 period.

Computing Curriculum Map

**Unit 6 – Events and Actions in Programs**

* Explain how a sprite moves in an existing project
* Create a program to move a sprite in four directions
* Adapt a program to a new context
* Develop my program by adding features
* Identify and fix bugs in a program
* Design and create a maze-based challenge

**Unit 5 – Desktop Publishing**

* Recognise how text and images convey information
* Recognise that text and layout can be edited
* Choose appropriate page settings
* Add content to a desktop publishing publication
* Consider how different layouts can suit different purposes
* Consider the benefits of desktop publishing

**Unit 4 – Branching Databases**

* Create questions with yes/no answers
* Identify the attributes needed to collect data about an object
* Create a branching database
* Explain why it is helpful for a database to be well structured
* Plan the structure of a branching database
* Independently create an identification tool

**Unit 3 – Sequencing Sounds**

* Explore a new programming environment
* Identify that commands have an outcome
* Explain that a program has a start
* Recognise that a sequence of commands can have an order
* Change the appearance of my projects
* Create a project from a task description

**Unit 2 – Stop-frame Animation**

* Explain that animation is a sequence of drawings or photographs
* Relate animated movement with a sequence of images
* Plan an animation
* Identify the need to work consistently and carefully
* Review and improve an animation
* Evaluate the impact of adding other media to an animation

**Unit 1 – Connecting Computers**

* Explain how digital devices function
* Identify input and output devices
* Recognise how digital devices can change the way we work
* Explain how a computer network can be used to share information
* Explore how digital devices can be connected
* Recognise the physical components of a network

**Unit 5 – Digital Music**

* Say how music makes us feel
* Identify patterns in music
* Experiment with sound using a computer
* Use a computer to create a musical pattern
* Create music for a purpose
* Review and refine our computer work

**Unit 6 – Programming Quizzes**

* Explain that a sequence of commands has a start and outcome
* Create a program using a given design
* Change a given design
* Create a program using my own design
* Decide how my project can be improved

**Unit 4 – Pictograms**

* Recognise that we can count and compare objects using tally charts
* Recognise that objects can be represented as pictures
* Create a pictogram
* Select objects by attribute and make comparisons
* Recognise that people can be described by attributes
* Explain that we can present information using a computer

**Unit 3 – Robot Algorithms**

* Describe a series of instructions as a sequence
* Explain what happens when we change the order of instruction
* 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

**Unit 2 – Digital Photography**

* Use a digital device to take a photo
* Make choices when taking a photo
* Describe what makes a good photo
* Decide how photos can be improved
* Use tools to change an image
* Recognise that photos can be changed

**Unit 1 – Information Technology Around Us**

* Recognise the uses and features of information technology

-in school

-beyond school

* Explain how information technology helps us
* How to use information technology safely
* Recognise that choices are made when using information technology

**Unit 3 – Moving a robot**

* To explain what a given command will do
* To act out a given word
* To combine forwards and backwards to make a sequence
* To combine four direction commands to make sequences
* To plan a simple program
* To find more than one solution to a problem.

**Unit 4 – Grouping Data**

* To label objects
* To identify that objects can be counted
* To describe objects in different ways
* To count objects with same properties
* To compare groups of objects
* To answer questions about groups

**Unit 5 – Digital writing**

* To use a computer to write
* To add and remove text
* To identify the look of text can be changed on a computer.
* To make choices when changing text
* To explain why used the tools that I chose
* To compare typing on a computer than paper

**Unit 6 – Programming animations**

* 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 my algorithm to create a program

**Unit 2 – Digital Painting**

* Describe what freehand tools do
* To use shape tool and line tools
* To make careful choices when painting a digital picture
* To explain why I chose the tools I used
* To use a computer independently to paint a picture
* To compare painting a digital picture to a paper one.

**Reception**

* Children use smart boards to access Busy Things program
* Digital drawings and digital games
* Bee bots
* Screen time lessons as part of being healthy
* Following 2 step instructions
* Positional language
* Keyboards in role play areas

**Unit 4 – Flat-File Databases**

* Use a form to record information
* Compare paper and computer-based databases
* Outline how you can answer questions by grouping and then sorting data
* Explain that tools can be used to select specific data
* Explain that computer programs can be used to compare data visually
* Use real-world database to answer questions

**Unit 4 – Data Logging**

* Explain that data gathered over time can be used to answer questions
* Use a digital device to collect data automatically
* Explain that a data logger collects ‘data points’ from sensors over time
* Recognise how a computer can help us analyse data
* Identify the data needed to answer questions
* Use data from sensors to answer questions

**Unit 5 – Photo Editing**

* Explain that the composition of digital images can be changed
* Explain that colours can be changed in digital images
* Explain how cloning can be used in photo editing
* Explain that images can be combined
* Combine images for a purpose
* Evaluate how changes can improve an image

**Unit 3 – Repetition in Shapes**

* Identify that accuracy in programming is important
* Create a program in a text-based language
* Explain what ‘repeat’ means
* Modify a count-controlled loop to produce a given outcome
* Decompose a task into small steps
* Create a program that uses count-controlled loops to produce a given outcome

**Unit 2 – Audio Production**

* Identify that sound can be recorded
* Explain that audio recordings can be edited
* Recognise the different parts of creating a podcast project
* Apply audio editing skills independently
* Combine audio to enhance a podcast project
* Evaluate the effective use of audio

Year 3

**Unit 6 – Sensing Movement**

* Create a program to run on a controllable device
* Explain that selection can control the flow of a program
* Update a variable with a user input
* Use a conditional statement to compare a variable to a value
* Design a project that uses inputs and outputs on a controllable device
* Develop a program to use inputs and outputs on a controllable device

**Unit 5 – 3D Modelling**

* Recognise that you can work in three dimensions on a computer
* Identify that digital 3D objects can be modified
* Recognise that objects can be combined in a 3D model
* Create a 3D model for a given purpose
* Plan my own 3D model
* Create my own digital 3D model

**Unit 2 – Web Page Creation**

* Review an existing website and consider its structure
* Plan the features of a web page
* Consider the ownership and use of images (copyright)
* Recognise the need to preview pages
* Outline the need for a navigation path
* Recognise the implications of linking to content owned by the other people

**Unit 1 – Communication and Collaboration**

* Explain the importance of internet addresses
* Recognise how data is transferred across the internet
* Explain how sharing information online can help people work together
* Evaluate different ways of working together online
* Recognise how we communicate using technology
* Evaluate different methods of online communication

Year

6

**Unit 6 – Selection in Quizzes**

* Explain how selection is used in computer programs
* Relate that a conditional statement connects a condition to an outcome
* Explain how selection directs the flow of a program
* Design a program which uses selection
* Create a program which uses selection
* Evaluate my program

**Unit 5 – Introduction to Vector Graphics**

* Identify that drawing tools can be used to produce different outcomes
* Create a vector drawing by combining shapes
* Use tools to achieve a desired effect
* Recognise that vector drawings consist of layers
* Group objects to make them easier to work with
* Apply what I have learned about vector drawings

**Unit 3 – Selection in Physical Computing**

* Control a simple circuit connected to a computer
* Write a program that includes count-controlled loops
* Explain 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
* Design a physical project that includes selection
* Create a program that controls a physical computing project

**Unit 2 – Video Production**

* Explain what makes a video effective
* Identify digital devices that can record video
* Capture video using a range of techniques
* Create a storyboard
* Identify that video can be improved through reshooting and editing
* Consider the impact of the choices made when making and sharing a video

**Unit 1 – Systems and Searching**

* Explain that computers can be connected together to form systems
* Recognise the role of computer systems in our lives
* Experiment with search engines
* Describe how search engines select results
* Explain how search results are ranked
* Recognise why the order of results is important and to whom

Year 5

**Unit 6 – Repetition in Games**

* Develop the use of count- controlled loops in a different programming environment
* Explain that in programming there are infinite loops and count controlled loops
* Develop a design that include two or more loops which run at the same time
* Modify an infinite loop in a given program
* Design and create a project that includes reptition

**Unit 1 – The Internet**

* Describe how networks physically connect to other networks
* Recognise how networks devices make up the internet
* Outline how websites can be shared via WWW
* Describe how content can be added and accessed on the WWW
* Recognise how the content of the WWW is created by people
* Evaluate the consequences of unreliable content

**Unit 3 – Variables in Games**

* Define a ‘variable’ as something that is changeable
* Explain why a variable is used in a program
* Choose how to improve a game by using variables
* Design a project that builds on a given example
* Use my design to create a project
* Evaluate my project

**Unit 4 – Spreadsheets**

* Create a data set in a spreadsheet
* Build a data set in a spreadsheet
* Explain that formulas can be used to produce calculated data
* Apply formulas to data
* Create a spreadsheet to plan an event
* Choose suitable ways to present data

Year 4

Year 2

**Unit 1 - Technology around us**

* Identify technology
* Identify a computer and its main parts
* How to use a mouse in different ways
* To use a keyboard to type on a computer
* To use the keyboard to edit text
* To create rules for using technology responsibly.

Year 1

**ELG**

Personal, Social and Emotional Development

* Be confident to try new activities to show independence, resilience and perseverance in the face of challenge.
* Explain the reasons for rules, know right from wrong and try to behave accordingly.

Expressive Arts and Design

* Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function.

**Nursery**

* Children use smart boards to access Busy Things program
* Digital drawings and digital games
* Keyboards in role play areas

Nursery and

EYFS