

Computing Skills Progression Overview

Through the IB PYP curriculum, Girton Glebe develops inquiring, knowledgeable and caring young people who help to create a better and more peaceful world through an education that builds intercultural understanding and respect.

Through our 6 core values, we aim to develop children at Girton Glebe who are:

Curious: inquisitive and inquiring

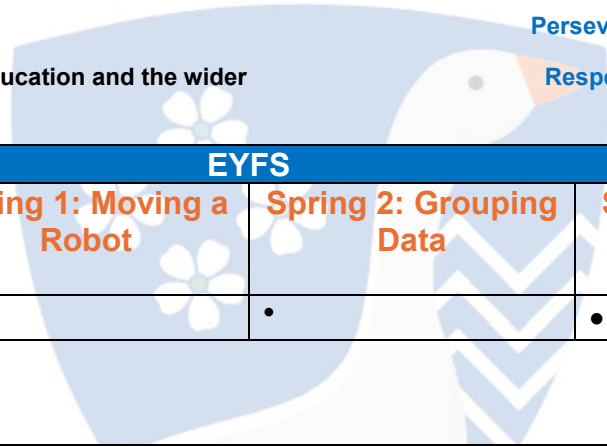
Empathetic: welcoming of others' opinions and valuing the feelings of others

Aspirational: striving to achieve

Persevering: appreciative of the learning journey

Responsible: understanding of their involvement in their education and the wider world

Respectful: inclusive, local and global citizens



EYFS

Autumn 1: Technology Around Us	Autumn 2: Digital Painting	Spring 1: Moving a Robot	Spring 2: Grouping Data	Summer 1: Digital Writing	Summer 2: Programming Animations
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Year 1

Autumn 1: Technology Around Us	Autumn 2: Digital Painting	Spring 1: Moving a Robot	Spring 2: Grouping Data	Summer 1: Digital Writing	Summer 2: Programming Animations
<ul style="list-style-type: none"> Identify the main parts of a computer Use a mouse in different ways Use a keyboard to type and edit text Choose a piece of technology to do a job Recognise that some technology can be 	<ul style="list-style-type: none"> Create a picture using freehand tools Use shape and line tools when precision is needed Use a range of paint colours Use the fill tool to colour an enclosed area 	<ul style="list-style-type: none"> Predicting the outcome of a command on a device List which commands can be used on a device Run a command on a floor robot Choose a command for a given purpose 	<ul style="list-style-type: none"> Collect simple data Show that collected data can be counted Describe the properties of an object Choose an attribute to group objects by Describe a group of objects 	<ul style="list-style-type: none"> Use letter, number and space keys to enter text on to a computer Use punctuation and special characters Select text Change the appearance of text on a computer 	<ul style="list-style-type: none"> Choose a series of words that can be enacted as a program Chose a series of commands that can be run as a program Run a program on a device

<ul style="list-style-type: none"> used in different ways Show how to use technology safely 	<ul style="list-style-type: none"> Use the undo button to correct a mistake Combine a range of tools to create a piece of artwork 	<ul style="list-style-type: none"> Choose a series of words that can be enacted – and run - as a program Build a sequence of commands in steps Combine commands in a program Run a program on a device 	<ul style="list-style-type: none"> Recognise that information can be presented in different ways 	<ul style="list-style-type: none"> Position the text cursor in a chosen location Use 'backspace' key to remove text Use 'undo' 	
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Year 2					
Autumn 1: Information Technology Around Us	Autumn 2: Digital Photography	Spring 1: Robot Algorithms	Spring 2: Pictograms	Summer 1: Making Music	Summer 2: Programming Quizzes
<ul style="list-style-type: none"> Describe some uses of computers Identify information technology in school and beyond school Show how to use information technology safely 	<ul style="list-style-type: none"> Capture a digital image Take photographs in landscape and portrait View photographs on a digital device Decide which photographs to keep Hold the camera still and take a clear photograph Use zoom to change the composition of a photograph Consider lighting before taking a photograph Use simple editing tools to change the appearance of a photograph Improve a photo by retaking it 	<ul style="list-style-type: none"> Choose a series of words that can be enacted as a sequence Choose a series of instructions that can be run as a program Create a program Trace a sequence to make a prediction Run a program on a device Debug a program that I have written 	<ul style="list-style-type: none"> Show I can enter data on a computer Use a computer to view data in different formats Use pictograms to answer single-attribute questions Use a computer to answer comparison questions Recognise that people, animals and objects can be described by attributes 	<ul style="list-style-type: none"> Experiment with musical patterns on a computer Experiment with different sounds on a computer Use a computer to create a musical pattern Use a computer to compose a rhythm and a melody on a given theme Use a computer to play the same music in different ways (e.g. tempo) Evaluate a musical composition created on a computer Improve a musical composition created on a computer 	<ul style="list-style-type: none"> Choose a series of words that can be enacted as a sequence Explain what happens when we change the order of instructions Choose a series of commands that can be run as a program Trace a sequence to make a prediction Test a prediction by running the sequence Create and debug a program Run a program on a device

Year 3

Autumn 1: Connecting Computers	Autumn 2: Stop-Frame Animation	Spring 1: Sequencing Sounds	Spring 2: Branching Databases	Summer 1: Desktop Publishing	Summer 2: Events and Actions in Programs
<ul style="list-style-type: none"> Identify input and output devices Explain that a computer system accepts an input and processes it to produce an output Explain how a computer network can be used to share information Explain the role of a switch, server and wireless access point in a network Identify network devices around me 	<ul style="list-style-type: none"> Set up the work area with an awareness of what will be captured Plan my animation using a storyboard Capture an image Use the onion skinning tool to review subject position Move a subject between captures Review a captured sequence of frames as an animation Remove frames to improve an animation Add media to enhance an animation Review a completed project 	<ul style="list-style-type: none"> Build a sequence of commands Combine commands in a program Order commands in a program Create a sequence of commands to produce a given outcome 	<ul style="list-style-type: none"> Create questions with yes/ no answers Choose questions that will divide objects into evenly sized subgroups Repeatedly create subgroups of objects Identify an object using a branching database Retrieve information from different levels of the branching database 	<ul style="list-style-type: none"> Show that page orientation can be changed Organise text and image placeholders in a page layout Add and remove images to and from placeholders Move, resize and rotate images Add text to a placeholder Edit text in a placeholder Choose fonts and apply effects to text Review a document 	<ul style="list-style-type: none"> Build a sequence of commands Combine commands in a program Order commands in a program Create a sequence of commands to produce a given outcome

Year 4

Autumn 1: The Internet	Autumn 2: Audio Production	Spring 1: Repetition in Shapes	Spring 2: Data Logging	Summer 1: Photo Editing	Summer 2: Repetition in Games
<ul style="list-style-type: none"> Describe how networks connect to computers Recognise the need for safety on the internet 	<ul style="list-style-type: none"> Record sound using a computer Play recorded audio Import audio into a project 	<ul style="list-style-type: none"> List an everyday task as a set of instructions including repetition 	<ul style="list-style-type: none"> Use a digital device to collect data automatically Choose how often to automatically collect data samples 	<ul style="list-style-type: none"> Identify the types of image needed in relation to their chosen theme 	<ul style="list-style-type: none"> List an everyday task as a set of instructions including repetition

<ul style="list-style-type: none"> • Explain that the World Wide Web comprises of websites and web pages • Explain that the internet allows us to view the World Wide Web 	<ul style="list-style-type: none"> • Delete a selection of audio • Change the volume of tracks in a project 	<ul style="list-style-type: none"> • Use an indefinite loop to produce a given outcome • Use a count-controlled loop to produce a given outcome • Plan a program that includes appropriate loops to produce a given outcome • Recognise tools that enable more than one process to be run at the same time • Create two or more sequences that run at the same time 	<ul style="list-style-type: none"> • Use a set of logged data to find information • Use a computer program to sort data by one attribute • Export information in different formats 	<ul style="list-style-type: none"> • Outline how the images will be used together • Suggest colours and effects that might suit their scene • Select images and combine them into one • Use a range of tools to create their image • Add relevant text to their publication • Evaluate how successful they were in meeting their task requirements 	<ul style="list-style-type: none"> • Use an infinite loop to produce a given outcome • Use a count-controlled loop to produce a given outcome • Plan a program that includes appropriate loops to produce a given outcome • Recognise tools that enable more than one process to be run at the same time • Create two or more sequences that run at the same time
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Year 5					
Autumn 1: Systems and Searching	Autumn 2: Video Production	Spring 1: Selection in Physical Computing	Spring 2: Flat-file Databases	Summer 1: Vector Drawing	Summer 2: Selection in quizzes
<ul style="list-style-type: none"> • Describe the input and output of a search engine • Demonstrate that different search terms produce different results • Evaluate the results of search terms 	<ul style="list-style-type: none"> • Use different camera angles • Use plan, tilt and zoom • Identify features of a video recording device or application • Combine filming techniques for a given purpose • Determine what scenes will convey your idea • Decide what changes I will make when editing • Choose to reshoot a scene or improve later through editing 	<ul style="list-style-type: none"> • Create a condition-controlled loop • Use a condition in an 'if...then...' statement to start an action • Use selection to switch the program flow in one of two ways • Use a condition in an 'if...then...else...' statement to produce given outcomes 	<ul style="list-style-type: none"> • Choose different ways to view data • Choose which attribute and value to search by to answer a given question • Ask questions that need more than one answer • Choose which attribute to sort data by to answer a given question • Choose multiple criteria to search data to answer a given question 	<ul style="list-style-type: none"> • Add an object to a vector drawing • Select one object or multiple objects • Delete objects • More objects between the layers of a drawing • Duplicate, modify and reposition objects • Group and ungroup selected objects • Combine options to achieve a desired effect 	<ul style="list-style-type: none"> • Choose a condition to use in a program • Create a condition-controlled loop • Use a condition in an 'if...then...' statement to start an action • Use selection to switch program flow • Use 'if...then...else...' to switch program flow in one of two ways

	<ul style="list-style-type: none"> Use split, trim and crop to edit a video 		<ul style="list-style-type: none"> Select an appropriate graph to visually compare data Choose suitable ways to present information to other people 	<ul style="list-style-type: none"> Create a vector drawing for a given purpose 	
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Year 6					
Autumn 1: Communication and Collaboration	Autumn 2: Web Page Creation	Spring 1: Variables in Games	Spring 2: Introduction to Spreadsheets	Summer 1: 3D Modelling	Summer 2: Sensing Movement
<ul style="list-style-type: none"> Recognise that data is transferred using agreed methods Explain that internet devices have addresses Describe how computers use addresses to access websites Identify and explain the main parts of a data packet Explain that data is transferred over networks in packets Recognise how to access shared files stored online Send information over the internet in different ways Explain that the internet allows different media to be shared Decide when I should and should not share information online 	<ul style="list-style-type: none"> Review an existing website (navigation bars, header) Create a new blank web page Add text to a web page Set the style of text on a web page change the appearance of text embed media in a web page add web pages to a website insert hyperlinks to another site and between web pages preview a web page 	<ul style="list-style-type: none"> identify a variable in an existing program experiment with the value of an existing variable choose a name that identifies the role of a variable to make it easier for humans to understand it decide where in a program to set a variable update a variable with a user input use an event in a program to update a variable use a variable in a conditional statement to control the flow of a program use the same variable in more than one location 	<ul style="list-style-type: none"> calculate data using a formula for each operation use functions to create new data use existing cells withing a formula choose suitable ways to present spreadsheet data 	<ul style="list-style-type: none"> position 3D shapes relative to one another use digital tools to modify 3D objects combine objects to create a 3D digital artefact use digital tools to accurately size 3D objects construct a 3D model which reflects a real world object 	<ul style="list-style-type: none"> identify a variable in an existing program experiment with the value of an existing variable choose a name that identifies the role of a variable to make to more usable (to humans) decide where in a program to set a variable update a variable with a user input use an event in a program to update a variable use a variable in a conditional statement to control the flow of a program use the same variable in more than one location in a program

<ul style="list-style-type: none">• Explain that communication on the internet may not be private• Explain how to report inappropriate content online					
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