Computing Program of Study – 2022-2023

Strands – Computer Science, Information Technology, Digital Literacy

Year	Topic	Long Term Learning (Skills-based)	Skills (Working scientifically)
1	Design A Plate	• Create an image.	• IT - Can use some software to create / assemble digital content for clear purpose, (could be text, images, animations, graphs, sound, etc.) • IT - Can make straight-forward edits of their digital work (text, image, sound etc.,) using simple editing tools, to both correct and improve it. • IT - Can take a digital picture or video clip, or record a sound, as part of a task. • CS - Understands that software may represent a fantasy situation and can make sensible (logical) decisions/choices when 'playing' a straight-forward 'game'
1	Cyberwalk	• Create a digital image.	• IT - Can use a mouse, finger etc. to select & move items on the screen, assembling or matching objects. • IT - Can use some software to create / assemble digital content for clear purpose, (could be text, images, animations, graphs, sound, etc.)
1	Making Toast	• Write instructions.	• CS - Can name some digital devices that need precise instructions (algorithms) to work / be controlled. • CS - Can use trial and error to produce an accurate set of simple instructions, to control a floor 'robot' or on-screen object. • IT - Can recognise and talk about some common uses of IT in the world around them.
1	Beebot Garden Walk	• Program a route.	• CS - Can give simple instructions to control a device, like a 'floor' robot, or on-screen object. • CS - Can use trial and error to produce an accurate set of instructions to control a floor 'robot' or on-screen object. • CS - Can name some digital devices that need precise instructions (algorithms) to work / be controlled.
1	Smartie the Penguin	• Know how to ask for help.	• DL - Knows about the Internet and beginning to understand some key, age appropriate, safety 'rules'.
1	Robot Words	• Create a story with a word bank.	• IT - Can use a mouse, finger etc. to select and move items on the

			screen, assembling or matching objects. • IT - Can use some software to create / assemble digital content for clear purpose, (could be text, images, animations, graphs, sound, etc.)
1	I Can Sort Objects	• Create and sort graphs.	• IT - Can use some software to create / assemble digital content for clear purpose, (could be text, images, animation, graph, sound, etc.) • IT - Can access a resource and then find answers to straight-forward questions. • DL - Can find some straight-forward information from a 'safe', selected online resource.
1	Who Painted This?	• Create self-portraits, crediting work.	• IT - Can use some software to create / assemble digital content for clear purpose, (could be text, images, animations, graphs, sound, etc.) • IT - Can make straight-forward edits of their digital work (text, image, sound etc.,) using simple editing tools, to both correct or improve it. • DL - Knows about the Internet and beginning to understand some key, age appropriate, safety 'rules'
1	I'm a Problem Solver	• Use instructions.	• CS - Understands some basic computing terms and concepts, such as ... algorithm, program, sequence .... • CS - Can give some simple instructions to control a device, like a beebot, floor robot or on-screen object. • CS - Can name some digital devices that need precise instructions (algorithms) to work / be controlled. • CS - Understands that software may represent a fantasy situation and can make sensible (logical) decisions/choices when 'playing' a straight-forward 'game'. • CS - Understands some basic computing terms and concepts, such as ... algorithm, program, sequence, etc. • IT - Can recognise and talk about some common uses of IT in the world around them.
1	How Does My Garden Grow?	• Find information online.	• DL - Knows about the Internet and is beginning to understand some key, age appropriate, safety 'rules'.

			• DL - Can find some straight-forward information from a 'safe', selected online resource. • IT - Can access a resource and then find answers to straight-forward questions
1	Share My Iceberg Work	• Share work online.	• DL - Knows about the Internet and is beginning to understand some key, age appropriate, safety 'rules'. • DL - Can share some information with others, (such as via school network, in school MLE, via a 'closed' blog). • IT - Can use some software to create / assemble digital content for clear purpose, (could be text, images, animations and graphs, sound, etc.)
1	I Can Code!	• Program on-screen.	• CS - Can give simple instructions to control a device, like a Beebot 'floor' robot or on screen object. • CS - Understands that software may represent a fantasy situation and can make sensible (logical) decisions/choices when "playing" a straight forward "game." • CS - Can use trial and error to produce an accurate set of simple instructions, to control a floor 'robot' or on-screen object.
2	Say No To Graffiti!	• Edit a photo and create a poster.	• IT - Can use some software to create / assemble digital content for clear purpose, (could be text, images, animation, graph, sound, etc.) • IT - Can make straight-forward edits of their digital work (text, image, sound etc.,) using simple editing tools, to correct or improve it. • IT - Can create and amend a (multimedia) resource for a clear purpose, starting to show a sense of the 'audience'. • IT - Can save and retrieve work (and print if appropriate to task).
2	Do You Like My Blog?	• Create content and comment on others' work.	• IT - Can use some software to create / assemble digital content for clear purpose, (could be text, images, animations, graphs, sound, etc.) • DL - Can create and share some information online, (such as in school MLE, 'closed' email

			system or blog), understanding need to be respectful and safe.
2	How Does That Work?	• Write algorithms.	• CS - Can give a set of simple instructions to program (control) a device, like a 'floor' robot, or on-screen object. • CS - Can talk about some electronic devices and understands that they need precise instructions (algorithms) to work / be programmed (controlled). • CS - Understands some basic computing terms and concepts, such as: (school) network, algorithm, program, debug, editing, website, etc. • IT - Can recognise and talk about some common uses of ICT in the world around them.
2	Demolition Robot!	• Program Beebot to complete a task.	• CS - Can give a set of simple instructions to program (control) a device, like a 'floor' robot, or on-screen object. • CS - Can use trial and error to produce an accurate set of 'instructions' to control a floor 'robot' or on-screen object; refine (de-bug) and improve / make changes. • CS - Understands some basic computing terms and concepts, such as: (school) network, algorithm, instructions, program, etc.
2	Digi Duck's Dilemma	• Know what to do when making mistakes online.	• DL - Can talk about key online safety 'rules' and knows where to go / report if there is a problem. • IT - Can use some software to create / assemble digital content for a clear purpose, (could be text, images, animations, graphs, sound, etc.)
2	Follow That Footprint	• Know we leave a 'digital trail' when on the internet.	• DL - Can talk about key online safety 'rules' and knows where to go / report if a problem.
2	Finding Out About…	• Find information online.	• IT - Can navigate their way within some straight-forward digital content, such as selected history content, to find some specific information. • DL - Can find some straight-forward information from (selected) website resource(s) and knows not all websites 'good to use'. • DL - Can talk about key online safety 'rules' and knows where to go / report if a problem.

2	Getting to school safely	• Create graphs and answer questions.	• IT - Can create & store some data, (simple data file), and then find answers to straight-forward questions. • CS - Can give a set of simple instructions to program (control) a … on-screen object.
2	I Can Debug!	• Program on screen using simple commands.	• CS - Can give a set of simple instructions to program (control) a device, like a 'floor' robot, or on-screen object. • CS - Can use trial and error to produce an accurate set of simple instructions to control a floor 'robot' or on-screen object, using trial and error to refine (de-bug) and improve / make changes. • CS - Demonstrates logical 'trial and error' when using a computer simulation or game, and predicts the consequences of decisions/choices made.
2	Let's Send A Message	• Send and respond to emails or messages.	• DL - Can talk about key online safety 'rules' and knows where to go / report if a problem. Understanding need to be respectful and safe (when communicating online). • IT - Can recognise and talk about some common uses of ICT in the world around them.
2	Mini-beasties	• Sort, classify and ask questions.	• IT - Can create & store some data, (simple database), and then find answers to straight-forward questions. • DL - Can find some straight-forward information from (selected) website resource(s) and knows not all websites 'good to use'.
3	Safe Surfing With Dongle	• Learn SMART rules and personal information.	• DL - I can talk about key online safety 'rules' and knows where to go / report if a problem. • IT - I can use some software to create / assemble digital content for a clear purpose, (could be text, images, animation, graph, sound, etc.) • IT - I can save and retrieve work from electronic folders (and print if appropriate to the task).
3	Journey Of An Email	• Explain networks using email.	• DL - I can talk about key online safety 'rules' and know where to go / report if a problem. • DL - I can create and share some information online (such as in MLE, email/blog), understanding need to be respectful and safe.

			• CS - I know some relevant computing terms such as computer network, Internet, algorithm, program, World Wide Web, website, etc. IT - I an use some software to create / assemble digital content for clear purpose, (could be text, images, animation, graph, sound, etc.)
3	Can Your Robot Make Shapes?	• Use algorithms.	• CS - I can produce an accurate set of simple instructions (code), to program (control) an on-screen object (or floor 'robot'), using trial and error to debug. • CS - I can also talk about how the sequence of events in some simple instructions (algorithms) or code are 'working'. • CS - I can demonstrate logical, trial and error when using a computer simulation, 'model' or game and predicts some consequences/decisions choices made.
3	Exploring How Things Work	• Use algorithms.	• CS - I can talk about some digital devices beyond school that need precise instructions (algorithms) to work / be programmed (controlled). • CS - I can also talk about how the sequence of events in some simple instructions (algorithms) or code are 'working'. • CS - I know some relevant computing terms such as computer network, Internet, algorithm, program, procedure , (World Wide Web, website) etc.
3	Would I Lie To You?	• Understand the difference between facts and fiction online.	• IT - I can navigate their way within some straightforward digital content, such as selected history content, to find some specific information. • DL - I can find some straight-forward information from (selected) website resource(s) and know not all websites 'good to use'
3	Do You Like My Presentation?	• Develop and share a presentation.	• IT - I can use some software to create / assemble digital content for clear purpose, (could be text, images, animation, graph, sound, etc.) • IT - I can make straight-forward edits of their digital work (text, image, sound etc.,) using simple editing tools, to both correct and improve it. • IT - I can create and amend a (multimedia) resource that shows a sense of 'audience'.

3	Finding Out About Me	• Add data and answer questions by searching a file.	• IT - I can use some software to create / assemble digital content for clear purpose, (could be text, images, animation, graph, sound, etc.) • IT - I can navigate my way within some straight-forward digital content to find some specific information. • IT - I can create & store some data, (simple data file), and then find answers to straight-forward questions. • IT - I can recognise and talk about some common uses of ICT in the world around me.
3	Creating A Tessellation	• Develop repeated patterns with tessellations.	• IT - I can use some software to create / assemble digital content for clear purpose, (could be text, images, animation, graph, sound, etc.) • IT - I can make straight-forward edits of my digital work (text, image, sound etc.,) using simple editing tools, to both correct and improve it.
3	I Can Use Block Coding	• Program simple sequences.	• CS - I can produce an accurate set of simple instructions (code), to program (control) an on-screen object (or floor 'robot'), using trial and error to debug. • CS - I can also talk about how the sequence of events in some simple instructions (algorithms) or code are 'working'. • CS - I know some relevant computing terms such as computer network, Internet, algorithm, program, World Wide Web, website, etc.
3	I Can Make An On-Screen Animation	• Create an animation using web tools.	• IT - I can use some software to create / assemble digital content for clear purpose, (could be text, images, animation, graph, sound, etc.) • IT - I can make straight-forward edits of my digital work (text, image, sound etc.,) using simple editing tools, to both correct and improve it. • IT - I can use software to create and combine content (be it text, pictures / images, graphs, animation, podcast etc.,) for meaningful purpose(s) • IT - I can also edit and amend my digital work (text, image, sound etc.,) using simple editing tools, to both correct and improve it.

4	Let's Email	• Understand how email 'works' – use email to send a story.	• DL - I can create and share some information online (such as school MLE, email / blog), demonstrating the need to be respectful and safe. • DL - I can talk about key online safety 'rules', knows what may be unacceptable behaviour, and know where to go / report if a problem. • IT - I can use software to create and combine content (be it text, pictures / images, graphs, animation, podcast etc.,) for meaningful purpose(s).
4	Searching The Web	• Understand search engines.	• CS - I can develop and use a wider computing 'vocabulary' relevant to work, such as de-bug, Apps, data logging, search engines, spam, Wiki, etc. • DL - I can find straightforward information from (selected) website resource(s) and knows sites can contain, true or false facts, or opinion.
4	Logo Turtle Mania	• Create on-screen shapes using text-based programming.	• CS - I can produce, debug and edit an accurate sequence of instructions, including the use of repeat, to control on-screen objects. • CS - I can plan and create a program using decomposition; includes the use of selection (IF/ELSE) and/or variables.
4	My Exciting World Landmarks	• Find information online.	• IT - I can also edit and amend my digital work (text, image, sound etc.,) using simple editing tools, to both correct and improve it.. • IT - I can create and amend a multi-media resource that shows a sense of 'audience'. • IT - I can navigate my way within range of (selected) online content, to find specific information. • IT - I can include some information / content from an online resource within a 'presentation'. • DL - I can find straight-forward information from (selected) website resource(s) and know sites can contain true or false facts, or opinion.
4	Weather Data	• Collect and analyse information.	• IT - I can navigate my way with range of 'selected' online content, to find specific information • IT - I can use a data file to find answers to straight-forward questions, (such as through data

			logging or a survey or a prepared database or a simple spreadsheet, etc.).
4	Creating An Alien Landscape	• Edit photos.	• IT - I can use software to create and combine content (be it text, pictures / images, graphs, animation, podcast etc.,) for meaningful purpose(s) • IT - I can also edit and amend my digital work (text, image, sound etc.,) using simple editing tools, to both correct and improve it.
4	Dancing With Scratch	• Program events using sequence.	• CS - I can demonstrate logical choices and prediction when using a computer simulation, 'model' or game and can make simple edits to solve a problem. • CS - I can produce, debug and edit an accurate sequence of instructions, including the use of repeat, to control on-screen objects. • CS - I can talk about different types of input options e.g. motion /touch, microphone, data logging sensor; and output options e.g. switch, speakers, screen, etc. • CS - I can develop and use a wider computing 'vocabulary' in context of task.
4	What's A Spreadsheet	• Introduction to spreadsheets.	• IT - I can use software to create and combine content (be it text, pictures images, graphs, animation, podcast etc.,) for meaningful purpose(s). • IT - I can use a data file to find answers to straight-forward questions, (such as through data logging or a survey or a prepared database or a simple spreadsheet, etc.).
4	Here's My Presentation	• Find information and images and present them to audience.	• DL - I can create and share some information online (such as in MLE, email/blog), demonstrating need to be respectful and safe. • DL - I can find straight-forward information from (selected) website resource(s) and know sites can contain, true or false facts, or opinion. • IT - I can use software to create (and combine) text, pictures / images, animation, podcast etc., for meaningful purpose(s). • IT - I can also edit and amend their digital work (text, image, sound etc.,) using simple editing tools, to both correct and improve it.

			• IT - I can create and amend a multimedia resource that shows a sense of 'audience'. • IT - I can include some information / content from an online resource within a 'presentation'. • IT - I can save and retrieve work from electronic folders.
5	Design A Poster	• Design an e-safety poster.	• DL - I can talk about key online safety 'rules' and know where to go / report if a problem. • IT - I can combine resources from different sources into a digital presentation, showing a clear sense of intended purpose and 'audience'.
5	Can You Finish My Story?	• Blog a story for others to finish.	• IT - I can use software effectively to create, design and manipulate for purposeful outcomes, such as DT, art or music projects. DL - I can communicate and collaborate online (such as in MLE blog/Wiki /forum), demonstrating respectful and safe behaviours.
5	Game Creation With Scratch	• On-screen programming.	• CS - I can test, debug and edit a program that accomplishes a given goal, (simple computer 'game' or model or simulation), to solve a problem. • CS - I can create an accurate program to accomplish a given goal, including the use of repetition (loops), selection (IF/ELSE) and variables. • CS - I can use logical reasoning to deconstruct programs, evaluate their effectiveness and make them more challenging and / or 'elegant' / efficient. • CS - I can use different types of input options and output options such as through sensing and control 'kits' and/or software, to solve a problem. • CS - I can develop and use a wider computing 'vocabulary' in context of task, such as search engine, URL, variable, validate, digital footprint, spam, Wiki, etc.
5	Stop! Check	• Understand how to check website accuracy.	• DL - I understand some simple steps to 'validate' information found on the Web, and appreciate how search results are selected and ranked. • DL - I can demonstrate 'web-savvy' awareness, from a range of given scenarios, including

			conduct, contact and content 'risks' and issues. • IT - I can find specific and valid information (i.e. be discerning) using sensible keywords / search terms, from online web content, as fits the task.
5	What Is The Internet?	• Explain the 'Internet' and the 'World Wide Web'.	• CS - I have an understanding of computer networks (local, internet services and WWW). • CS - I can developing and use a wider computing 'vocabulary' in context of task, such as …. network, URL, web address bar, WWW / Internet, protocols, IP address, domain name server, data packets, internet services, web browser, router, web server, client device, HTML, http://, etc • DL - I can demonstrate 'web-savvy' awareness, from a range of given scenarios, including commercial, contact and content 'risks' and issues.
5	Simply Delicious	• Use formulae to model costs of a meal.	• IT - I can use software effectively to create, design and manipulate for purposeful outcomes, such as DT, art or music projects. • IT - I can collect, analyse and draw conclusions from data, such as through data logging in science or a survey or a prepared database in geography or through manipulating a spreadsheet.
5	Logo Shapes And Patterns	• Understand procedures and variables.	• CS - I can create an accurate program to accomplish a given goal, including the use of repetition (loops), selection (IF/ELSE) and variables. • CS - I can test, debug and edit a program that accomplishes a given goal, (simple computer 'game' or model or simulation), to solve a problem. • CS - I can use logical reasoning to deconstruct programs, evaluate their effectiveness and make them more challenging and / or 'elegant' / efficient.
5	Let's Design In 3D!	• Design a sculpture / dream house.	• IT - I can use software effectively to create, design and manipulate for purposeful outcomes, such as DT, art or music projects.
6	Are You A Cyber Superhero?	• Understand how to make good online decisions.	• DL - I can discuss a range of eSafety and eSecurity (privacy) issues and know a range of ways

			to report concerns or inappropriate behaviour.
6	Do You Agree?	• Create and share a presentation to persuade.	• IT - I can use software effectively to create, design and manipulate for purposeful outcomes, such as DT, art or music projects. • IT - I can combine resources from different sources into digital presentations, showing a clear sense of intended purpose and 'audience'. • DL - I can communicate and collaborate online (such as in blog/Wiki / forum), demonstrating respectful and safe behaviours
6	Fun With Scratch	• Solve programming problems.	• CS - I can test, debug and edit a program that accomplishes a given goal, (simple computer 'game' or model or simulation), to solve a problem. • CS - I can create & develop programs, by planning, debugging and applying programming skills of repetition (loops), selection (IF/ELSE) and variables, to accomplish specific goals. • CS - I can use logical reasoning to deconstruct programs, evaluate their effectiveness and make them more challenging and / or 'elegant' / efficient. • CS - I can use different types of input options and output options such as through sensing and control 'kits' and/or software to solve a problem.
6	Searching Searching	• Understand how a search engine 'works'.	• CS - I can developing and use a wider computing 'vocabulary' in context of task, such as search engine, URL, validate, digital footprint, Wiki, etc. • CS - I have an understanding of computer networks (local, internet services and WWW). • DL - I can demonstrate 'web-savvy' awareness, from a range of given scenarios, including conduct, contact and content 'risks' and issues. • DL - I can check the results of web searches i.e. how useful, relevant, reasonable, valid, accurate, and appreciates how search results are selected & ranked.
6	How Fake Is That?	• Understand online media and its impacts on body image.	• DL - I can demonstrate 'web-savvy' awareness, from a range of given scenarios, including

			conduct, contact and content 'risks' and issues. • DL - I can discuss a range of eSafety and eSecurity (privacy) issues and know a range of ways to report concerns or inappropriate behaviour. • DL - I can check the results of web searches i.e. how useful, relevant, reasonable, valid, accurate, ...
6	How Can We Trust The Internet?	• Understand how to check information accuracy.	• DL - I can demonstrate 'web-savvy' awareness, from a range of given scenarios, including commercial, contact and content 'risks' and issues • DL - I can check the results of their web searches i.e. how useful, relevant, reasonable, valid and accurate the information is. • IT - I can be discerning and find valid information using sensible keywords / search terms, from a range of online web content, as fits the task.
6	Party Time!	• Plan and cost a party using software.	• IT - I can use software effectively to create, design and manipulate for purposeful outcomes, such as DT, art or music projects. • IT - I can collect, analyse and evaluate and draw conclusions from data, such as through survey, database or spreadsheet. • CS - I can test, debug and edit a program that accomplishes a given goal, (simple computer 'game' or model or simulation), to solve a problem.
6	Logo Block Of Flats	• Understand procedures, variables and ifelse.	• CS - I can test, debug and edit a program that accomplishes a given goal, (simple computer 'game' or model or simulation), to solve a problem. • CS - I can create & develop programs, by planning, debugging and applying programming skills of repetition (loops), selection (IF/ELSE) and variables, to accomplish specific goals. • CS - I can use logical reasoning to deconstruct programs, evaluate their effectiveness and make them more challenging and / or 'elegant' / efficient.
6	What's Wrong Here?	• Understand and fix Syntax and Logic errors.	• CS - I can test, debug and edit a program that accomplishes a given goal, (simple computer

			'game' or model or simulation), to solve a problem. • CS - I can develop and use a wider computing 'vocabulary' in context of task, such as search engine, URL, variable, validate, digital footprint, spam, Wiki, etc. (especially the terminology of computational thinking)
6	Let's Design And Combine In 3D	• Design a product using 3D software.	• IT - I can use software effectively to create, design and manipulate for purposeful outcomes, such as DT, art or music projects.