Primary Computing Skills Progression (EYFS – Year 6)

EYFS (Foundations of Computing)

(Understanding the World: Technology)

Core skills

Operate simple technology and digital equipment independently

Show curiosity about technological toys and devices

Understand that technology performs actions (cause and effect)

Begin retrieving information from digital devices

Use simple programs and apps

Recognise technology in everyday life and select it for a purpose

Progression focus

From **exploring & using** → towards **intentional, purposeful use**

Key Stage 1

Year 1

Computing Systems & Digital Use

Turn on, log in, and navigate devices independently

Use basic controls (mouse, keyboard, touchscreen)

Creating Media

Create digital images using tools (paint, shapes, brushes)

Use a keyboard to enter and edit text

Make simple design choices (colour, font, layout)

Programming

Understand that programs control outcomes

Use block-based coding (ScratchJr)

Create simple sequences of instructions

Control and move sprites

Key progression

👉 From **basic operation → simple creation and sequencing**

Year 2

Computing Systems & Safety

Identify IT in school and everyday life

Understand benefits and responsible use of technology

Begin recognising safe/un-safe use

Data & Information

Collect and enter data

Present data as pictograms/block diagrams

Use data to answer simple questions

Programming

Understand sequences produce outcomes

Predict what code will do

Modify and create simple programs (e.g. quizzes)

Key progression

From **using tech → understanding purpose & outcomes**

🥹 Key Stage 2

Year 3

Computing Systems & Networks

Understand inputs, processes, outputs

Recognise how devices connect in networks

Creating Media

Create stop-frame animations with multiple media elements

Combine images, text, and sound meaningfully

Data & Information

Use branching databases

Classify and group using yes/no questions

Programming

Create sequences using Scratch

Control sprites and combine commands

Begin event-driven programming (actions triggered by events)

Key progression

From **simple use** → **structured thinking and combining elements**

Year 4

Networks & Safety

Understand the internet as a network of networks

Evaluate online information for reliability

Creating Media

Record and edit audio (podcasts)

Edit and manipulate digital images

Understand ownership and copyright

Data & Information

Collect data using sensors/data loggers

Analyse datasets over time

Programming

Use repetition (loops) in programs

Design algorithms with efficiency in mind

Create games using loops

Key progression

From **building programs → improving efficiency and critical thinking**

Year 5

Computing Systems

Understand how systems transfer data (input-process-output)

Understand how search engines work

Creating Media

Plan, film, and edit videos

Use advanced editing techniques and storytelling

Data & Information

Use flat-file databases

Search, sort, and analyse data effectively

Programming

Use selection (if/then/else)

Control programs with conditions

Apply programming to real-world (physical computing)

Key progression

From **logic building → decision-making and real-world application**

Year 6

Networks & Communication

Understand data transfer (packets, addressing)

Use technology for collaboration responsibly

Creating Media & Design

Design and create websites

Apply layout, navigation, and user experience principles

Understand copyright and digital ethics

Data & Information

Use spreadsheets (formulas, calculations, graphs)

Organise and analyse complex data

Programming

Use variables to store and update data

Combine sequence, repetition, and selection

Create complex programs and simulations

Apply programming to physical computing (micro:bit)

Key progression

From **independent creators → confident, analytical problem-solvers**

Whole-School Progression Overview

Across all phases, the curriculum follows a clear **spiral progression**:

1. Programming

EYFS: Explore cause/effect

KS1: Sequencing

Lower KS2: Events and loops

Upper KS2: Selection → variables → complex systems

2. Data & Information

EYFS: Recognise information

KS1: Collect and present data

LKS2: Classify and organise

UKS2: Analyse and manipulate data

3. Computing Systems & Networks

EYFS: Recognise technology

KS1: Identify IT

LKS2: Understand networks

UKS2: Understand systems, internet, communication

4. Creating Media

KS1: Basic images and text

LKS2: Combine media (animations, publishing)

UKS2: Advanced multimedia (video, web, 3D)

5. Safety & Digital Literacy

KS1: Basic safe use

LKS2: Evaluating content

UKS2: Responsible communication, ethics, and impact

End of Year 6 Outcome

By the end of primary, pupils are:

Computational thinkers (sequence, selection, variables)

Creative digital producers (websites, media, 3D models)

Data-literate users (databases, spreadsheets)

Technically informed (networks, systems, internet)

Responsible digital citizens (safety, ethics, communication)