



Computing Curriculum

Year 1

Year	Module	Focus: Creating Media - Digital Painting
1	1	
Vocabulary for the year:	Computing systems: Computer, mouse, trackpad, keyboard, screen, typing Creating media: Tool, erase, fill, undo, shape tools, line tools, fill tool, keys, type, space, backspace Data: Object, label, group, search, image, colour, size, shape, more, less, same Programming: Forwards, backwards, left, right, turn, clear, go, instructions, directions, plan, program, change	
Objectives:	• Describe what different freehand tools do. • Use the shape and line tools. • Make careful choices when creating a digital picture. • Explain why I chose the tools I used. • Compare painting on a computer to painting on paper.	
Assessment criteria for the year:	• Use technology safely • Understand why and how to keep personal information private • Recognise common uses of information technology beyond school • With support, use technology purposefully to create digital content • Use technology purposefully to store and retrieve digital content • Begin to explain what algorithms are • Begin to create simple programs • Begin to debug simple programs • Beginning to use logical reasoning to make predictions	



Computing Curriculum

Year 1

Year	Module	Focus: Programming - Moving a Robot
1	2	
Vocabulary for the year:	Computing systems: Computer, mouse, trackpad, keyboard, screen, typing Creating media: Tool, erase, fill, undo, shape tools, line tools, fill tool, keys, type, space, backspace Data: Object, label, group, search, image, colour, size, shape, more, less, same Programming: Forwards, backwards, left, right, turn, clear, go, instructions, directions, plan, program, change	
Objectives:	• Explain what a given command will do • Act out a given word • Combine ‘forwards’ and ‘backwards’ commands to make a sequence • Combine four direction commands to make sequences • Plan a simple program • Find more than one solution to a problem	
Assessment criteria for the year:	• Use technology safely • Understand why and how to keep personal information private • Recognise common uses of information technology beyond school • With support, use technology purposefully to create digital content • Use technology purposefully to store and retrieve digital content • Begin to explain what algorithms are • Begin to create simple programs • Begin to debug simple programs • Beginning to use logical reasoning to make predictions	



Computing Curriculum

Year 1

Year	Module	Focus: Computing systems and networks – Technology around us
1	3	
Vocabulary for the year:	Computing systems: Computer, mouse, trackpad, keyboard, screen, typing Creating media: Tool, erase, fill, undo, shape tools, line tools, fill tool, keys, type, space, backspace Data: Object, label, group, search, image, colour, size, shape, more, less, same Programming: Forwards, backwards, left, right, turn, clear, go, instructions, directions, plan, program, change	
Objectives:	• Identify technology. • Identify a computer and its main parts. • Use a mouse in different ways. • Use a keyboard to type on a computer. • Use a keyboard to edit text. • Create rules for using technology safely.	
Assessment criteria for the year:	• Use technology safely • Understand why and how to keep personal information private • Recognise common uses of information technology beyond school • With support, use technology purposefully to create digital content • Use technology purposefully to store and retrieve digital content • Begin to explain what algorithms are • Begin to create simple programs • Begin to debug simple programs • Beginning to use logical reasoning to make predictions	



Computing Curriculum

Year 1

Year	Module	Focus: Data and information – Grouping data
1	4	
Vocabulary for the year:	Computing systems: Computer, mouse, trackpad, keyboard, screen, typing Creating media: Tool, erase, fill, undo, shape tools, line tools, fill tool, keys, type, space, backspace Data: Object, label, group, search, image, colour, size, shape, more, less, same Programming: Forwards, backwards, left, right, turn, clear, go, instructions, directions, plan, program, change	
Objectives:	• Label objects. • Identify that objects can be counted. • Describe objects in different ways. • Count objects with the same properties. • Compare groups of objects. • Answer questions about groups of objects.	
Assessment criteria for the year:	• Use technology safely • Understand why and how to keep personal information private • Recognise common uses of information technology beyond school • With support, use technology purposefully to create digital content • Use technology purposefully to store and retrieve digital content • Begin to explain what algorithms are • Begin to create simple programs • Begin to debug simple programs • Beginning to use logical reasoning to make predictions	



Computing Curriculum

Year 1

Year	Module	Focus: Creating media – Digital writing
1	5	
Vocabulary for the year:	Computing systems: Computer, mouse, trackpad, keyboard, screen, typing Creating media: Tool, erase, fill, undo, shape tools, line tools, fill tool, keys, type, space, backspace Data: Object, label, group, search, image, colour, size, shape, more, less, same Programming: Forwards, backwards, left, right, turn, clear, go, instructions, directions, plan, program, change	
Objectives:	• Use a computer to write • Add and remove text on a computer • Identify that the look of text can be changed on a computer • Make careful choices when changing text • Explain why I used the tools that I chose • Compare typing on a computer to writing on paper	
Assessment criteria for the year:	• Use technology safely • Understand why and how to keep personal information private • Recognise common uses of information technology beyond school • With support, use technology purposefully to create digital content • Use technology purposefully to store and retrieve digital content • Begin to explain what algorithms are • Begin to create simple programs • Begin to debug simple programs • Beginning to use logical reasoning to make predictions	



Computing Curriculum

Year 1

Year	Module	Focus: Programming - Animations
1	6	
Vocabulary for the year:	Computing systems: Computer, mouse, trackpad, keyboard, screen, typing Creating media: Tool, erase, fill, undo, shape tools, line tools, fill tool, keys, type, space, backspace Data: Object, label, group, search, image, colour, size, shape, more, less, same Programming: Forwards, backwards, left, right, turn, clear, go, instructions, directions, plan, program, change	
Objectives:	• Choose a command for a given purpose • Show that a series of commands can be joined together • Identify the effect of changing a value • Explain that each sprite has its own instructions • Design the parts of a project • Use an algorithm to create a program	
Assessment criteria for the year:	• Use technology safely • Understand why and how to keep personal information private • Recognise common uses of information technology beyond school • With support, use technology purposefully to create digital content • Use technology purposefully to store and retrieve digital content • Begin to explain what algorithms are • Begin to create simple programs • Begin to debug simple programs • Beginning to use logical reasoning to make predictions	



Computing Curriculum

Year 2

Year	Module	
2	1	Focus: Creating media – Digital photography
Vocabulary for the year:	Computing systems: Information technology, double-click, barcode, scanner, device Creating media: Word processor, toolbar, bold, italic, underline, select, font, undo, redo, format, open, edit, capture, image, background, filter Data: Property, value, data set, most, fewest, least, organise, chart, count, diagram Programming: Commands, route, algorithm, program, area, block, start, run, reset, predict, design, sequence, debug, modify, evaluate, code	
Objectives:	• Use a digital device to take a photograph. • Make choices when taking a photograph. • Describe what makes a good photograph. • Decide how photographs can be improved. • Use tools to change an image. • Recognise that photos can be changed.	
Assessment criteria for the year:	• Use technology respectfully • Identify where to go for support when they have concerns about content/contact • Recognise common uses of information technology beyond school • Use technology purposefully to organise digital content • Use technology purposefully to manipulate digital content • Use technology purposefully to store and retrieve digital content independently • Use technology purposefully to create digital content • Understand the use of algorithms • Understand that programs execute by following precise and unambiguous instructions • Write and debug simple programs • Use logical reasoning to predict the behaviour of simple programs	



Computing Curriculum

Year 2

Year	Module	Focus: Programming - Algorithms
2	2	
Vocabulary for the year:	Computing systems: Information technology, double-click, barcode, scanner, device Creating media: Word processor, toolbar, bold, italic, underline, select, font, undo, redo, format, open, edit, capture, image, background, filter Data: Property, value, data set, most, fewest, least, organise, chart, count, diagram Programming: Commands, route, algorithm, program, area, block, start, run, reset, predict, design, sequence, debug, modify, evaluate, code	
Objectives:	• Describe a series of instructions as a sequence • Explain what happens when we change the order of instructions • Use logical reasoning to predict the outcome of a program • Explain that the programming projects can have code and artwork • Design an algorithm • Create and debug a program that I have written	
Assessment criteria for the year:	• Use technology respectfully • Identify where to go for support when they have concerns about content/contact • Recognise common uses of information technology beyond school • Use technology purposefully to organise digital content • Use technology purposefully to manipulate digital content • Use technology purposefully to store and retrieve digital content independently • Use technology purposefully to create digital content • Understand the use of algorithms • Understand that programs execute by following precise and unambiguous instructions • Write and debug simple programs • Use logical reasoning to predict the behaviour of simple programs	



Computing Curriculum

Year 2

Year	Module	Focus: Data and information – Pictograms
2	3	
Vocabulary for the year:	Computing systems: Information technology, double-click, barcode, scanner, device Creating media: Word processor, toolbar, bold, italic, underline, select, font, undo, redo, format, open, edit, capture, image, background, filter Data: Property, value, data set, most, fewest, least, organise, chart, count, diagram Programming: Commands, route, algorithm, program, area, block, start, run, reset, predict, design, sequence, debug, modify, evaluate, code	
Objectives:	• Recognise that we can count and compare objects using tally charts. • Recognise that objects can be represented by pictures. • Create a pictogram. • Select objects by attribute and make comparisons. • Recognise that people can be described by attributes. • Explain that we can present information using a computer.	
Assessment criteria for the year:	• Use technology respectfully • Identify where to go for support when they have concerns about content/contact • Recognise common uses of information technology beyond school • Use technology purposefully to organise digital content • Use technology purposefully to manipulate digital content • Use technology purposefully to store and retrieve digital content independently • Use technology purposefully to create digital content • Understand the use of algorithms • Understand that programs execute by following precise and unambiguous instructions • Write and debug simple programs • Use logical reasoning to predict the behaviour of simple programs	



Year	Module	Focus: Programming - Quizzes
2	4	
Vocabulary for the year:	Computing systems: Information technology, double-click, barcode, scanner, device Creating media: Word processor, toolbar, bold, italic, underline, select, font, undo, redo, format, open, edit, capture, image, background, filter Data: Property, value, data set, most, fewest, least, organise, chart, count, diagram Programming: Commands, route, algorithm, program, area, block, start, run, reset, predict, design, sequence, debug, modify, evaluate, code	
Objectives:	• Explain that a sequence of commands has a start. • Explain that a sequence of commands has an outcome. • Create a program using a given design. • Change a given design. • Create a program using my own design. • Decide how my project can be improved.	
Assessment criteria for the year:	• Use technology respectfully • Identify where to go for support when they have concerns about content/contact • Recognise common uses of information technology beyond school • Use technology purposefully to organise digital content • Use technology purposefully to manipulate digital content • Use technology purposefully to store and retrieve digital content independently • Use technology purposefully to create digital content • Understand the use of algorithms • Understand that programs execute by following precise and unambiguous instructions • Write and debug simple programs • Use logical reasoning to predict the behaviour of simple programs	



Computing Curriculum

Year 2

Year	Module	
2	5	Focus: Computing systems and networks – IT around us
Vocabulary for the year:	Computing systems: Information technology, double-click, barcode, scanner, device Creating media: Word processor, toolbar, bold, italic, underline, select, font, undo, redo, format, open, edit, capture, image, background, filter Data: Property, value, data set, most, fewest, least, organise, chart, count, diagram Programming: Commands, route, algorithm, program, area, block, start, run, reset, predict, design, sequence, debug, modify, evaluate, code	
Objectives:	• Recognise the uses and features of information technology • Identify the uses of information technology in the school • Identify information technology beyond school • Explain how information technology helps us • Explain how to use information technology safely • Recognise that choices are made when using information technology	
Assessment criteria for the year:	• Use technology respectfully • Identify where to go for support when they have concerns about content/contact • Recognise common uses of information technology beyond school • Use technology purposefully to organise digital content • Use technology purposefully to manipulate digital content • Use technology purposefully to store and retrieve digital content independently • Use technology purposefully to create digital content • Understand the use of algorithms • Understand that programs execute by following precise and unambiguous instructions • Write and debug simple programs • Use logical reasoning to predict the behaviour of simple programs	



Computing Curriculum

Year 2

Year	Module	
2	6	Focus: Creating media - Digital music
Vocabulary for the year:	Computing systems: Information technology, double-click, barcode, scanner, device Creating media: Word processor, toolbar, bold, italic, underline, select, font, undo, redo, format, open, edit, capture, image, background, filter Data: Property, value, data set, most, fewest, least, organise, chart, count, diagram Programming: Commands, route, algorithm, program, area, block, start, run, reset, predict, design, sequence, debug, modify, evaluate, code	
Objectives:	• Say how music can make us feel • Identify that there are patterns in music • Experiment with sound using a computer • Use a computer to make a musical pattern • Create music for a purpose • Review and refine computer work	
Assessment criteria for the year:	• Use technology respectfully • Identify where to go for support when they have concerns about content/contact • Recognise common uses of information technology beyond school • Use technology purposefully to organise digital content • Use technology purposefully to manipulate digital content • Use technology purposefully to store and retrieve digital content independently • Use technology purposefully to create digital content • Understand the use of algorithms • Understand that programs execute by following precise and unambiguous instructions • Write and debug simple programs • Use logical reasoning to predict the behaviour of simple programs	



Year	Module	
3	1	Focus: Computing systems and networks – Connecting computers
Vocabulary for the year:	Computing systems: Digital device, input, process, output, program, digital, connection, network, switch, server, wireless access point, cables, sockets Creating media: Orientation, placeholder, template, layout, content, desktop publishing, copy, paste, import, transition Data: Attribute, table, branching, database, separate, order, compare, decision tree Programming: Blocks, commands, run the code, event, task, order, algorithm, bug, debug, code, error, test	
Objectives:	• Explain how digital devices function. • Identify input and output devices. • Recognise how digital devices can change the way we work. • Explain how a computer network can be used to share information. • Explore how digital devices can be connected. • Recognise the physical components of a network.	
Assessment criteria for the year:	• Use technology responsibly • Beginning to identify a range of ways to report concerns • Understand what a computer network is and how it functions • Design and create content • Select, use and combine a variety of software to design and create content that accomplishes given goals (plan and create an animation) • Use search technologies effectively • Collect and present data appropriately • Design and write programs that accomplish specific goals • Beginning to understand computer networks • Explore how sequence, selection and repetition affects programs • Use logical reasoning to identify how simple programmes work	



Year	Module	
3	2	Focus: Data and information – Branching databases
Vocabulary for the year:	Computing systems: Digital device, input, process, output, program, digital, connection, network, switch, server, wireless access point, cables, sockets Creating media: Orientation, placeholder, template, layout, content, desktop publishing, copy, paste, import, transition Data: Attribute, table, branching, database, separate, order, compare, decision tree Programming: Blocks, commands, run the code, event, task, order, algorithm, bug, debug, code, error, test	
Objectives:	• Create questions with yes/no answers • Identify the attributes needed to collect data about an object • Create a branching database • Explain why it is helpful for a database to be well-structured • Plan the structure of a branching database • Independently create an identification tool	
Assessment criteria for the year:	• Use technology responsibly • Beginning to identify a range of ways to report concerns • Understand what a computer network is and how it functions • Design and create content • Select, use and combine a variety of software to design and create content that accomplishes given goals (plan and create an animation) • Use search technologies effectively • Collect and present data appropriately • Design and write programs that accomplish specific goals • Beginning to understand computer networks • Explore how sequence, selection and repetition affects programs • Use logical reasoning to identify how simple programmes work	



Year	Module	
3	3	Focus: Creating media - Stop-frame animation
Vocabulary for the year:	Computing systems: Digital device, input, process, output, program, digital, connection, network, switch, server, wireless access point, cables, sockets Creating media: Orientation, placeholder, template, layout, content, desktop publishing, copy, paste, import, transition Data: Attribute, table, branching, database, separate, order, compare, decision tree Programming: Blocks, commands, run the code, event, task, order, algorithm, bug, debug, code, error, test	
Objectives:	• Explain that animation is a sequence of drawings or photographs. • Relate animated movement with a sequence of images. • Plan an animation. • Identify the need to work consistently and carefully. • Review and improve an animation. • Evaluate the impact of adding other media to an animation.	
Assessment criteria for the year:	• Use technology responsibly • Beginning to identify a range of ways to report concerns • Understand what a computer network is and how it functions • Design and create content • Select, use and combine a variety of software to design and create content that accomplishes given goals (plan and create an animation) • Use search technologies effectively • Collect and present data appropriately • Design and write programs that accomplish specific goals • Beginning to understand computer networks • Explore how sequence, selection and repetition affects programs • Use logical reasoning to identify how simple programmes work	



Year	Module	
3	4	Focus: Creating media – Desktop publishing
Vocabulary for the year:	Computing systems: Digital device, input, process, output, program, digital, connection, network, switch, server, wireless access point, cables, sockets Creating media: Orientation, placeholder, template, layout, content, desktop publishing, copy, paste, import, transition Data: Attribute, table, branching, database, separate, order, compare, decision tree Programming: Blocks, commands, run the code, event, task, order, algorithm, bug, debug, code, error, test	
Objectives:	• Recognise how text and images convey information. • Recognise that text and layout can be edited. • Choose appropriate page settings. • Add content to a desktop publishing publication. • Consider how different layouts can suit different purposes. • Consider the benefits of desktop publishing.	
Assessment criteria for the year:	• Use technology responsibly • Beginning to identify a range of ways to report concerns • Understand what a computer network is and how it functions • Design and create content • Select, use and combine a variety of software to design and create content that accomplishes given goals (plan and create an animation) • Use search technologies effectively • Collect and present data appropriately • Design and write programs that accomplish specific goals • Beginning to understand computer networks • Explore how sequence, selection and repetition affects programs • Use logical reasoning to identify how simple programmes work	



Year	Module	
3	5	Focus: Programming - Sequencing sounds
Vocabulary for the year:	Computing systems: Digital device, input, process, output, program, digital, connection, network, switch, server, wireless access point, cables, sockets Creating media: Orientation, placeholder, template, layout, content, desktop publishing, copy, paste, import, transition Data: Attribute, table, branching, database, separate, order, compare, decision tree Programming: Blocks, commands, run the code, event, task, order, algorithm, bug, debug, code, error, test	
Objectives:	• Explore a new programming environment • Identify that commands have an outcome • Explain that a program has a start • Recognise that a sequence of commands can have an order • Change the appearance of my project • Create a project from a task description	
Assessment criteria for the year:	• Use technology responsibly • Beginning to identify a range of ways to report concerns • Understand what a computer network is and how it functions • Design and create content • Select, use and combine a variety of software to design and create content that accomplishes given goals (plan and create an animation) • Use search technologies effectively • Collect and present data appropriately • Design and write programs that accomplish specific goals • Beginning to understand computer networks • Explore how sequence, selection and repetition affects programs • Use logical reasoning to identify how simple programmes work	



Year	Module	
3	6	Focus: Programming - Events and actions in programs
Vocabulary for the year:	Computing systems: Digital device, input, process, output, program, digital, connection, network, switch, server, wireless access point, cables, sockets Creating media: Orientation, placeholder, template, layout, content, desktop publishing, copy, paste, import, transition Data: Attribute, table, branching, database, separate, order, compare, decision tree Programming: Blocks, commands, run the code, event, task, order, algorithm, bug, debug, code, error, test	
Objectives:	• Explain how a sprite moves in an existing project • Create a program to move a sprite in four directions • Adapt a program to a new context • Develop a program by adding features • Identify and fix bugs in a program • Design and create a maze-based challenge	
Assessment criteria for the year:	• Use technology responsibly • Beginning to identify a range of ways to report concerns • Understand what a computer network is and how it functions • Design and create content • Select, use and combine a variety of software to design and create content that accomplishes given goals (plan and create an animation) • Use search technologies effectively • Collect and present data appropriately • Design and write programs that accomplish specific goals • Beginning to understand computer networks • Explore how sequence, selection and repetition affects programs • Use logical reasoning to identify how simple programmes work	



Year	Module	Focus: Computing systems and networks – The Internet
4	1	
Vocabulary for the year:	Computing systems: Internet, network, router, security, website, webpage, web address, routing, web browser, WWW, content, links, files, download, share, permission, ownership Creating media: Audio, microphone, speaker, input device, output device, podcast, edit, trim, align, layer, import, record, playback, selection, load, save, export, crop, rotate, adjust, hue, saturation, retouch, clone, combine, background, foreground, zoom Data: Layout, input device, sensor, logging, data point, interval, data set, import, export, review Programming: Snippet, repetition, count-controlled loop, value, trace, procedure, infinite loop, forever, duplicate, refine, evaluate	
Objectives:	• Describe the internet as a network of networks. • Demonstrate how information is shared across the internet. • Discuss why a network needs protecting. • Describe networked devices and how they connect. • Recognise that the World Wide Web contains websites and web pages. • Explain the types of media that can be shared on the WWW. • Describe how to access websites on the WWW. • Evaluate the consequences of unreliable content.	
Assessment criteria for the year:	• Recognise acceptable and unacceptable behaviour online • Identify a range of ways to report concerns • Understand how computer networks support communication • Select, use and combine internet services • Select, use and combine a variety of software to design and create content that accomplish given goals (digital recordings) • Select, use and combine a variety of software to design and create content that accomplish given goals (digital images) • Collect and present data appropriately • Design and write programs that accomplish specific goals, including solving problems • Understand computer networks • Sequence, selection and repetition in programs	



Year	Module	
4	2	Focus: Creating media - Audio production
Vocabulary for the year:	Computing systems: Internet, network, router, security, website, webpage, web address, routing, web browser, WWW, content, links, files, download, share, permission, ownership Creating media: Audio, microphone, speaker, input device, output device, podcast, edit, trim, align, layer, import, record, playback, selection, load, save, export, crop, rotate, adjust, hue, saturation, retouch, clone, combine, background, foreground, zoom Data: Layout, input device, sensor, logging, data point, interval, data set, import, export, review Programming: Snippet, repetition, count-controlled loop, value, trace, procedure, infinite loop, forever, duplicate, refine, evaluate	
Objectives:	- Identify that sound can be recorded - Explain that audio recordings can be edited - Recognise the parts of creating a podcast project - Apply audio editing skills independently - Combine audio to enhance my podcast project - Evaluate the effective use of audio	
Assessment criteria for the year:	- Recognise acceptable and unacceptable behaviour online - Identify a range of ways to report concerns - Understand how computer networks support communication - Select, use and combine internet services - Select, use and combine a variety of software to design and create content that accomplish given goals (digital recordings) - Select, use and combine a variety of software to design and create content that accomplish given goals (digital images) - Collect and present data appropriately - Design and write programs that accomplish specific goals, including solving problems - Understand computer networks - Sequence, selection and repetition in programs	



Year	Module	
4	3	Focus: Creating media – Photo editing
Vocabulary for the year:	Computing systems: Internet, network, router, security, website, webpage, web address, routing, web browser, WWW, content, links, files, download, share, permission, ownership Creating media: Audio, microphone, speaker, input device, output device, podcast, edit, trim, align, layer, import, record, playback, selection, load, save, export, crop, rotate, adjust, hue, saturation, retouch, clone, combine, background, foreground, zoom Data: Layout, input device, sensor, logging, data point, interval, data set, import, export, review Programming: Snippet, repetition, count-controlled loop, value, trace, procedure, infinite loop, forever, duplicate, refine, evaluate	
Objectives:	• Explain that the composition of digital images can be changed. • Explain that colours can be changed in digital images. • Explain how cloning can be used in photo editing. • Explain that images can be combined. • Combine images for a purpose. • Evaluate how changes can improve an image.	
Assessment criteria for the year:	• Recognise acceptable and unacceptable behaviour online • Identify a range of ways to report concerns • Understand how computer networks support communication • Select, use and combine internet services • Select, use and combine a variety of software to design and create content that accomplish given goals (digital recordings) • Select, use and combine a variety of software to design and create content that accomplish given goals (digital images) • Collect and present data appropriately • Design and write programs that accomplish specific goals, including solving problems • Understand computer networks • Sequence, selection and repetition in programs	



Year	Module	
4	4	Focus: Programming – Repetition in shapes
Vocabulary for the year:	Computing systems: Internet, network, router, security, website, webpage, web address, routing, web browser, WWW, content, links, files, download, share, permission, ownership Creating media: Audio, microphone, speaker, input device, output device, podcast, edit, trim, align, layer, import, record, playback, selection, load, save, export, crop, rotate, adjust, hue, saturation, retouch, clone, combine, background, foreground, zoom Data: Layout, input device, sensor, logging, data point, interval, data set, import, export, review Programming: Snippet, repetition, count-controlled loop, value, trace, procedure, infinite loop, forever, duplicate, refine, evaluate	
Objectives:	• Identify that accuracy in programming is important. • Create a program in a text-based language. • Explain what 'repeat' means. • Modify a count-controlled loop to produce a given outcome. • Decompose a task into small steps. • Create a program that uses count-controlled loops to produce a given outcome.	
Assessment criteria for the year:	• Recognise acceptable and unacceptable behaviour online • Identify a range of ways to report concerns • Understand how computer networks support communication • Select, use and combine internet services • Select, use and combine a variety of software to design and create content that accomplish given goals (digital recordings) • Select, use and combine a variety of software to design and create content that accomplish given goals (digital images) • Collect and present data appropriately • Design and write programs that accomplish specific goals, including solving problems • Understand computer networks • Sequence, selection and repetition in programs	



Year	Module	
4	5	Focus: Data and information – Data logging
Vocabulary for the year:	Computing systems: Internet, network, router, security, website, webpage, web address, routing, web browser, WWW, content, links, files, download, share, permission, ownership Creating media: Audio, microphone, speaker, input device, output device, podcast, edit, trim, align, layer, import, record, playback, selection, load, save, export, crop, rotate, adjust, hue, saturation, retouch, clone, combine, background, foreground, zoom Data: Layout, input device, sensor, logging, data point, interval, data set, import, export, review Programming: Snippet, repetition, count-controlled loop, value, trace, procedure, infinite loop, forever, duplicate, refine, evaluate	
Objectives:	• Explain that data gathered over time can be used to answer questions • Use a digital device to collect data automatically • Explain that a data logger collects 'data points' from sensors over time • Recognise how a computer can help us analyse data • Identify the data needed to answer questions • Use data from sensors to answer questions	
Assessment criteria for the year:	• Recognise acceptable and unacceptable behaviour online • Identify a range of ways to report concerns • Understand how computer networks support communication • Select, use and combine internet services • Select, use and combine a variety of software to design and create content that accomplish given goals (digital recordings) • Select, use and combine a variety of software to design and create content that accomplish given goals (digital images) • Collect and present data appropriately • Design and write programs that accomplish specific goals, including solving problems • Understand computer networks • Sequence, selection and repetition in programs	



Year	Module	
4	6	Focus: Programming – Repetition
Vocabulary for the year:	Computing systems: Internet, network, router, security, website, webpage, web address, routing, web browser, WWW, content, links, files, download, share, permission, ownership Creating media: Audio, microphone, speaker, input device, output device, podcast, edit, trim, align, layer, import, record, playback, selection, load, save, export, crop, rotate, adjust, hue, saturation, retouch, clone, combine, background, foreground, zoom Data: Layout, input device, sensor, logging, data point, interval, data set, import, export, review Programming: Snippet, repetition, count-controlled loop, value, trace, procedure, infinite loop, forever, duplicate, refine, evaluate	
Objectives:	• Develop the use of count-controlled loops in a different programming environment • Explain that in programming, there are count-controlled loops and infinite loops • Develop a design that includes two or more loops which run at the same time • Modify an infinite loop in a given program • Design a project that includes repetition • Create a project that includes repetition	
Assessment criteria for the year:	• Recognise acceptable and unacceptable behaviour online • Identify a range of ways to report concerns • Understand how computer networks support communication • Select, use and combine internet services • Select, use and combine a variety of software to design and create content that accomplish given goals (digital recordings) • Select, use and combine a variety of software to design and create content that accomplish given goals (digital images) • Collect and present data appropriately • Design and write programs that accomplish specific goals, including solving problems • Understand computer networks • Sequence, selection and repetition in programs	



Year	Module	
5	1	Focus: Computing systems and networks - Systems and searching
Vocabulary for the year:	Computing systems: System, connection, digital, input, process, output, storage, search engine, refine, index, bot, links, search engine optimisation (SEO), content creator, ranking Creating media: Vector, move, resize, duplicate, select, align, modify, layers, group, ungroup, reflection, panning, close up, mid-range, long shot, angle, static, tilt, storyboard, film, review, import, split, trim, clip, edit, reshoot, delete, reorder, export, evaluate, share Data: Record, field, sort, group, value, criteria, graph, chart, axis, filter, present Programming: Microcontroller, components, connection, motor, LED, USB, condition, circuit, condition, true, false, implement, operator	
Objectives:	• Explain that computers can be connected together to form systems. • Recognise the role of computer systems in our lives. • Identify how to use a search engine. • Describe how search engines select results. • Explain how search results are ranked. • Recognise why the the order of results is important, and to whom.	
Assessment criteria for the year:	• Identify how to use technology safely, respectfully and responsibly • Beginning to use good judgement when evaluating digital content • Understand the purpose of computer systems • Understand how computer networks supports collaboration • Work collaboratively to select, use and combine software on a range of digital devices • Select, use and combine a variety of software to design and create content that accomplish given goals (video recordings) • Analyse and evaluate data • Design and write programs to solve problems by decomposing them into smaller parts • Understand uses of networks for collaboration and communication • Detect and correct errors in programs • Experiment using sequence, repetition, inputs, variables and outputs in programs	



Year	Module	
5	2	Focus: Creating media - Video production
Vocabulary for the year:	Computing systems: System, connection, digital, input, process, output, storage, search engine, refine, index, bot, links, search engine optimisation (SEO), content creator, ranking Creating media: Vector, move, resize, duplicate, select, align, modify, layers, group, ungroup, reflection, panning, close up, mid-range, long shot, angle, static, tilt, storyboard, film, review, import, split, trim, clip, edit, reshoot, delete, reorder, export, evaluate, share Data: Record, field, sort, group, value, criteria, graph, chart, axis, filter, present Programming: Microcontroller, components, connection, motor, LED, USB, condition, circuit, condition, true, false, implement, operator	
Objectives:	• Explain what makes a video effective • Use a digital device to record video • Capture video using a range of techniques • Create a storyboard • Identify that a video can be improved • Consider the impact of the choices made when making and sharing a video	
Assessment criteria for the year:	• Identify how to use technology safely, respectfully and responsibly • Beginning to use good judgement when evaluating digital content • Understand the purpose of computer systems • Understand how computer networks supports collaboration • Work collaboratively to select, use and combine software on a range of digital devices • Select, use and combine a variety of software to design and create content that accomplish given goals (video recordings) • Analyse and evaluate data • Design and write programs to solve problems by decomposing them into smaller parts • Understand uses of networks for collaboration and communication • Detect and correct errors in programs • Experiment using sequence, repetition, inputs, variables and outputs in programs	



Year	Module	
5	3	Focus: Programming – Selection in physical computing
Vocabulary for the year:	Computing systems: System, connection, digital, input, process, output, storage, search engine, refine, index, bot, links, search engine optimisation (SEO), content creator, ranking Creating media: Vector, move, resize, duplicate, select, align, modify, layers, group, ungroup, reflection, panning, close up, mid-range, long shot, angle, static, tilt, storyboard, film, review, import, split, trim, clip, edit, reshoot, delete, reorder, export, evaluate, share Data: Record, field, sort, group, value, criteria, graph, chart, axis, filter, present Programming: Microcontroller, components, connection, motor, LED, USB, condition, circuit, condition, true, false, implement, operator	
Objectives:	• Control a simple circuit connected to a computer. • Write a program that includes count-controlled loops. • Explain that a loop can stop when a condition is met. • Explain that a loop can be used to repeatedly check whether a condition has been met. • Design a physical project that includes selection. • Create a program that controls a physical computing project.	
Assessment criteria for the year:	• Identify how to use technology safely, respectfully and responsibly • Beginning to use good judgement when evaluating digital content • Understand the purpose of computer systems • Understand how computer networks supports collaboration • Work collaboratively to select, use and combine software on a range of digital devices • Select, use and combine a variety of software to design and create content that accomplish given goals (video recordings) • Analyse and evaluate data • Design and write programs to solve problems by decomposing them into smaller parts • Understand uses of networks for collaboration and communication • Detect and correct errors in programs • Experiment using sequence, repetition, inputs, variables and outputs in programs	



Year	Module	
5	4	Focus: Data and information – Flat-file databases
Vocabulary for the year:	Computing systems: System, connection, digital, input, process, output, storage, search engine, refine, index, bot, links, search engine optimisation (SEO), content creator, ranking Creating media: Vector, move, resize, duplicate, select, align, modify, layers, group, ungroup, reflection, panning, close up, mid-range, long shot, angle, static, tilt, storyboard, film, review, import, split, trim, clip, edit, reshoot, delete, reorder, export, evaluate, share Data: Record, field, sort, group, value, criteria, graph, chart, axis, filter, present Programming: Microcontroller, components, connection, motor, LED, USB, condition, circuit, condition, true, false, implement, operator	
Objectives:	• Use a form to record information. • Compare paper and computer-based databases. • Outline how you can answer questions by grouping and then sorting data. • Explain that tools can be used to select specific data. • Explain that computer programs can be used to compare data visually. • Use a real-world database to answer questions.	
Assessment criteria for the year:	• Identify how to use technology safely, respectfully and responsibly • Beginning to use good judgement when evaluating digital content • Understand the purpose of computer systems • Understand how computer networks supports collaboration • Work collaboratively to select, use and combine software on a range of digital devices • Select, use and combine a variety of software to design and create content that accomplish given goals (video recordings) • Analyse and evaluate data • Design and write programs to solve problems by decomposing them into smaller parts • Understand uses of networks for collaboration and communication • Detect and correct errors in programs • Experiment using sequence, repetition, inputs, variables and outputs in programs	



Year	Module	
5	5	Focus: Creating media - Introduction to vector graphics
Vocabulary for the year:	Computing systems: System, connection, digital, input, process, output, storage, search engine, refine, index, bot, links, search engine optimisation (SEO), content creator, ranking Creating media: Vector, move, resize, duplicate, select, align, modify, layers, group, ungroup, reflection, panning, close up, mid-range, long shot, angle, static, tilt, storyboard, film, review, import, split, trim, clip, edit, reshoot, delete, reorder, export, evaluate, share Data: Record, field, sort, group, value, criteria, graph, chart, axis, filter, present Programming: Microcontroller, components, connection, motor, LED, USB, condition, circuit, condition, true, false, implement, operator	
Objectives:	• Identify that drawing tools can be used to produce different outcomes • Create a vector drawing by combining shapes • Use tools to achieve a desired effect • Recognise that vector drawings consist of layers • Group objects to make them easier to work with • Apply what I have learned about vector drawings	
Assessment criteria for the year:	• Identify how to use technology safely, respectfully and responsibly • Beginning to use good judgement when evaluating digital content • Understand the purpose of computer systems • Understand how computer networks supports collaboration • Work collaboratively to select, use and combine software on a range of digital devices • Select, use and combine a variety of software to design and create content that accomplish given goals (video recordings) • Analyse and evaluate data • Design and write programs to solve problems by decomposing them into smaller parts • Understand uses of networks for collaboration and communication • Detect and correct errors in programs • Experiment using sequence, repetition, inputs, variables and outputs in programs	



Year	Module	
5	6	Focus: Programming – Selection in quizzes
Vocabulary for the year:	Computing systems: System, connection, digital, input, process, output, storage, search engine, refine, index, bot, links, search engine optimisation (SEO), content creator, ranking Creating media: Vector, move, resize, duplicate, select, align, modify, layers, group, ungroup, reflection, panning, close up, mid-range, long shot, angle, static, tilt, storyboard, film, review, import, split, trim, clip, edit, reshoot, delete, reorder, export, evaluate, share Data: Record, field, sort, group, value, criteria, graph, chart, axis, filter, present Programming: Microcontroller, components, connection, motor, LED, USB, condition, circuit, condition, true, false, implement, operator	
Objectives:	• Explain how selection is used in computer programs • Relate that a conditional statement connects a condition to an outcome • Explain how selection directs the flow of a program • Design a program that uses selection • Create a program that uses selection • Evaluate the program	
Assessment criteria for the year:	• Identify how to use technology safely, respectfully and responsibly • Beginning to use good judgement when evaluating digital content • Understand the purpose of computer systems • Understand how computer networks supports collaboration • Work collaboratively to select, use and combine software on a range of digital devices • Select, use and combine a variety of software to design and create content that accomplish given goals (video recordings) • Analyse and evaluate data • Design and write programs to solve problems by decomposing them into smaller parts • Understand uses of networks for collaboration and communication • Detect and correct errors in programs • Experiment using sequence, repetition, inputs, variables and outputs in programs	



Year	Module	
6	1	Focus: Computing systems and networks - Communication and collaboration
Vocabulary for the year:	Computing systems: Communication, protocol, data, address, internet protocol (IP), domain name server (DNS), packet, header, data payload, chat, explore, slide deck, remix, collaboration, public, private, one-way, two-way, one-to-one, one-to-many Creating media: Hypertext markup language (HTML), logo, header, copyright, fair use, homepage, preview, navigation, hyperlink, subpage, external link, embed, perspective, handles, lift, lower, recolour, placeholder, hollow, combine, construct Data: Spreadsheet, cell, cell reference, data item, formula, calculation, range, duplicate, sigma, sum, comparison, data set Programming: Variable, project, design, code, test, debug, improve, evaluate, share, assign, random, navigation	
Objectives:	• Explain the importance of internet addresses. • Show how data is transferred across the internet. • Explain how sharing information online can help people to work together. • Evaluate different ways of working together online. • Recognise how we communicate using technology. • Evaluate different methods of online communication.	
Assessment criteria for the year:	• Demonstrate how to use technology safely, respectfully and responsibly • Use good judgement when evaluating digital content • Demonstrate how computer networks supports communication and collaboration • Be discerning in evaluating digital content • Select, use and combine software on a range of digital devices • Design and write programs to solve problems • Use sequence, repetition, inputs, variables and outputs in programs • Detect and correct errors in programs they have created • Explain the uses of networks for collaboration and communication	



Year	Module	
6	2	Focus: Creating media – Web page creation
Vocabulary for the year:	Computing systems: Communication, protocol, data, address, internet protocol (IP), domain name server (DNS), packet, header, data payload, chat, explore, slide deck, remix, collaboration, public, private, one-way, two-way, one-to-one, one-to-many Creating media: Hypertext markup language (HTML), logo, header, copyright, fair use, homepage, preview, navigation, hyperlink, subpage, external link, embed, perspective, handles, lift, lower, recolour, placeholder, hollow, combine, construct Data: Spreadsheet, cell, cell reference, data item, formula, calculation, range, duplicate, sigma, sum, comparison, data set Programming: Variable, project, design, code, test, debug, improve, evaluate, share, assign, random, navigation	
Objectives:	• Review an existing website and consider its structure • Plan the features of a web page • Consider the ownership and use of images (copyright) • Recognise the need to preview pages • Outline the need for a navigation path • Recognise the implications of linking to content owned by other people	
Assessment criteria for the year:	• Demonstrate how to use technology safely, respectfully and responsibly • Use good judgement when evaluating digital content • Demonstrate how computer networks supports communication and collaboration • Be discerning in evaluating digital content • Select, use and combine software on a range of digital devices • Design and write programs to solve problems • Use sequence, repetition, inputs, variables and outputs in programs • Detect and correct errors in programs they have created • Explain the uses of networks for collaboration and communication	



Year	Module	
6	3	Focus: Data and information - Introduction to Spreadsheets
Vocabulary for the year:	Computing systems: Communication, protocol, data, address, internet protocol (IP), domain name server (DNS), packet, header, data payload, chat, explore, slide deck, remix, collaboration, public, private, one-way, two-way, one-to-one, one-to-many Creating media: Hypertext markup language (HTML), logo, header, copyright, fair use, homepage, preview, navigation, hyperlink, subpage, external link, embed, perspective, handles, lift, lower, recolour, placeholder, hollow, combine, construct Data: Spreadsheet, cell, cell reference, data item, formula, calculation, range, duplicate, sigma, sum, comparison, data set Programming: Variable, project, design, code, test, debug, improve, evaluate, share, assign, random, navigation	
Objectives:	• Create a data set in a spreadsheet. • Build a data set in a spreadsheet. • Explain that formulas can be used to produce calculated data. • Apply formulas to data. • Create a spreadsheet to plan an event. • Choose suitable ways to present data.	
Assessment criteria for the year:	• Demonstrate how to use technology safely, respectfully and responsibly • Use good judgement when evaluating digital content • Demonstrate how computer networks supports communication and collaboration • Be discerning in evaluating digital content • Select, use and combine software on a range of digital devices • Design and write programs to solve problems • Use sequence, repetition, inputs, variables and outputs in programs • Detect and correct errors in programs they have created • Explain the uses of networks for collaboration and communication	



Year	Module	
6	4	Focus: Programming – Variables in games
Vocabulary for the year:	Computing systems: Communication, protocol, data, address, internet protocol (IP), domain name server (DNS), packet, header, data payload, chat, explore, slide deck, remix, collaboration, public, private, one-way, two-way, one-to-one, one-to-many Creating media: Hypertext markup language (HTML), logo, header, copyright, fair use, homepage, preview, navigation, hyperlink, subpage, external link, embed, perspective, handles, lift, lower, recolour, placeholder, hollow, combine, construct Data: Spreadsheet, cell, cell reference, data item, formula, calculation, range, duplicate, sigma, sum, comparison, data set Programming: Variable, project, design, code, test, debug, improve, evaluate, share, assign, random, navigation	
Objectives:	• Define 'variable' as something that is changeable. • Explain why a variable is used in a program. • Choose how to improve a game by using variables. • Design a project that builds on a given example. • Use my design to create a project. • Evaluate my project.	
Assessment criteria for the year:	• Demonstrate how to use technology safely, respectfully and responsibly • Use good judgement when evaluating digital content • Demonstrate how computer networks supports communication and collaboration • Be discerning in evaluating digital content • Select, use and combine software on a range of digital devices • Design and write programs to solve problems • Use sequence, repetition, inputs, variables and outputs in programs • Detect and correct errors in programs they have created • Explain the uses of networks for collaboration and communication	



Year	Module	
6	5	Focus: Creating media – 3D Modelling
Vocabulary for the year:	Computing systems: Communication, protocol, data, address, internet protocol (IP), domain name server (DNS), packet, header, data payload, chat, explore, slide deck, remix, collaboration, public, private, one-way, two-way, one-to-one, one-to-many Creating media: Hypertext markup language (HTML), logo, header, copyright, fair use, homepage, preview, navigation, hyperlink, subpage, external link, embed, perspective, handles, lift, lower, recolour, placeholder, hollow, combine, construct Data: Spreadsheet, cell, cell reference, data item, formula, calculation, range, duplicate, sigma, sum, comparison, data set Programming: Variable, project, design, code, test, debug, improve, evaluate, share, assign, random, navigation	
Objectives:	• Recognise that you can work in three dimension in a computer • Identify that digital 3D objects can be modified • Recognise that objects can be combined in a 3D model • Create a 3D model for a given purpose • Plan my own 3D model • Create my own digital 3D model	
Assessment criteria for the year:	• Demonstrate how to use technology safely, respectfully and responsibly • Use good judgement when evaluating digital content • Demonstrate how computer networks supports communication and collaboration • Be discerning in evaluating digital content • Select, use and combine software on a range of digital devices • Design and write programs to solve problems • Use sequence, repetition, inputs, variables and outputs in programs • Detect and correct errors in programs they have created • Explain the uses of networks for collaboration and communication	



Year	Module	
6	6	Focus: Programming - Sensing movement
Vocabulary for the year:	Computing systems: Communication, protocol, data, address, internet protocol (IP), domain name server (DNS), packet, header, data payload, chat, explore, slide deck, remix, collaboration, public, private, one-way, two-way, one-to-one, one-to-many Creating media: Hypertext markup language (HTML), logo, header, copyright, fair use, homepage, preview, navigation, hyperlink, subpage, external link, embed, perspective, handles, lift, lower, recolour, placeholder, hollow, combine, construct Data: Spreadsheet, cell, cell reference, data item, formula, calculation, range, duplicate, sigma, sum, comparison, data set Programming: Variable, project, design, code, test, debug, improve, evaluate, share, assign, random, navigation	
Objectives:	• Create a program to run on a controllable device • Explain that selection can control the flow of a program • Update a variable with user input • Use a conditional statement to compare a variable to a value • Design a project that uses inputs and outputs on a controllable device • Develop a program to use inputs and outputs on a controllable device	
Assessment criteria for the year:	• Demonstrate how to use technology safely, respectfully and responsibly • Use good judgement when evaluating digital content • Demonstrate how computer networks supports communication and collaboration • Be discerning in evaluating digital content • Select, use and combine software on a range of digital devices • Design and write programs to solve problems • Use sequence, repetition, inputs, variables and outputs in programs • Detect and correct errors in programs they have created • Explain the uses of networks for collaboration and communication	