

**St Luke's Primary School**  
**Progression of Skills Map**  
**Computing**  
**2022-2023**

**KS1 Cycle A**

**Autumn term 1: (Computing systems and networks-Technology around us)**

- To identify technology
- To identify a computer and its main parts
- 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

**Autumn term 2 (creating media-digital painting)**

- To describe what different freehand tools do
- To use the shape tool and line tool
- To make careful choices when painting a digital picture
- To explain why I used the tools I did
- To use a computer on my own to paint a picture

**Spring term 1: (Programming A-moving a robot)**

- To explain what a given command will do
- To act out a given word
- To combine forwards and backwards commands 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

**Spring term 2 (data and information-grouping data)**

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

**Summer term 1: (creating media-digital writing)**

- To use a computer to write
- To add and remove text on a computer
- To identify that the look of text can be changed on a computer
- To make careful choices when changing text
- To explain why I used the tools that I chose
- To compare writing on a computer with writing on paper

**Summer term 2 (programming B-animations)**

- To choose a command for a given purpose
- To show that a series of commands can be joined together
- To identify the effect of changing a value
- To explain that each sprite has its own instructions
- To design the parts of a project
- To use my algorithm to create a program

**KS1 Cycle B**

**Autumn term 1 (computing systems and networks-IT around us)**

- To recognise the uses and features of information technology
- To identify information technology in the home
- To identify information technology beyond school
- To explain how information technology benefits us
- To show how to use information technology safely
- To recognise that choices are made when using information technology

**Autumn Term 2: (creating media-digital photography)**

- To know what devices can be used to take photographs
- To use a digital device to take a photograph
- To describe what makes a good photograph
- To decide how photographs can be improved
- To use tools to change an image
- To recognise that images can be changed

**Spring term 1 (programming A-robot algorithms)**

- To describe a series of instructions as a sequence
- To explain what happens when we change the order of instructions
- To use logical reasoning to predict the outcome of a program (series of commands)
- To explain that programming projects can have code and artwork
- To design an algorithm
- To create and debug a program that I have written

**Spring term 2 (data and information-Pictograms)**

- To recognise that we can count and compare objects using tally charts
- To recognise that objects can be represented as pictures
- To create a pictogram
- To select objects by attribute and make comparisons
- To recognise that people can be described by attributes
- To explain that we can present information using a computer

**Summer 1 (creating media-digital music)**

- To say how music can make us feel (not a computing related progression step)
- To identify that there are patterns in music
- To describe how music can be used in different ways
- To show how music is made from a series of notes
- To create music for a purpose
- To review and refine our computer work

**Summer 2 (programming B-programming quizzes)**

- To explain that a sequence of commands has a start
- To explain that a sequence of commands has an outcome
- To create a program using a given design
- To change a given design
- To create a program using my own design

**LKS2 Cycle A**

**Autumn term 1 (computing systems and networks-connecting computers)**

- To explain how digital devices function
- To identify input and output devices
- To recognise how digital devices can change the way we work
- To explain how a computer network can be used to share information
- To explore how digital devices can be connected
- To recognise the physical components of a network

**Autumn 2 (creating media-stop-frame animation)**

- To explain that animation is a sequence of drawings or photographs
- To relate animated movement with a sequence of images
- To plan an animation
- To identify the need to work consistently and carefully
- To review and improve an animation
- To evaluate the impact of adding other media to an animation

**Spring 1 (programming A-sequencing sounds)**

- To explore a new programming environment
- I can identify that each sprite is controlled by the commands I choose
- To explain that a program has a start
- To recognise that a sequence of commands can have an order
- To change the appearance of my project
- To create a project from a task description

**Spring 2 (data and information-branching databases)**

- To create questions with yes/no answers
- To create a branching database
- To explain why it is helpful for a database to be well structured
- To identify objects using a branching database
- To identify the object attributes needed to collect relevant data
- To compare the information shown in a pictogram with a branching database

**Summer 1 (creating media-desktop publishing)**

- To recognise how text and images convey information
- To recognise that text and layout can be edited
- To choose appropriate page settings
- To add content to a desktop publishing publication
- To consider how different layouts can suit different purposes
- To consider the benefits of desktop publishing

**Summer 2 (programming B-events and actions in programs)**

- To explain how a sprite moves in an existing project
- To create a program to move a sprite in four directions
- To adapt a program to a new context
- To develop my program by adding features
- To identify and fix bugs in a program
- To design and create a maze based (given) challenge

## LKS2 Cycle B

### Autumn 1 (computing systems and networks-The Internet)

- To describe how networks physically connect to other networks
- To recognise how networked devices make up the internet
- To outline how websites can be shared via the World Wide Web
- To describe how content can be added and accessed on the World Wide Web
- To recognise how the content of the WWW is created by people
- To evaluate the consequences of unreliable content

### Autumn2 (creating media-Audio production)

- To identify that sound can be digitally recorded
- To use a digital device to record sound
- To explain that a digital recording is stored as a file
- To explain that audio can be changed through editing
- To show that different types of audio can be combined and played together
- To evaluate editing choices made

### Spring 1 (programming A-repetition in shapes)

- To identify that accuracy in programming is important
- To create a program in a text-based language
- To explain what 'repeat' means
- To modify a count-controlled loop to produce a given outcome
- To decompose a program into parts
- To create a program that uses count-controlled loops to produce a given outcome

### Spring 2 (data and information-data logging)

- To explain that data gathered over time can be used to answer questions
- To use a digital device to collect data automatically
- To explain that a data logger collects 'data points' from sensors over time
- To use data collected over a long duration to find information
- To identify the data needed to answer questions
- To use collected data to answer questions

### Summer 1 (creating media-photo editing)

- To explain that digital images can be changed
- To change the composition of an image
- To describe how images can be changed for different uses
- To make good choices when selecting different tools
- To recognise that not all images are real
- To evaluate how changes can improve an image

### Summer 2 (programming B-repetition in games)

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

## UKS2 Cycle A

### Autumn 1 (computing systems and networks—systems and searching)

- To explain that computers can be connected together to form systems
- To recognise the role of computer systems in our lives
- To recognise how information is transferred over the internet
- To explain how sharing information online let's people in different places work together
- To contribute to a shared project online
- To evaluate different ways of working together online

### Autumn 2 (creating media-video production)

- To recognise video as moving pictures, which can include audio
- To identify digital devices that can record video
- To capture video using a digital device
- To recognise the features of an effective video
- To identify that video can be improved through reshooting and editing
- To consider the impact of the choices made when making and sharing a video

### Spring 1 (programming A-selection in physical computing)

- To control a simple circuit connected to a computer
- To write a program that includes count-controlled loops
- To explain that a loop can stop when a condition is met, e.g. number of times
- To conclude that a loop can be used to repeatedly check whether a condition has been met
- To design a physical project which includes selection
- To create a controllable system which includes selection

### Spring 2 (data and information-flat-file databases)

- To use a form to record information
- To compare paper and computer-based databases
- To apply my knowledge of a database to ask and answer real-world questions
- To explain that tools can be used to select data to answer questions
- To apply my knowledge of a database to ask and answer real-world questions
- To apply my knowledge of a database to ask and answer real-world questions

### Summer 1 (creating media-introduction to vector graphics)

- To identify that drawing tools can be used to produce different outcomes
- To create a vector drawing by combining shapes
- To use tools to achieve a desired effect
- To recognise that vector drawings consist of layers
- To group objects to make them easier to work with
- To evaluate my vector drawing

### Summer 2 (Programming B-selection in quizzes)

- To explain how selection is used in computer programs
- To relate that a conditional statement connects a condition to an outcome
- To explain how selection directs the flow of a program
- To design a program which uses selection
- To create a program which uses selection
- To evaluate my program

## UKS2 Cycle B

### Autumn 1 (computing systems and networks-communication and collaboration)

- To explain the importance of internet addresses
- To explain how data is transferred across the internet
- To explain how sharing information online can help people work together
- To evaluate different ways of working together online
- To recognise how we communicate using technology
- To evaluate different methods of online communication

### Autumn 2 (creating media-webpage creation)

- To review an existing website and consider its structure
- To plan the features of a web page
- To consider the ownership and use of images (copyright)
- To recognise the need to preview pages
- To outline the need for a navigation path
- To recognise the implications of linking to content owned by other people

### Spring 1 (programming A-variables in games)

- To define a 'variable' as something that is changeable
- To explain why a variable is used in a program
- To choose how to improve a game by using variables
- To design a project that builds on a given example
- To use my design to create a project
- To evaluate my project

### Spring 2 (data and information-spreadsheets)

- To create a data set in a spreadsheet
- To build a data set in a spreadsheet
- To explain that formulae should be used to produce calculated data
- To apply formulae to data
- To create a spreadsheet to plan an event
- To choose suitable ways to present data

### Summer 1 (creating media 3D modelling)

- To recognise that you can work in 3D on a computer
- To identify that digital 3d objects can be modified
- To recognise that objects can be combined in a 3d model
- To create a 3d model for a given purpose
- To plan my own 3d model

### Summer 2 (programming B –sensing movement)

- To create a program to run on a controllable device
- To explain that selection can control the flow of a program
- To update the variable with a user input
- To use a conditional statement to compare a variable to a value
- To design a project that uses inputs and outputs on a controllable device
- To develop a program to use inputs and outputs on a controllable device

Three strands: computer science, information technology and digital literacy