge of variables to improve a game • To be able to design, create and evaluate a project using knowledge of variables
Data and Information	• To be able to create and build a data set in a spreadsheet • Explain that formulas can be used to produce calculated data and apply formulas to data • Be able to create a spreadsheet to plan an event • Understand how to choose suitable ways to present data. •
3D Modelling	• Understand that you can work in 3D on a computer • Understand that 3D objects can be modified and combined • Be able to rotate, duplicate and group 3D objects • Know how to plan and create a 3D object •
Sensing	• Be able to design and create a program to run on a controllable device • Explain that selection can control the flow of a program • Be able to compare a variable using conditional statements •

Year 3/4 Cycle A Area of Learning (Block)	End points of learning
Connecting Computers	• Explain how digital devices function (input, output and passwords) • Recognise how digital devices can change the way we work • Understand how a computer network can be used to share information • Know how digital devices can be connected and recognise the physical components of a network
Stop Frame Animation	• Explain that animation is a sequence of drawings or photographs • Know how to create an effective flip-book style animation • Understand how to relate animated movement with a sequence of images • Know how to plan an animation • Know how to review and improve an animation including adding media to the animation
Sequencing Sounds	• Explore a new programming environment (Scratch) • Understand commands in Scratch are represented as blocks • Identify that commands have an outcome • Know that a program has a start • Understand that a sequence of commands can have an order • Know how to change the appearance of an object • Be able to create a project from a task description
Branching Database	• Be able to create questions with yes/no answers • Know how to create a branching database • Know why it is important for a database to be well structured • Understand how to plan the structure of a branching database • Be able to create an identification tool independently •
Desktop Publishing	• Recognise how text and images convey information • Understand that text and layout can be edited • Know how to choose appropriate page settings • Know how to add content to a desktop publishing publication • Understand the benefits of desktop publishing •
Events and Actions in Programs	• Explain how a sprite moves in an existing project • Ability to create a program to move a sprite in four directions • Know how to adapt a program to a new context • Understand how to develop a program by adding features • Identify and fix bugs in a program • Use knowledge to design and create a maze-based challenge •

Computing End Points of Learning

Year 3/4 Cycle B Area of Learning (Block)	End points of learning
The Internet	• Describe how networks physically connect to other networks • Recognise that networked devices make up the internet • Understand how websites can be shared via the World Wide Web • Describe how content can be added and accessed on the WWW • Recognise how content on the WWW is created by people • Evaluate the consequences of unreliable content
Audio Production	• Understand how sound can be recorded • Explain how audio recordings can be edited • Recognise the different parts of creating a podcast project • Be able to independently apply audio editing skills • Know how to combine audio to enhance a podcast project • Use knowledge to evaluate the effective use of audio
Repetition in Shapes	• Understand that accuracy in programming is important • Be able to create a program in a text-based language (Logo) • Explain what repeat means • Know how to modify a count-controlled loop to produce a given outcome • Use knowledge to create a program that uses count-controlled loops to produce a given outcome
Data Logging	• Explain that data gathered over time can be used to answer questions • Understand how to use a digital device to collect data automatically • Know that a data logger collects 'data points' from sensors over time • Recognise how a computer can help us analyse data • Know how to identify the data needed, and to use data from sensors to answer questions
Photo Editing	• Explain that the composition of digital images can be changed • Understand how and why colours can be changed in digital images • Know how cloning can be used in photo editing • Explain that images can be combined and know how to combine images for a purpose • Understand how to evaluate how changes can improve an image
Repetition in Games	• Use of count-controlled loops in different programming environments developed • Explain that there are infinite loops and count-controlled loops in programming • Ability to develop a design that includes two or more loops at the same time • Ability to modify an infinite loop in a given program • Ability to design and create a project that includes repetition

Year 1/2 Cycle A Area of Learning (Block)	End points of learning
IT Around Us	• Recognise the uses and features of IT • Identify uses of IT in and beyond school • Explain how IT helps us • Understand how to use IT safely
Digital Photography	• Use a digital device to take a photograph. • Describe what makes a good photograph • Decide on how photographs can be improved • Use tools to change an image
Robot Algorithms	• Describe a series of instructions as a sequence • Understand what happens when we change to order • Use logical reasoning to predict the outcome of a program • Explain that programming projects can have code and artwork • Design an algorithm • Create and debug a program I have written
Pictograms	• Recognise that we can count and compare using tally charts • Recognise that objects can be represented as pictures • Create a pictogram • Select objects by attribute • Recognise that people can be described by attributes • Explain that we can present information using a computer
Creating Media – Digital Music	• To say how music can make us feel • To identify that there are patterns in music • To experiment with sound using a computer • Be able to create a musical pattern on a computer • Create music for a purpose – eg to represent an animal
Programming Quizzes	• To understand that a sequence of commands has a start and an outcome • Be able to create and change a simple program using a given design • To create and improve a program using my own design

Computing End Points of Learning

Year 1/2 Cycle B Area of Learning (Block)	End points of learning
Technology Around Us	• To identify technology • Identify a computer and its main parts • Ability to use a mouse in different ways • Begin to use a keyboard to type and edit text • Create and understand rules to use technology safely and responsibly
Digital Painting	• Describe what different freehand tools do • Be able to use the shape and line tools • Understand why I chose the tools I used • Use a computer on my own to paint a picture and compare it to painting on paper.
Moving a Robot	• Explain what a given command will do • Act out a given word • Combine forwards/backwards commands to make a sequence • Combine 4 direction commands to make sequences • Plan a simple program • Find more than one solution to a problem
Grouping Data	• Be able to label objects • Identify that objects can be counted • Describe objects in different ways • Count objects with the same properties • Compare and answer questions about groups of objects
Digital Writing	• Use a computer to write • Add and remove text • Understand that the look of text can be changed on a computer • Carefully choose and use tools to change text • Compare writing on a computer to writing on paper
Programming Animations	• Be able to choose a command for a given purpose • Show a series of commands can be joined together • Identify the effect of changing a value • Explain that each sprite has its own instructions • Design parts of a project • Use an algorithm to create a program