



Computing Year 6

Unit of work	3D Modelling	Introducing AI	Photo editing	Selection: if ... else...
Link to Programme of study	Digital Literacy – inc. online safety	Digital Literacy – inc. online safety	Digital Literacy – inc. online safety	Computer Science
Composite knowledge	<p>Use a variety of software to design and create</p> <p>Identify how technology – specially 3D modelling and 3D printing, is used in the world around us</p>	<p>Identify how technology is used in the world around them</p> <p>Use technology safely, respectfully, and responsibly</p> <p>Develop an awareness of AI: how it works, the possibilities it presents and its possible limitations or dangers</p>	<p>Use a variety of software to design and create</p> <p>Identify how technology is used in the world around them</p> <p>Recognise the affect technology can have on our mental wellbeing</p>	<p>Recognise and use Selection in a range of programs</p> <p>Design, write and test programs which achieve specific outcomes</p> <p>Use logical reasoning to explain what will happen when code is run</p>
Intentional knowledge they need to understand (Component knowledge)	<p>Recognise CAD as computer aided design</p> <p>Recognise some of the ways 3D modelling is used in the wider world</p> <p>Use the tools available within a software package to make things happen:</p> <ul style="list-style-type: none"> • add shapes to the workspace • edit the dimensions of the added shapes • combine and group shapes to create more complex designs • Use the Rotate and view tools to inspect designs from all angles <p>Evaluate their designs and identify how they could be improved</p>	<p>Have experience of using and interacting with age appropriate AI models</p> <p>Recognise the type of applications which might make use of AI</p> <p>Know that AI is trained using machine learning and what Machine learning is</p> <p>Recognise that AI gets things wrong and that the data used to train it can result in bias.</p>	<p>Identify altered images and suggest how they were edited</p> <p>Recognise the affect altered images can have on ones mental wellbeing</p> <p>Use image editing software to digitally alter images</p> <p>Use video tutorials to learn new skills</p> <p>Evaluate their own work and suggest ways to develop it further</p>	<p>Recognise different types of selection in programs</p> <p>Identify the conditions which control the flow of a program</p> <p>Can plan, write and test programs which include selection</p> <p>Use their understanding of coding in Scratch to logically predict what code will do before it is run</p>

National Curriculum KS2 (skills)	<p>Key stage 2 Pupils should be taught to:</p> <ul style="list-style-type: none"> design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts. use sequence, selection, and repetition in programs; work with variables and various forms of input and output. use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs. 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. use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content. 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. use technology safely, respectfully, and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact. 			
Vocabulary	3D Modelling, dimensions, tinkerCAD, group, 3D Printing,	AI, AI model, machine learning, data, AI bias,	image editing, Pixlr, filter, Air brushing, video tutorial	Sequence, if, if ... else ..., condition
Links to prior knowledge		Using AI based tools in other software e.g PowerPoint and Adobe Express		Year 5 - Variables Year 5 – Introducing Selection and the Micro:Bit Year 4 – Making Things Happen
Key knowledge for assessment	<p>Can give some examples of where 3D modelling and 3D printing are used in the world around them.</p> <p>Can create increasingly more complex designs using the CAD software</p> <p>Can plan, design and evaluate a 3D artefact</p>	<p>Can identify some possible uses of AI</p> <p>Can explain how AI is trained / programmed</p> <p>Understands that AI isn't always correct</p> <p>Recognise examples of AI bias</p>	<p>Can identify altered images and images that use filters</p> <p>Can use an image editing software to create their own edited images</p> <p>Can combine software packages to create digital artefacts</p>	<p>Can recognise and describe how selection is used in programs to control events and outcomes</p> <p>Can plan, write and test programs to achieve a specified outcome</p> <p>Can create increasing more complex programs which draw on the concepts they have learnt so far: sequence, repetition, selection and variables</p>
Cross Curricular Links	Art D&T Math		Art	
Oracy & Outdoor Learning Links				