

SPRING HILL COMPUTING CURRICULUM- EYFS



AUTUMN

IPad

Model applications

2Simple

Firework patterns
Diwali patterns

Pogrammable toys

Introducing the Bee-Bots

Internet

Gather information

Topmarks

Today's number (to 5)
Today's number (to 10)

SPRING

IPad

IPad safety

2Simple

Story setting-add characters
Flower pictures

Pogrammable toys

Programming a Bee-Bot

Internet

Keeping safe online

Topmarks

Gingerbread Man Game
Ladybird spots

SUMMER

IPad

Take pictures

2Simple

Animal pictures
Transport pictures

Pogrammable toys

Remote control toys

Internet

Gather information

Topmarks

Underwater counting
Blast off

SPRING HILL COMPUTING CURRICULUM- YEAR 1



AUTUMN

Computer Systems and Network—Technology around us.

Lesson 1

To be able to explain how technology helps us

Lesson 2

To know the main parts of a computer

Lesson 3

To know how to switch on and log into a computer

Lesson 4

To know how to save my work

Lesson 5

To know how to use a mouse

Lesson 6

To know how to use a keyboard

Creating Media—Digital Painting

Lesson 1

To be able to draw lines and make a mark on a screen

Lesson 2

To know the job of the tools I use

To know that different paint tools do different jobs

Lesson 3

To know how to use the paint tools effectively

Lesson 4

To know how to make appropriate colour choices

Lesson 5

To explain that pictures can be made in lots of different

SPRING

Programming A— Moving a robot

Lesson 1

To know that commands do different things

Lesson 2

To understand how to give and follow an instruction using the correct terms

To know how to combine forwards and backwards commands to make a sequence

To know how to combine four direction commands to make sequences

To understand how to plan a simple program

To know how to debug by finding more than one solution to problem

Data and Information—Grouping Data

Lesson 1

To understand how to label objects

Lesson 2

To understand that objects can be counted

Lesson 3

To know how to describe objects in different ways

Lesson 4

To know how to count objects with the same properties

Lesson 5

To understand how to compare groups of objects

Lesson 6

To know how to answer questions about groups of objects

SUMMER

Creating Media—Digital Writing

Lesson 1

To understand how to use a computer to write

Lesson 2

To know how to add and remove text on a computer

Lesson 3

To know that the look of text can be changed on a computer

Lesson 4

To know I have choices when changing text

Lesson 5

To understand if my changes have improved my writing

Lesson 6

To understand the differences between typing and writing

Programming 2— Programming Animation

Lesson 1

To know how to choose a command for a given purpose

Lesson 2

To understand that a series of commands can be joined together

Lesson 3

To know the effect of changing a value

Lesson 4

To understand that each sprite has its own instructions

Lesson 5

To know how to design the parts of a project

Lesson 6

To know how to use my algorithm to create a program

SPRING HILL COMPUTING CURRICULUM- YEAR 2



AUTUMN

Computing systems and networks –

IT around us

Lesson 1

To recognise the uses and features of information technology

Lesson 2

To identify the uses of information technology

Lesson 3

To identify information technology

Lesson 4

To explain how information technology helps us

Lesson 5

To explain how to use information technology safely

Lesson 6

To recognise that choices are made when using information technology

Creating media – Digital photography

Lesson 1

To use a digital device to take a photograph

Lesson 2

To make choices when taking a photograph

Lesson 3

To describe what makes a good photograph

Lesson 4

To decide how photographs can be improved

Lesson 5

To use tools to change an image

Lesson 6

To recognise that photos can be changed

SPRING

Programming A – Robot algorithms

Lesson 1

To describe a series of instructions as a sequence

Lesson 2

To use an algorithm to program a sequence on a floor robot

Lesson 3

To use logical reasoning to predict the outcome of a program

Lesson 4

To explain that programming projects can have code and artwork

Lesson 5

To design an algorithm

Lesson 6

To create and debug a program

Data and information – Pictograms

Lesson 1

To recognise that we can count and compare objects using tally charts

Lesson 2

To recognise that objects can be represented as pictures

Lesson 3

To create a pictogram

Lesson 4

To create a pictogram to arrange objects by an attribute

Lesson 5

To create a pictogram and draw conclusions from it

Lesson 6

To explain that we can present information using a computer

SUMMER

Creating media - Digital music

Lesson 1

To create a rhythm pattern

Lesson 2

To experiment with sound using a computer

Lesson 3

To use a computer to create a musical pattern

Lesson 4

To create music for a purpose

Lesson 5

To review and refine our computer work

Programming B - programming quizzes

Lesson 1

To explain that a sequence of commands has a start

Lesson 2

To create a program using a given design create a program based on the new design

Lesson 3

To create an algorithm

Lesson 4

To compare my project to my design

Lesson 5

To debug my program

Lesson 6

To improve my project by adding features

SPRING HILL COMPUTING CURRICULUM- YEAR 3



AUTUMN

Computing systems and networks – Connecting computers

Lesson 1

To explain how digital devices function

Lesson 2

To identify input and output devices

Lesson 3

To recognise how digital devices can change the way we work

Lesson 4

To explain how a computer network can be used to share information

Lesson 5

To explore how digital devices can be connected

Lesson 6

To recognise the physical components of a network

Creating media - Stop-frame animation

Lesson 1

To explain that animation is a sequence of drawings or photographs

Lesson 2

To relate animated movement with a sequence of images

Lesson 3

To plan an animation

Lesson 4

To identify the need to work consistently and carefully

Lesson 5

To review and improve an animation

Lesson 6

To evaluate the impact of adding other media to an animation

SPRING

Programming A - Sequencing sounds

Lesson 1

To explore a new programming environment

Lesson 2

To identify that commands have an outcome

Lesson 3

To create a sequence of connected commands

Lesson 4

To recognise that a sequence of commands can have an order

Lesson 5

To build a sequence of commands

Lesson 6

To decide the actions for each sprite in a program

Data and information – Branching databases

Lesson 1

To create questions with yes/no answers

Lesson 2

To identify the attributes needed to collect data about an object

Lesson 3

To create a branching database

Lesson 4

To explain that questions need to be ordered carefully to split objects into similarly sized groups

Lesson 5

To plan the structure of a branching database

Lesson 6

To create an identification tool

SUMMER

Creating media – Desktop publishing

Lesson 1

To recognise how text and images convey information

Lesson 2

To recognise that text and layout can be edited

Lesson 3

To choose appropriate page settings

Lesson 4

To add content to a desktop publishing publication

Lesson 5

To consider how different layouts can suit different purposes

Lesson 6

To consider the benefits of desktop publishing

Programming B - Events and actions in programs

Lesson 1

To explain the relationship between an event and an action

Lesson 2

To create a program to move a sprite in four directions

Lesson 3

To adapt a program to a new context

Lesson 4

To build more sequences of commands to make my design work

Lesson 5

To identify and fix bugs in a program

Lesson 6

To design and create a maze-based challenge

SPRING HILL COMPUTING CURRICULUM- YEAR 4



AUTUMN

Computing systems and networks – The Internet

- Lesson 1
To describe how networks physically connect to other networks
- Lesson 2
To recognise how networked devices make up the internet
- Lesson 3
To outline how websites can be shared via the World Wide Web
- Lesson 4
To explain that internet services can be used to create content online
- Lesson 5
To explain that there are rules to protect content
- Lesson 6
To evaluate the consequences of unreliable content

Creating media - Audio production

- Lesson 1
To identify that sound can be recorded
- Lesson 2
To explain that audio recordings can be edited
- Lesson 3
To recognise the different parts of creating a podcast project
- Lesson 4
To apply audio editing skills independently
- Lesson 5
To combine audio to enhance my podcast project
- Lesson 6
To evaluate the effective use of audio

SPRING

Programming A – Repetition in shapes

- Lesson 1
To identify that accuracy in programming is important
- Lesson 2
To create a program in a text-based language
- Lesson 3
To explain what 'repeat' means
- Lesson 4
To modify a count-controlled loop to produce a given outcome
- Lesson 5
To decompose a task into small steps
- Lesson 6
To create a program that uses count-controlled loops to produce a given outcome

Data and information – Data logging

- Lesson 1
To explain that data gathered over time can be used to answer questions
- Lesson 2
To use a digital device to collect data automatically
- Lesson 3
To explain what data can be collected using sensors
- Lesson 4
To explain that a data logger collects 'data points' from sensors over time
- Lesson 5
To recognise how a computer can help us analyse data
- Lesson 6
To identify the data needed to answer questions

SUMMER

Creating media – Photo editing

- Lesson 1
To explain that the composition of digital images can be changed
- Lesson 2
To explain that colours can be changed in digital images
- Lesson 3
To explain how cloning can be used in photo editing
- Lesson 4
To explain that images can be combined
- Lesson 5
To combine images for a purpose
- Lesson 6
To evaluate how changes can improve an image

Programming B – Repetition in games

- Lesson 1
To develop the use of count-controlled loops in a different programming environment
- Lesson 2
To explain that in programming there are infinite loops and count controlled loops
- Lesson 3
To develop a design that includes two or more loops which run at the same time
- Lesson 4
To modify an infinite loop in a given program
- Lesson 5
To design a project that includes repetition
- Lesson 6
To create a project that includes repetition

SPRING HILL COMPUTING CURRICULUM- YEAR 5



AUTUMN

Computing systems and networks - systems and searching

Lesson 1

To explain that computers can be connected together to form systems

Lesson 2

To recognise the role of computer systems in our lives

Lesson 3

To make use of a web search to find specific information

Lesson 4

To describe how search engines select results

Lesson 5

To explain that a search engine follows rules to rank results

Lesson 6

To recognise why the order of results is important.

Creating media - Video production

Lesson 1

To compare features in different videos

Lesson 2

To identify digital devices that can record video

Lesson 3

To capture video using a range of techniques

Lesson 4

To create and save video content

Lesson 5

To identify that video can be improved through reshooting and editing

Lesson 6

To consider the impact of the choices made when making and sharing a video

SPRING

Programming A – Selection in physical computing

Lesson 1

To control a simple circuit connected to a computer

Lesson 2

To write a program that includes count-controlled loops

Lesson 3

To explain that a condition is either true or false

Lesson 4

To explain that a loop can be used to repeatedly check whether a condition has been met

Lesson 5

To design a physical project that includes selection

Lesson 6

To create a program that controls a physical computing project

Data and in

formation – Flat-file databases

Lesson 1

To explain how information can be recorded

Lesson 2

To choose which field to sort data by to answer a given question

Lesson 3

To outline how you can answer questions by grouping and then sorting data

Lesson 4

To explain that tools can be used to select specific data

Lesson 5

To explain that computer programs can be used to compare data visually

Lesson 6

To use a real-world database to answer questions

SUMMER

Creating media - Introduction to vector graphics

Lesson 1

To identify that drawing tools can be used to produce different outcomes

Lesson 2

To create a vector drawing by combining shapes

Lesson 3

To use tools to achieve a desired effect

Lesson 4

To recognise that vector drawings consist of layers

Lesson 5

To group objects to make them easier to work with

Lesson 6

To apply what I have learned about vector drawings

Programming B – Selection in quizzes

Lesson 1

To explain how selection is used in computer programs

Lesson 2

To identify the condition and outcomes in an 'if... then... else...' statement

Lesson 3

To explain how selection directs the flow of a program

Lesson 4

To identify the outcome of user input in an algorithm

Lesson 5

To create a program which uses selection

Lesson 6

To design, debug and evaluate my program

SPRING HILL COMPUTING CURRICULUM- YEAR 6



AUTUMN

Computing systems and networks - Communication and collaboration

Lesson 1

To describe how computers use addresses to access websites

Lesson 2

To recognise how data is transferred across the internet

Lesson 3

To explain how sharing information online can help people to work together

Lesson 4

To evaluate different ways of working together online

Lesson 5

To recognise how we communicate using technology

Lesson 6

To evaluate different methods of online communication

Creating media - Web page creation

Lesson 1

To review an existing website and consider its structure

Lesson 2

To plan the features of a web page

Lesson 3

To consider the ownership and use of images (copyright)

Lesson 4

To add content to my own web page

Lesson 5

To outline the need for a navigation path

Lesson 6

To recognise the implications of linking to content owned by other people

SPRING

Programming A - Variables in games

Lesson 1

To define a 'variable' as something that is changeable

Lesson 2

To explain why a variable is used in a program

Lesson 3

To choose how to improve a game by using variables

Lesson 4

To design, create and debug a project that builds on a range of variables

Lesson 5

To use my design to create a project

Lesson 6

To use variables to extend my game

Data and information - Introduction to Spreadsheets

Lesson 1

To create a data set in a spreadsheet

Lesson 2

To apply an appropriate format to a cell

Lesson 3

To explain that formulas can be used to produce calculated data

Lesson 4

To apply a formula to multiple cells by duplicating it

Lesson 5

To create a spreadsheet to plan an event

Lesson 6

To apply a formula to calculate the data I need to answer questions

To choose suitable ways to present data

SUMMER

Creating media - 3D Modelling

Lesson 1

To recognise that you can work in three dimensions on a computer

Lesson 2

To recognise that objects can be combined in a 3D model

Lesson 3

To create a 3D model for a given purpose

Lesson 4

To modify my 3D model to improve it

Lesson 5

To construct a 3D model based on a design

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Programming B - Sensing movement

Lesson 1

To create a program to run on a controllable device

Lesson 2

To use a variable in an if, then, else statement to select the flow of a program

Lesson 3

To use a condition to change a variable

Lesson 4

To explain the importance of the order of conditions in else, if statements

Lesson 5

To develop a program to use inputs and outputs on a controllable device