Purple Mash Computing Scheme

8 Computing Scheme Overview

Long Term Planner

Long Term Planner

These example tracks for each year group provide a suggested route of units to follow with a total of **36 teaching hours**.

Each track includes a range of units offering full coverage of curriculum objectives as well as the three computing strands: Information Technology, Digital Literacy and Computer Science.

In most year groups there are also some **additional units** which can be taught in addition or as a replacement to those units in the suggested track, depending on the needs of your setting.

The units marked with an asterisk are now live with the remaining units coming over the Autumn term.

(A downloadable version of these tracks is available at the bottom of this page.)

Year 1

Information Technology | Computer Science | Digital Literacy

Unit Title	Introduction to PM *	Creative Computing *	Data Explorers *	Creating & Following Instructions *	Animated Stories *	Coding	Technology Around Us *	Making Beats
Lessons	3	4	6	3	6	6	4	4
Online Safety – Delivered throughout the year using 2BeSafe – Being Safe in a Digital World								

Year 2

Information Technology | Computer Science | Digital Literacy

Unit Title	Route Explorers *	The Internet *	Creating Pictures *	Spreadsheets *	Questioning *	Coding	Presenting Ideas	Making Music
Lessons	4	4	5	6	4	6	4	3
Online Safety – Delivered throughout the year using 2BeSafe – Being Safe in a Digital World								

Additional Units Lessons	Introduction to Purple Mash
	3

Year 3

Information Technology | Computer Science | Digital Literacy

Unit Title	Email *	Route Planners *	Branching Databases *	Spreadsheets	Coding	Presentations (Microsoft, Apple & Google)	Touch Typing *
Lessons	6	5	4	6	6	5	4

Online Safety – Delivered throughout the year using 2BeSafe – Being Safe in a Digital World

Additional Units	Introduction to Purple Mash	micro:bits *
Lessons	2	4

Year 4

Information Technology | Computer Science | Digital Literacy

Unit Title	Unpacking Hardware & Software *	Animation *	Logo *	Sound Stories *	Effective Searching *	Coding	Composing Beats *	Introduction to AI
Lessons	4	6	4	4	4	6	4	4

Online Safety – Delivered throughout the year using 2BeSafe – Being Safe in a Digital World

Additional Units	Introduction to Purple Mash	micro:bits *
Lessons	2	4

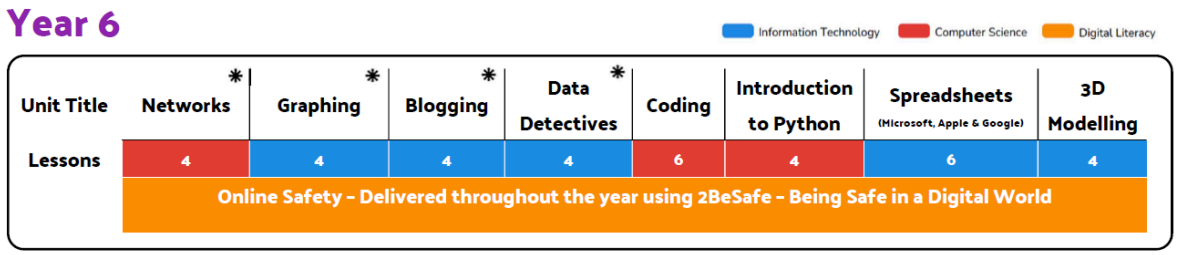
Year 5

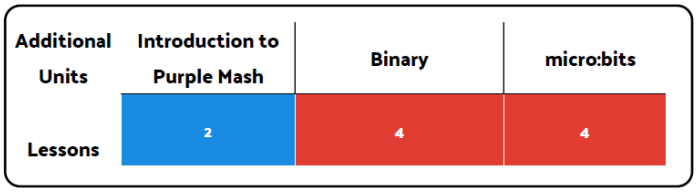
Information Technology | Computer Science | Digital Literacy

Unit Title	Quizzing *	Databases *	Game Creator *	Spreadsheets	Coding	Word Processing (Microsoft, Apple & Google)	Concept Maps
Lessons	5	4	5	6	6	6	4

Online Safety – Delivered throughout the year using 2BeSafe – Being Safe in a Digital World

Additional Units	Introduction to Purple Mash	Coding: External Devices	micro:bits
Lessons	2	6	4





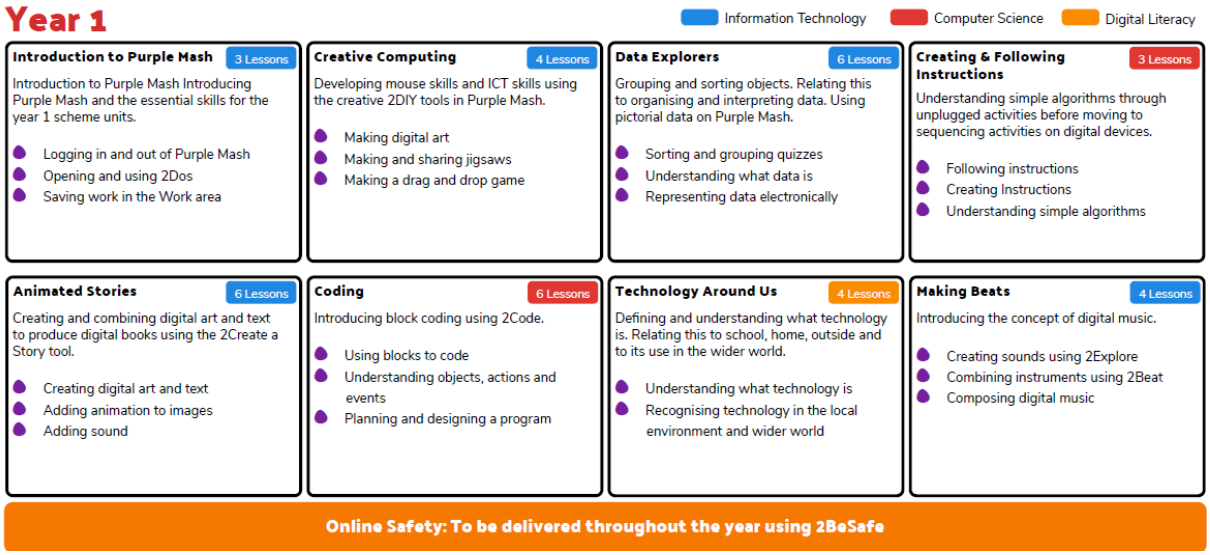
- Single Age Overview - 2025

Unit Content Overview

Unit Content Overview

This **content overview** offers additional information on all of the units in the scheme.

(A downloadable version of these documents is available at the bottom of this page.)



Year 2

Information Technology | Computer Science | Digital Literacy

Introduction to Purple Mash — 2 Lessons
An optional introduction to Purple Mash and the essential skills for beginning the year 2 scheme units. Use with classes who haven't used Purple Mash before or who need a refresher in the basics.

Route Explorers — 4 Lessons
Coding using 2Go. Writing simple instructions to move a screen turtle along routes.

- Considering direction and distance
- Creating commands
- Building an algorithm

The Internet — 4 Lessons
Understanding what the internet is.

- Defining the World Wide Web
- Recognising browsers and websites
- Connecting to the internet

Creating Pictures — 5 Lessons
Using a digital art tool to create art in different traditional art styles.

- Using 2Paint a Picture templates
- Exploring the features of each template
- Compiling an online art portfolio
- Comparing digital art effects to non digital effects

Spreadsheets — 6 Lessons
Introducing spreadsheets and the way they organise data using the 2Calculate tool.

- Understanding cells and columns
- Inserting images with values
- Using totalling tools
- Creating graphs

Questioning — 4 Lessons
Investigating data, how it is collected and how it can be presented.

- Asking the right question to collect or present data
- Keeping a tally
- Using 2Count to present the data
- Using a branching database

Coding — 6 Lessons
Developing coding skills using 2Code.

- Understanding algorithms
- Introducing sequencing
- Coding interaction between objects
- Using timers
- Debugging

Presenting Ideas — 4 Lessons
Creating mind maps using 2Connect to organise and present ideas.

- Using and making mind maps
- Using a mind map as a presentation tool

Making Music — 3 Lessons
Composing digital melodies using 2Sequence.

- Understanding a digital music tool
- Relating the functions to musical terms
- Composing music digitally

Online Safety: To be delivered throughout the year using 2BeSafe

Year 3

Information Technology | Computer Science | Digital Literacy

Introduction to Purple Mash — 2 Lessons
An optional introduction to Purple Mash and the essential skills for beginning the year 3 scheme units. Use with classes who haven't used Purple Mash before or who need a refresher in the basics.

Email — 6 Lessons
Communicating electronically using 2Email. Considering safety aspects of email communication.

- Composing and replying to emails
- Opening and sending attachments
- Using email safely

Route Planners — 5 Lessons
Using 2Go to create routes for screen turtles. Coding using angles of turn and repetition.

- Writing commands using rotation
- Creating algorithms and writing code
- Planning routes
- Repetition in 2Go

Branching Databases — 4 Lessons
Creating branching databases (binary tree databases) using 2Question.

- Asking binary questions
- Completing branching databases in 2Question
- Creating and testing branching databases

Spreadsheets — 6 Lessons
Working with data using spreadsheets in the 2Calculate tool.

- Creating graphs
- Understanding cell addresses
- Using the formula bar
- Combining 2Calculate functions to analyse data

Coding — 6 Lessons
Developing coding skills using 2Code.

- Using flowcharts in 2Chart
- Using timers
- Introducing repetition
- Testing and debugging

Presentations — 5 Lessons
Using industry standard software to create presentations.

- Adding media
- Customising with animation and timingsĂ
- Designing an effective presentation

Touch Typing — 4 Lessons
Developing touch typing skills using 2Type.

- Recognising keyboard locations
- Understanding correct finger positioning
- Improving accuracy and speed

micro:bit — 4 Lessons
Coding using a micro:bit as an external device. The software includes an emulator for use in schools without micro:bits.

- Using the LED display
- Sequencing and timing
- Understanding inputs and outputs
- Adding sounds and gestures

Online Safety: To be delivered throughout the year using 2BeSafe

Year 4

Information Technology | Computer Science | Digital Literacy

Introduction to Purple Mash — 2 Lessons
An optional introduction to Purple Mash and the essential skills for beginning the year 4 scheme units. Use with classes who haven't used Purple Mash before or who need a refresher in the basics.

Unpacking Hardware and Software — 4 Lessons
Understanding technology and computer systems in relation to their hardware and software.

- Defining types of technology
- Knowing how systems work together
- Identifying hardware
- Understanding software

Animation — 6 Lessons
Creating digital animations using the 2Animate tool.

- Knowing the types of animation
- Understanding onion skinning
- Exploring animation features
- Using storyboarding

Logo — 4 Lessons
Learning the text-based Logo coding language to create patterns and shapes Coding sequences, repetition, and procedures.

- Using Logo commands
- Writing commands in a sequence
- Refining code using repetition and procedures

Sound Stories — 4 Lessons
Adding narrative and sound effects to create audio books using 2Cast.

- Recording audio content
- Creating sound effects
- Post-production editing

Effective Searching — 4 Lessons
Exploring how to effectively search the internet. Exploring safety aspects of online information.

- Using a search engine
- Search rankings
- Reliable searching
- Search algorithms

Coding — 6 Lessons
Developing coding skills using 2Code.

- Introducing selection
- Exploring design properties
- Introducing loops
- Coding number variables

Composing Beats — 4 Lessons
Using the Busy Beats tool to explore and compose music digitally.

- Exploring pulse, rhythm and tempo
- Understanding pitch and texture
- Composing a melody

Introduction to AI — 4 Lessons
Understanding what artificial intelligence is, how it can help and the ethics around its use.

- Exploring how AI works
- Investigating the positive and negative impacts of AI
- Considering AI in the future

micro:bit — 4 Lessons
Coding using a micro:bit as an external device. Includes an emulator for schools without micro:bits.

- Exploring sensor inputs and the accelerometer
- Using variables, inputs and outputs
- Coding with selection and loops

Online Safety: To be delivered throughout the year using 2BeSafe

Year 5

Information Technology | Computer Science | Digital Literacy

Introduction to Purple Mash — 2 Lessons
An optional introduction to Purple Mash and the essential skills for beginning the year 5 scheme units. Use with classes who haven't used Purple Mash before or who need a refresher in the basics.

Quizzing — 5 Lessons
Making effective quizzes using 2Quiz. Exploring types of questioning and effective presentation of a quiz.

- Evaluating the features of a good quiz
- Choosing appropriate question types
- Making use of feedback and titles
- Testing and editing quizzes

Databases — 4 Lessons
Using table-based databases for collecting, presenting, searching and analysing data.

- Understanding records and fields
- Creating a collaborative database
- Searching databases
- Analysing data

Game Creator — 5 Lessons
Designing and making a 3D maze adventure game using 2DIY3D.

- Exploring the features of a good game
- Designing and making sprites and the game world
- Evaluating the playability of games

Spreadsheets — 6 Lessons
Working with data using spreadsheets in the 2Calculate tool.

- Using formulae
- Exploring measurement conversions
- Carrying out numerical investigations
- Creating computational models

Coding — 6 Lessons
Developing coding skills using 2Code.

- Coding efficiently by refining code
- Simulating a physical system
- Exploring decomposition and abstraction
- Using functions and variables

Word Processing — 6 Lessons
Using industry standard software to create documents.

- Creating documents
- Using images
- Entering and editing text
- Using tables and templates

Concept Maps — 4 Lessons
Using and creating concept maps using 2Connect.

- Creating concept maps
- Presenting from a concept map
- Making collaborative concept maps

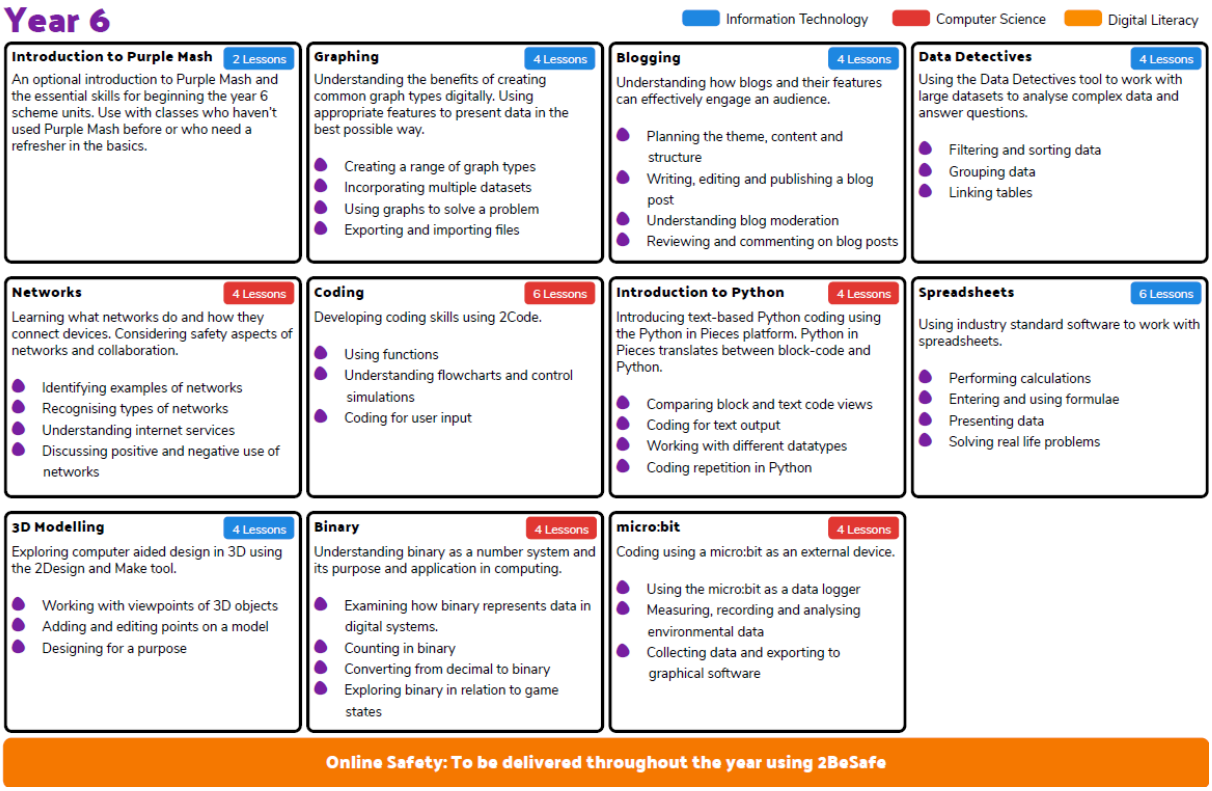
Coding External Devices — 6 Lessons
Using the Purple Chip app on a tablet or phone device alongside Purple Mash.

- Using device movement
- Exploring text functions
- Coding interaction with the environment

micro:bit — 4 Lessons
Coding using a micro:bit as an external device. Includes an emulator for schools without micro:bits.

- Exploring sensor inputs and the accelerometer
- Using selection, variables, inputs and outputs
- Coding for the micro:bit pins

Online Safety: To be delivered throughout the year using 2BeSafe



- Unit Content Overview

Excel Overview Document

Excel Overview Document

This **overview spreadsheet** contains all the key information for each unit. It includes:

- Lesson title, aims and success criteria
- Key Vocabulary by lesson
- Overview of tools used
- National Curriculum links
- Key links to 'Education in a Connected World'
- Key links to KCSIE 4Cs (Content, Contact, Conduct, Commerce)

- Overview Spreadsheet

Mixed Aged Planning

Mixed Aged Planning

This document has been designed to support schools with mixed age classes consisting of:

- Years 1 and 2
- Years 3 and 4
- Years 5 and 6

It is a suggested plan for schools to follow based on 36 hours of teaching a year, offering a wide range of units with the full breadth of National Curriculum objectives.

- Mixed Age Overview - 2025

We are always here to help if you would like assistance with mixed age planning, especially if your mixes are different from the above. If you would like help in amending this plan to meet the needs of your school, please contact the education team at 2Simple by emailing **support@2simple.com**.

Online Safety

Online Safety

It is recommended that Online Safety is delivered over the course of the year using **2BeSafe - Being Safe in a Digital World**. This is an **Online Safety Scheme** created by 2Simple. These sessions can be delivered outside of Computing lessons as part of PSHE and\or RSE lessons, or wherever timetable flexibility may allow.

- **2BeSafe** covers many of the requirements of the Digital Literacy strand of the Computing curriculum.
- **2BeSafe** meets the guidance set out within the Department for Education's - **Teaching Online Safety in Schools Guidance** and Education for a Connected World.
- **The Education for a Connected World framework** outlines eight key areas which seek to equip children and young people for digital life and the digital world.
- **2BeSafe** offers a comprehensive coverage of these requirements for primary schools starting from Reception up to Year 6.
- For each objective within the framework, we have produced a **15-to-20-minute session** containing activities to promote discussion, greater thinking and deeper reflection in order to raise the profile of the importance of staying safe online.
- All sessions contain a teaching **PowerPoint and easily accessible resources** in order to save teachers' time.
- Sessions **do not** require children to take out **devices**; activities requiring devices are optional.

Find out more and view the **2BeSafe Online Safety Scheme** by clicking the button below.

- 2BeSafe - Being Safe in a Digital World

Adaptation and SEND

Adaptation and SEND

Where appropriate, guidance has been given on how to simplify tasks within lessons or challenge those who are ready for more stretching tasks. We identify SEND as a broad term which can include physical, sensory, cognitive, behaviour and learning access needs, of which some children with SEND needs may be functioning at above expected national levels.

Within the scheme, most lessons are designed to be differentiated by using support and/or scaffolding to adapt tasks and activities so that outcomes can be tailored to each child's individual needs.

Specific SEND guidance is not provided, except where difficulties in other subjects may affect access to computing content. For example, some activities involving spreadsheets draw on mathematical understanding, which may present additional challenges for certain pupils.

We aim to make resources accessible to as many children as possible, such as including voice recordings alongside text in quiz activities, and carefully considering colour palettes and illustrations.

Extension tasks are included in many lessons to provide additional challenge for more able learners.

Links Across the Curriculum

Links Across the Curriculum

Within the scheme, there are many opportunities to incorporate the computational skills into other subjects. Resources could be adapted or created to match your topics. Below are some suggestions.

Units that link to the Maths curriculum:

- Year 1 - Data Explorers
- Year 2 - Questioning
- Year 3 - Branching Databases
- Year 5 - Databases
- Year 6 - Graphing
- Year 2, 3 and 5 - Spreadsheets
- Year 6 - Spreadsheets

Units that could be part of English lessons:

- Year 2 - Presenting Ideas
- Year 4 - Sound Stories
- Year 5 - Word Processing

Units that could easily be topic linked; resources will need to be adapted to have a topic theme:

- Any of the data handling units suggested in the Maths section.
- Year 1 - Animated Stories
- Year 2 - Creating Pictures
- Year 2 - Presenting Ideas
- Year 3 - Presentations
- Year 4 - Animation
- Year 4 - Sound Stories
- Year 5 - Quizzing
- Year 5 - Game Creator
- Year 5 - Word Processing
- Year 5 - Concept Maps
- Year 6 - Blogging

Music topics could be incorporated into music lessons with a modelling of musical skills on both instruments and using the computer:

- Year 1 - Making Beats
- Year 2 - Making Music
- Year 4 - Composing Beats

Typing could be covered during a regular 10-minute morning session over a term rather than during dedicated computing lessons (Year 3 Touch Typing). This is facilitated by using the Typing Across the Year resources (found in the Computing area).

Cultural Capital

Cultural Capital

"As part of making the judgement about the quality of education, inspectors will consider the extent to which schools are equipping pupils with the knowledge and cultural capital they need to succeed in life. Our understanding of 'knowledge and cultural capital' is derived from the following wording in the national curriculum: 'It is the essential knowledge that pupils need to be educated citizens, introducing them to the best that has been thought and said and helping to engender an appreciation of human creativity and achievement.'"

(Ofsted's definition of cultural capital – Extract: Ofsted School Inspection Handbook 2019)

When we consider cultural capital in relation to a child starting their journey of learning in a school setting, it's the idea that they all have started school with their own experiences and knowledge. These experiences and knowledge will link to their culture and wider family. Pierre Bourdieu, a French sociologist, developed the concept of cultural capital in the 1960s, arguing heavily that children's attainment in schools was not defined by solely economic factors. Various research indicates a strong correlation between the value placed on children's cultures and the

progress they make in formal education settings.

It's important to note that cultural capital shouldn't be defined as just academic achievement, cultural capital should be thought of enabling a child to grow into educated citizens who have had broad experiences and knowledge with a strong appreciation of human achievement and creativity.

Cultural capital is one of the key things that a child will utilise throughout their life in order to become successful in society.

How Schools Play A Part

Schools have a duty to ensure that their children are given a rich educational diet that supports the notion of Cultural Capital.

Schools should consider several key things:

- **Culturally relevant pedagogy:** Embracing all their children's cultural identities, personal experiences, knowledge, and heritage in order to make learning more relevant to them and in thus doing so, giving rise to greater engagement and subsequently greater achievement.
- **Culturally responsive teaching:** Using a range of teaching strategies that supports children's personal experiences and cultural identities.
- **Provision:** Providing broad and rich experiences that their learners may not have experienced before, including the immersion of different cultures, traditions and approaches to everyday activities.
- **Knowledge:** Giving children a diet of knowledge that supports them in becoming educated citizens.

Purple Mash Computing Scheme of Work and Cultural Capital

We understand the importance of supporting opportunities for all children. Our future workforce should reflect a broad cross section of society, including but not limited to: age, gender, race, religious beliefs, cognitive and physical differences. If we consider computing and the potential career opportunities and pathways this may lead to, it's vital that a broad workforce is in place, particularly when decisions on design and implementation of systems is required to limit bias. Computing should be integrated within different cultures and experiences of people, for example, farmers using technology to maximise yield of crops.

The Purple Mash Computing Scheme of Work is a comprehensive set of resources aligned to the National Curricula for Computing, Technology and Digital Competence. The Scheme of Work is intended to facilitate teachers in achieving the very best outcomes for all children. It exposes children to a wide variety of digital tools, technological skills and innovations to enable them to

become informed members of the digital community.

It contains everything that is needed to deliver inspiring and engaging lessons whilst allowing for the flexibility to meet individual school needs. The scheme provides the scaffolding for teaching key skills alongside the flexibility to change the context to meet needs of individuals. For example, relating graphing to the local environment; tailoring blogging to individual cultures, experiences and interests. Lessons are delivered from lesson plans with accompanying slide shows. We have included additional units that go beyond the expectations of National Curricula, whilst also providing 'Catch-Up' units to close gaps in learning. The activity ideas for Early Years (Reception) show opportunities for using Mini Mash or Purple Mash as part of the Early Years classroom to support children in working towards early learning goals.

The scheme's flexibility is not just limited to adaptation of teaching approaches or contexts used within lessons. Functionality within the delivery platform allows for a range of devices to be used to access and deliver content. Additionally, features such as collaboratively enabled tools, means that children don't always require individual devices.

Supplementary resources such as Code Club and Digital Leaders give rise to opportunities for broadening horizons for all children regardless of their starting point. They support experience of leadership, developing skills and give exposure to new experiences and responsibilities such as leadership.