





| <div>   ISLINGTON </div> <div> KS1 Learning Objectives Extracted from Islington Computing Scheme </div> | | |
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| Computer Science Steps | | |
| Year 1 | | Year 2 |
| <div> Coding Unit A Beebots - Moving a floor robot Coding Unit B Online Early Coding - Busy Things </div> | From Islington Computing Units Plans To follow and give simple everyday commands or instructions To explore and predict what robot commands will do To combine four direction commands to make sequences To predict the outcome of sequences To read and write simple algorithms To plan and test a simple program Y1 To show that an algorithm is series of commands can be joined to achieve a given purpose To use logical reasoning to predict what the next step will do To code a sequence of instructions using online software To run and test the code to fix errors To design an algorithm for a program To code, test and debug the program | To describe a series of instructions as a sequence To explain what an algorithm is in everyday situations To use logical reasoning to predict the outcome of a program (series of commands) To explore algorithms and use them to sequence commands To design an algorithm for a program To create and debug a program that I have written Y2 To explore how commands can be connected to create simple sequences 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 To decide how my project can be improved |
| | <div> Coding Unit A Online Robots - J2Code Coding Unit B Sequencing - Animations - ScratchJr </div> | |
| DL & IT Steps | | |
| Year 1 | | Year 2 |
| <div> IT - Digital Media - Multimedia and Digital Writing MUSIC and PAINTING - Busy Things IT - Digital Media - Multimedia and Digital Writing : WRITING and PHOTOGRAPHY - Busy Things </div> | To sit on, log in and access online resources and work (DL) To use the mouse/trackpad to move the cursor and interact with my computer (DL) To explore sounds and music using technology To use the keyboard to interact with the computer and type (DL) To use a computer on my own to paint a picture To compare painting a picture on a computer and on paper Y1 To use a computer to write To add and remove text 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 To use a digital camera to take a picture and change it using filters | To use the keyboard to type sentences (DL) To save and retrieve what I create (DL) To use a bookmark or a link to access a web page and find information to answer questions (DL) To select templates for my writing To format my typing to suit the task To review and refine our computer work Y2 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 |
| | <div> IT - Multimedia and Digital Writing - J1T IT - Creating Media - Digital Photography </div> | |
| <div> DL - Technology around us IT - Data groups and exploring Busy Things Statistics </div> | To identify technology To identify examples of technology in the classroom and how it helps us To identify a computer and its main parts To create rules for using technology responsibly (To switch on and off and use keyboard and mouse/trackpad) part of IT lessons Y1 To label objects and describe objects in different ways To count objects with the same properties To compare groups of objects To answer questions about groups of objects To explore using pictograms to present data To talk about the link between the data and the information on the screen pictogram | To recognise the uses and features of information technology To identify information technology beyond school and in the home To explain how information technology benefits us To know that the internet is made of computers connected around the world To know some uses of the internet To show how to use information technology safely Y2 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 use the pictograms to help me make comparisons To explain that we can present information using a computer |
| | <div> DL - Uses of Computers and Information technology IT - Data J1T Pictograms </div> | |
| <div>   ISLINGTON </div> <div> Created by U Can Too - Amended by Islington Computing </div> | | |



Lower Key Stage 2 Learning Objectives Extracted from Islington and NCC

Computer Science Steps

Year 3

To drag and drop blocks of code

To translate movements into a sequence algorithm

To identify patterns of repetition in an algorithm

To solve coding puzzles using repetition

To create a program; run, test and debug it

To solve coding challenges

[Coding Unit A – Code.org – Course B](#)

Y3

To become familiar with the basic features in Scratch and tinker

To predict and create a sequence to build a program using blocks

To modify a given program by changing the input

To plan and design a monologue

To use input and output blocks to code a program

To test and debug a program

[Coding Unit B- Sequencing with Scratch Animation](#)

Year 4

To explore code sequences

To plan and use an algorithm to code

To add stage, sound and movement

To use a sequence to plan dialogue between two sprites

To add stage and sound effects to a program

To evaluate, test and debug a program

[Coding Unit A- Multiple sequences Scratch Scene Dialogue](#)

Y4

To identify the order and write an algorithm to draw a square on the screen

To adapt a sequence of instructions to draw other 2D shapes

To use repeat loops to simplify a program

To create a program to draw different shapes using repetition loops and colours

To compare different ways to code to draw shapes

To evaluate, test and debug a program

[Coding Unit B- Repetition Scratch Shapes](#)

DL & IT Steps

Year 3

To become familiar with text and editing tools

To add an image, resize and change layout in a document

To use keyboard shortcuts to copy and paste images

To add content to a desktop publishing publication and use basic formatting tools

To consider how different layouts can suit different purposes

To edit a publication using keyboard shortcuts and arrows

[IT - Multimedia and Digital Writing- Google Docs](#)

Y3

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

[IT Digital Media - Create, Share, Respond J2 Animate](#)

Y3

To use a branching database and explain how it works

To select attributes to separate objects into groups with yes/no answers

To create a branching database

To select objects by attribute and make comparisons

To identify the object attributes needed to collect relevant data

To compare the information shown in a pictogram with a branching database

[IT Branching Databases - J2 Data- J2E](#)

Y3

To explain how digital devices function

To identify inputs and outputs and design own digital device

To explore how digital devices can be connected

To recognise the physical components of a network

To demonstrate how information can be passed between devices

To identify the benefits of computer networks

[DL Connecting Systems & Networks & Hello Ruby](#)

Year 4

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

[DL- Computing Systems and Networks-The Internet](#)

Y4

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

[IT- Data Logging -NCCCE](#)

Y4

To choose an appropriate background theme and layouts to suit my work

To insert, edit and format images within Google Slides

To create and add animations and transitions to slides

To edit the command (input) for an animation or transition in a presentation

To explore different presenting features and use presenter notes

To evaluate how changes can improve a presentation

[IT- Multimedia & Digital Writing - Google Slides](#)

Y4

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

[IT - Digital Media- Creating Media- Audio editing](#)





Computer Science Steps

Year 5

[Coding Unit A - Selection Scratch Quiz](#)

- To identify and role play conditional selection in everyday situations
- To explore selection code and use 'ask' and 'answer' variables
- To explain how selection directs the flow of a program
- To plan and write a program which uses selection
- To add another output to a program to check the answers
- To evaluate someone else's program and give feedback

Y5

[Coding Unit B - Variables in Scratch Games](#)

- To read sections of code and predict what the code will do
- To make changes to the code to achieve specific results
- To design and draw a plan for a game
- To use my plan and algorithm to code my game
- To test and debug my program as I code
- To evaluate a program according to specific criteria and give feedback

Year 6

[Coding Unit A - Variables in Games - Scratch](#)

- To define a 'variable' as something that is changeable
- To predict and make changes to a program
- To choose how to improve a game by adding variables and modifying the code
- To design a project that builds on a given example
- To use my design and algorithms to code my game
- To test and debug my program

Y6

[Coding Unit B - Sensing - micro:bits](#)

- To create a program to run on a controllable device
- To explain that selection can control the flow of a program
- To update a variable with a user input
- To use an 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

DL & IT Steps

Year 5

[IT Multimedia & Digital Writing - Vector Drawings \(Google\)](#)

- 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

Y5

[IT- Data & Information - Spreadsheets](#)

- To use a form to record information
- To compare paper and computer-based databases
- To outline how grouping and then sorting data allows us to answer questions
- To explain that tools can be used to select data to answer questions
- To select an appropriate chart to visually compare data
- To apply my knowledge of a database to ask and answer real-world questions

Y5

[DL- History of Computing & Women in Computing](#)

- To begin to understand how computers evolved and changed over time
- To understand the component parts of a computer and how they work
- To understand the drive behind the development of computing during the war
- To create a timeline to show the developments of computers overtime
- To show awareness of how we connect with others and know about the dangers and how to minimise them
- To evaluate different ways of working together online

Y5

[IT- Digital Media - Video Creation & Editing \(iMovie\)](#)

- To identify digital devices that can record video and explore camera angles
- To plan a video project using a storyboard
- To record a video that demonstrates some of the features of an effective video
- To select the correct tools to make edits to my video
- To use an audio voiceover, theme music or sound effects in my project
- To consider the impact of the choices made when making and sharing a video

Year 6

[Coding Unit C - Python with Code Combat](#)

- To identify questions which can be answered using data
- To explain that objects can be described using data
- To explain that formula can be used to produce calculated data
- To apply formulas to data, including duplicating
- To create a spreadsheet to plan an event
- To choose suitable ways to present data

Y6

[DL - Computer Systems & Networks - Communication](#)

- To identify how to use a search engine
- To describe how search engines select results
- To explain how search results are ranked
- To recognise why the order of results is important, and to whom
- To recognise how we communicate using technology
- To evaluate different methods of online communication

Y6

[IT -3D Modelling - Tinkercad](#)

- To use a computer to create and manipulate three-dimensional (3D) digital objects
- To compare working digitally with 2D and 3D graphics
- To construct a digital 3D model of a physical object
- To identify that physical objects can be broken down into a collection of 3D shapes
- To design a digital model by combining 3D objects
- To develop and improve a digital 3D model

