



Progression of Knowledge and Skills in Computing



	Year 3	Year 4	Year 5	Year 6
<p>Digital Programmer</p> <p>NC link: -Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts (Co2 1.1) -Use sequence, selection, and repetition in programs; work with variables and various forms of input and output . (Co2 1.2) - Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs . (Co2 1.3)</p>	<p>Knowledge: -To explore a new programming environment. -To identify that commands have an outcome. -I understand and can explain that a program has a start. -I recognise that a sequence of commands can have an order. - I know how you change the appearance of my project. -I know how to create a project from a task description. Skills: - I can design and create programs with specific goals. -I can use repetition in programs including commands -I can put programming commands into a sequence to achieve a specific outcome. - I can keep testing my program and can recognise when I need to debug it. -I can detect a problem in an algorithm which could result in unsuccessful programming.</p>	<p>Knowledge: -I understand the commands of Scratch programming -I know how to create a sequence of commands (algorithm) -I know how to use Scratch codes to extend conversations -I know how to use Scratch to recreate a conversation Skills: -I can use simple selection in programs. -I can work with various forms of output. -I can use logical reasoning to systematically detect and correct errors in programs. - I can use a sensor to detect a change which can select an action within my program. -I can recognise an error in a program and debug it.</p>	<p>Knowledge: -I understand the importance of commands in order in Scratch -I know how to de-bug and refine my algorithms in Scratch -I know how to use the ask and answer input blocks in Scratch -I know how to use sound for correct and incorrect answers in Scratch -I can create, input and change variables based on the user's answer Skills: - I can decompose a problem into smaller parts to design an algorithm for a specific outcome and use this to write a program. -I can refine a procedure using repeat commands to improve a program. -I can use a variable to increase programming possibilities. -I can change an input to a program to achieve a different output. - I can use 'if' and 'then' commands to select an action.</p>	<p>Knowledge: -I understand the basics of Kodu programming software -I can program Kodu using 'When' and 'Do' instructions -I know how to use tools and add features to create a landscape -I know how to analyse and deconstruct code to work out its purpose -I understand how to program a character to follow an automatic path Skills: - I can deconstruct a problem into smaller steps, recognising similarities to solutions used before. -I can explain and program each of the steps in my algorithm. - I can recognise when I need to use a variable to achieve a required output. -I can use a variable and operators to stop a program. -I can use logical reasoning to detect and correct errors in algorithms and programs.</p>
<p>Digital Artist</p> <p>NC link:</p>	<p>Knowledge: -I know how to view a range of artwork and express an opinion -I understand what digital art is</p>	<p>Knowledge: N/A</p> <p>Skills: N/A</p>	<p>Knowledge: -I understand how to enhance digital images and photographs</p>	<p>Knowledge: N/A</p> <p>Skills: N/A</p>

<p>-Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content (Co2 1.5)</p> <p>-Select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information . (Co2 1.6)</p>	<p>-I understand how to make and use a Roman Mosaic using an online programme</p> <p>-I understand how different programs can be used to create digital art work</p> <p>Skills:</p> <p>-I can create different effects with different technology tools</p> <p>- I can create a digital image using a range of tools, pens, brushes and effects.</p> <p>-I can create transparent images.</p> <p>- I can edit individual images/photographs.</p>		<p>using crop, brightness, contrast and resize</p> <p>- I understand what digital abstract art is and can evaluate examples</p> <p>- I know how to explore different aspects of abstract digital art</p> <p>- I understand how to use Bazaar to create a piece of digital art</p> <p>Skills:</p> <p>- I can delete parts of an image digitally</p> <p>-I can enhance digital photos and images using crop, brightness and resize tools</p> <p>-I can link and explain how to photoshop images and how this is used in the media.</p> <p>- I can edit multiple photographs and use layers.</p>	
<p>Digital Broadcaster</p> <p>NC link:</p> <p>-Understand computer networks including the internet; how they can provide multiple services, such as the world wide web; and the opportunities they offer for communication and collaboration. (Co2 1.4)</p> <p>-Use search technologies effectively, appreciate how results are selected and ranked, and be</p>	<p>Knowledge:</p> <p>-I understand how to record into a recording software (Audacity)</p> <p>- I understand how to stop and play my recording</p> <p>- I know to use the recording button on Audacity</p> <p>- I know how to record a story</p> <p>- I can retell a story and record it with appropriate sound effects</p> <p>Skills:</p> <p>- Understood the difference between live and pre-recorded broadcast.</p> <p>-I can evaluate what makes an effective audio recording.</p>	<p>Knowledge: N/A</p> <p>Skills: N/A</p>	<p>Knowledge:</p> <p>-I know how to use Audacity to record a podcast with WW2 content</p> <p>-I know how to import a sound to create a podcast jingle</p> <p>- I know how to combine audio effects</p> <p>- I know how to add multiple audio layers in a podcast</p> <p>Skills:</p> <p>-I can add voice over and edit sound clips (volume, pitch, fade, effect) to create a podcast.</p> <p>-I can record my voice clearly, with good expression using good microphone technique.</p>	<p>Knowledge: N/A</p> <p>Skills: N/A</p>

<p>discerning in evaluating digital content (Co2 1.5) -Select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information . (Co2 1.6)</p>	<p>-I can create/use appropriate sounds, music and voices to represent objects, characters or atmospheres. -I can share recordings within the classroom and sought opinions from teachers and peers. - I can share an opinion, with reasons, on the quality of a digital work from other learners.</p>		<p>-I can make appropriate use of sound effects and music (including sounds that have been recorded) to bring my radio play to life. - I can record and edit my own radio play, working in groups.</p>	
<p>Digital Designer</p> <p>NC link: -Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content (Co2 1.5) -Select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting</p>	<p>Knowledge: -I understand what digital design means -I understand and can experiment with 3D digital designs -I can create 3D digital designs using Lego Digital Designer -I understand how to design and evaluate my lego toy packaging using an online app Skills: -I can create different effects with different technology tools. -I can combine a mixture of text, graphics and sound to share my ideas and learning. -I can save and retrieve work on the Internet, the school network or my own device.</p>	<p>Knowledge: N/A</p> <p>Skills: N/A</p>	<p>Knowledge: -I understand how to use the basic features of SketchUp -I know how to add detail to 3D drawings -I know how to manipulate 3D drawings inside -I know how to create a 3D model of a WW2 Anderson Shelter Skills: - I can draw a 3D model. -I can use a range of tools to create a design or add to a template. - I can use the dimensions, eraser, push/pull, 2 point arc, roof and select tools - I can use the appropriate shape tools to design and create a WW2 shelter.</p>	<p>Knowledge: N/A</p> <p>Skills: N/A</p>

<p>data and information . (Co2 1.6)</p>	<p>-I can describe the World Wide Web as the part of the Internet that contains websites. -I can use search tools to find and use an appropriate website.</p>		<p>- I can select different materials to choose appropriate finishes for my design.</p>	
<p>Digital Researcher, Presenter and Publisher</p> <p>NC link: -I understand computer networks including the internet; how they can provide multiple services, such as the world wide web; and the opportunities they offer for communication and collaboration (Co2 1.4) -I know how to use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content (Co2 1.5) -I understand how to select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing,</p>	<p>Knowledge: -I can explain how digital devices function -To explain how a computer network can be used to share information - I understand the terms ‘copy right and plagiarism’ - To recognise that text and layout can be edited - To add content to a desktop publishing publication about the Ancient Egyptians (Google Classroom and Google Slides). Skills: - I can create an interactive presentation with sounds, text and video. -I can use appropriate keyboard commands to amend text on my device, including making use of a spellchecker. -I can experiment with fonts, size, colour, alignment for emphasis and effect. -I can use individual fingers to input text and use SHIFT key to type characters. -I can amend text by highlighting and using select/delete, copy and paste.</p>	<p>Knowledge: - I understand how to create content digitally for information on the Stone Age -To recognise how networked devices make up the internet -To recognise how digital devices can change the way we work -I understand how to research the internet purposefully - I know how to create a presentation using Google Slides Skills: -I can create an interactive presentation introducing hyperlinks in Google Slides. - I can change the appearance of text to increase its effectiveness. - I can create, modify and present documents for a particular purpose. -I can use a keyboard confidently and make use of a spellchecker to write and review my work. - I can use font sizes and effects such as bullet points appropriate.</p>	<p>Knowledge: -I understand the term ‘blogging’ - I know how to create a blog what I have learnt in my lessons (Vikings/Anglo Saxons) -I understand what whiteboard animation is - I know how to edit and improve my animation skills - I know how to add narration and music to an animation Skills: - I can collaborate with peers using the online tools, Google Sites Google Drive, Google Slides, Google Classroom -I can create and export an interactive presentation including a variety of media, animations, transitions and other effects. -I can create an interactive guide to an image by embedding digital content and publishing it online. -I can create a webpage and embed video. -I can use text, photo, sound and video editing tools to refine my work.</p>	<p>Knowledge: - To know how to choose effective sources of information for a presentation. - To know how to save useful websites as favourites. - I know how to develop content within webpages - I understand how to publish my research project work and share with my peers -I understand if using images from the internet or elsewhere in projects, please bear in mind copyright rules - i.e. use Creative Commons images where possible. Skills: -I can design an app prototype that links multimedia pages together with hyperlinks. -I can choose applications to communicate to a specific audience. -I can talk about audience, atmosphere and structure when planning a particular outcome. -I can combine a range of media, recognising the contribution of each to achieve a particular outcome. - I can be digitally discerning when evaluating the effectiveness of my own work and the work of others</p>

evaluating and presenting data and information . (Co2 1.6)				
<p>Digital Animator</p> <p>NC link: -Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content (Co2 1.5) -Select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information . (Co2 1.6)</p>	<p>Knowledge: N/A</p> <p>Skills: N/A</p>	<p>Knowledge: -To know and understand how sense of movement is created in stop motion animation - I know how to plan a story board for animation - I know how to create a Stop Motion animation and edit and improve this - I understand how to create a smoot viewing experience using more frames per second - I understand the term ‘onion skinning’ Skills: - I can hold the ipad still to take clear pictures for my stop-motion story. -I can use stop-motion to create a 3D animated story. -I can insert images to create a simple stop-motion animation. - I can create a series of linked frames and control and adjust a time slider. - I can analyse and evaluate my own work, drawing conclusions and editing accordingly</p>	<p>Knowledge: N/A</p> <p>Skills: N/A</p>	<p>Knowledge: -I understand how to use Koma Koma and it’s key features - I know how to develop my animation by including different movements. -I know that my sentence length must fit the animation frame. - I know that I must include a voiceover and frames to 10 FPS to create a smooth transition in Stop Motion Skills: -I can plan, script and create a 3D animation to explain a concept or tell a story. -I can record animations of different characters and edit them together to create an interview. - I can make my character walk by using different walking techniques - I can add a voiceover to my narration -I can create a short video for a specific length of time using FPS.</p>
<p>Digital Film Maker</p> <p>NC link: -Use search technologies effectively, appreciate</p>	<p>Knowledge: N/A</p> <p>Skills: N/A</p>	<p>Knowledge: -I know how to develop an imovie trailer based on Romeo and Juliet - I can plan a presentation based upon a romance trailer</p>	<p>Knowledge: N/A</p> <p>Skills: N/A</p>	<p>Knowledge: -I know what film making is and what a documentary is - I know how to locate and check appropriate digital content and</p>

<p>how results are selected and ranked, and be discerning in evaluating digital content (Co2 1.5)</p> <p>-Select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information . (Co2 1.6)</p>		<p>-I can create an appropriate trailer including subtitles and speech</p> <p>- I know that having a green background can be used as a masking tool</p> <p>Skills:</p> <p>-I can use cutaway and split screen tools in iMovie</p> <p>-I can evaluate and improve the best video tools to best explain my understanding</p> <p>-I can further improve the best video tools to best explain my understanding</p> <p>-I can further improve green screen clips using crop and resize and explore more creative ways to use the tool</p>		<p>provide accurate crediting of sources</p> <p>- I know to use a digital recording device to film and import into a video editing software</p> <p>- I can plan, conduct and import video interviews as part of a short film</p> <p>- I know how to use video editing software to turn a film project into a finished movie.</p> <p>Skills:</p> <p>-I can talk about audience, atmosphere and structure when planning a particular outcome.</p> <p>-I can confidently identify the potential of unfamiliar technology to increase my creativity.</p> <p>-I can combine a range of media, recognising the contribution of each to achieve a particular outcome.</p> <p>-I can tell you why I select a particular online tool for a specific purpose.</p> <p>-I can be digitally discerning when evaluating the effectiveness of my own work and the work of others.</p>
<p>Digital Musician</p> <p>NC link:</p> <p>-Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content (Co2 1.5)</p>	<p>Knowledge: N/A</p> <p>Skills: N/A</p>	<p>Knowledge:</p> <p>-I know that sound can be recorded</p> <p>-I can explain that audio recordings can be edited</p> <p>-To recognise the different parts of creating a digital song</p> <p>-To apply audio editing skills independently</p>	<p>Knowledge: N/A</p> <p>Skills: N/A</p>	<p>Knowledge:</p> <p>-I know the musical style of the genre of the Beatles music and the 60s</p> <p>- I know how to use Garage Band to create a new song, add a drum loop and instruments</p> <p>-I know how electronic music is created.</p>

<p>-Select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information . (Co2 1.6)</p>		<p>-To combine audio and instruments to enhance my project -To evaluate the effectiveness of different musical components. Skills: -I can create a simple four chord song following the correct rhythm. -I can listen to and appreciate a range of music. - I can research and gathered opinions. - I can use appropriate software to create a rap. - I can share and evaluate my own and others' music battle.</p>		<p>-I understand how to use Smart drums and Smart Strings - I know to how to compose my own piece of Beatles-inspired music Skills: -I can talk about audience, atmosphere and structure when planning a particular outcome. -I can confidently identify the potential of unfamiliar technology to increase my creativity. -I can tell you why I select a particular online tool for a specific purpose. -I can be digitally discerning when evaluating the effectiveness of my own work and the work of others.</p>
<p>Digital Data Handler</p> <p>NC link: -Use sequence, selection, and repetition in programs; work with variables and various forms of input and output. (Co2 1.2) -Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs . (Co2 1.3) -Select, use and combine a variety of software (including internet services) on a range of</p>	<p>Knowledge: N/A</p> <p>Skills: N/A</p>	<p>Knowledge: - I know how to create questions with yes/no answers -I can identify the attributes needed to collect data about an object - I can explain why it is helpful for a database to be well structured. -I know how to plan the structure of a branching database -I know how to independently create an identification tool. Skills: -I can organise data in different ways. -I can collect data and identify where it could be inaccurate. -I can choose the best way to present data to my friends.</p>	<p>Knowledge: N/A</p> <p>Skills: N/A</p>	<p>Knowledge: -I know the features of excel - I know that entering data and formulae into cells creates a desired outcome - I know how to use a model spreadsheet to design a theme park - I know how to write a spreadsheet formula to solve more challenging maths problems. - I know how to plan the process needed to investigate world around me. Skills: -I can select the most effective tool to collect data for my investigation. -I can check the data I collect for accuracy and plausibility. -I can interpret the data I collect.</p>

<p>digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information . (Co2 1.6)</p>		<p>-I can use a data logger to record and share my readings with my friends. - I can add to a database and a branching database</p>		<p>-I can use the skills I have developed to interrogate a database. - I can present the data I have collected in an appropriate way.</p>
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