Subject	**Computing**	**Year Group**	**9**	
	Unit 1	Unit 2	Unit 3	Unit 4
Scheme title	**Effecient Programming**	**Applying programming in physical systems**	**Asset collection**	**Creating Digital Artefacts**
Knowledge in sequence	Introduction to turtle using Blockly. How to use Turtle in Python? How to use loops to program effeciently? How to use subroutines to program effeciently?	How to flash hardware? How to identify errors on hardware? How to program light, sound and movement using effecient programming techniques?	***Two units will be taught concurrently to deliver a blended theoretical and practical body of learning***. Judge an asset/sources reliability and credibility and explain the reasoning behind this judgement. Develop digital artefacts that are fit for purpose and audience combining existing assets and creating new graphics. Explain how legislation prevents the unauthorise use, copying or redistributing of existing assets / artefacts.	
Purpose of scheme	To explore how loops and subroutines can be used to solve problems in an effecient manner.	To explore how programming can be used to manipulate physical systems. To apply and consolidate sequence, selection and looping programming skills.	Investigate the credibility of sources/assets found online and raise awareness of legislation and law in the use of assets.	Compare artefacts for effectiveness, explain bitmap and vector graphics and identify file formats. Creatively developing digital aretefacts that satisfy a client brief.
Skills	Students can apply For loops To choose and implement effecient programming techniques such as loop and subroutines.	To be able to write, transfer and test programs for the Move:Motor robots. To choose and implement effecient programming techniques such as loop and subroutines.	Understaning primary / secondary research. Analysing sources for credibility. Recognising legislation and being able to apply it in context.	Planning, prioritising and making design decisions based on research outcomes. Competent technical application of Adobe Cloud software to create digital artefacts. Evaluting own work.
Key words	Python Translator / Editor Syntax Sequence, selection, looping	Python Translator / Editor Syntax Sequence, selection, looping Flash	Credibility, reliability, bias, legislation.	Digital artefact, visualisation, bitmap, vector, file types, file types.
End point	To be able to write programs with inputs, outputs and variables. To be able to fix syntax and logic errors. To be able to produce an effecient programming solution.	To be able to write programs with inputs, outputs and variables. To be able to fix syntax and logic errors. To be able to produce an effecient programming solution.	Independently identify the steps needed to verifiy a sources credibility. Restate main points of legislation related working with digital assets.	Imagine and create a solution to a client brief that will involve creativity and technical application. This could be a logo, album artwork, game desing concept.
Assessment Methods	Skills are teacher assessed.	End of unit assessment online. Key skills - teacher assessed	A completed design project that demonstrates creativity and technical knowledge. Quiz assessment to demonstrate knowledge accumulated on legislation and creditibity of assets.	