

	Working Towards	Expected Standard	Greater Depth
	By the end of Year 8 a student should be able to:	By the end of Year 8 a student should be able to:	By the end of Year 8 a student should be able to:
A U T U M N	<ul style="list-style-type: none"> ● Understand how to keep themselves safe online ● Define the term sexting ● Identify simple cybersecurity threats like malware ● Define different malware terms like worm or virus ● Identify the different symbols used within an algorithm/flowchart ● Identify simple errors within Python coding ● Write simple programs that use variables ● Read simple python code and explain what the program should do 	<ul style="list-style-type: none"> ● Explain how to keep themselves safe online ● Understand the term sexting ● Identify and explain cybersecurity and the threats of things like phishing and pharming ● Use an algorithm and turn it into pseudocode. ● Follow and write algorithms ● Understand and identify simple errors within coding and how to fix them ● Read and write programs written in a high-level programming language ● Understand the syntax and structure of a high-level language 	<ul style="list-style-type: none"> ● Analyse different methods used to keep themselves safe online ● Understand the implications of sexting ● Analyse the impact of cybersecurity threats to a computer system ● Produce detailed pseudocode ● Complete a trace table using an algorithm ● Explain how errors occur within coding and demonstrate how to fix them ● Analyse and refine programs written in a high-level programming language

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- Explain different planning tools such as a moodboard, mindmap, visualisation diagram and storyboard
- Understand when to use existing components and how to comply with the laws that are associated with them
- Produce at least one animation either 2D or 3D using Animaker or FlipAnimate
- Understand the different types of animations
- Understand what a client brief is
- Produce a simple animation using a limited range of tools
- Understand what visual identity is
- Understand what a bitmap and a vector graphic are
- Produce a simple graphic using a limited range of editing tools
- Use editing tools with limited accuracy
- Understand why graphical images need to be compressed

- Use a range of planning tools such as a moodboard, mindmap, visualisation diagram and storyboard
- Identify different ethical and legal aspect with using existing components
- Produce both 2D and 3D animations using Animaker and FlipAnimate
- Identify different types of animation and what they would be used to produce
- Understand how to use basic tools to produce an animation following a client brief
- Understand the graphics may be copyright and subject to intellectual property
- Explain the concept of visual identify
- Identify the differences between vector and bitmap graphics
- Produce a graphic following a client brief using a variety of different editing tools
- Explain the difference between lossy and lossless compression

- Analyse different planning tools and be able to identify when each should be used
- Analyse the different laws that exist to protect an individual's creative work
- Analyse the advantages/disadvantages of different types of animation
- Use advanced tools to produce an animation that fully meets a client brief
- Analyse different graphics to identify visual identify
- Explain the differences between vector and bitmap graphics and the pros and cons of each one
- Use advanced editing tools to produce a detailed graphic that fully meets a client brief
- Analyse the different file formats for compression and their advantages/disadvantages

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- Understand the difference between binary and denary
- Convert simple binary numbers into denary and vice versa
- Can accurately draw and use the table needed for binary conversions
- Can add 24-bit binary numbers together
- Understand that binary is needed to store images on a computer
- Understand that a computer needs to change an analogue sound into a digital sound so that it can store it
- Enter data into a spreadsheet and perform simple formatting
- Can identify what a chart should have to make it useful
- Can add, divide, multiply and subtract using simple formulas in a spreadsheet

- Identify different number bases
- Explain why computers use binary and link to switches
- Convert denary to binary, binary to denary, binary to hexadecimal and hexadecimal to binary
- Add 2 simple 8-bit binary numbers together
- Explain how bitmap images are represented
- Explain how analogue sound is represented
- Enter data into a spreadsheet, format it and manipulate it to answer what if questions.
- Produce different charts from a spreadsheet setting each one out correctly.
- Use relative cell references and absolute cell references in basic formulas.

- Add 3 binary numbers together
- Explain the concept of an overflow error and why it occurs
- Explain the different binary addition rules
- Analyse how the number of pixels, colour depth and resolution affect a digital image
- Analyse how amplitude, sample rate, bit depth and sample interval affect a digital sound file
- Explain how to format data to represent percentages etc.
- Use goal seeking on a spreadsheet in order to produce forecasts from data.