



Computer **&** **Creative I Media** **Learning Journey**

Intent · Implementation · Impact



Learning Journey overview

Year 7: Topic summary

How we interleave topics to enable pupils to build and recall knowledge.

KS3 Year 7 Computing - Interleaving Approach											
Year 7	Unit 1			Unit 2			Unit 3				
	Unit 4			Unit 5			Unit 1		Unit 2		
	Unit 1		Unit 2	Unit 1		Unit 2	Unit 1		Unit 2		
	Unit 3			Unit 3	Unit 4						
	Unit 1			Unit 1			Unit 1			Unit 1	
Unit 1	Unit 1 Introduction to Computing										
	Unit 1 Memory Recall		L1	L1 L2	L1 L2 L3	L1 L2 L3 L4	L1 L2 L3 L4	L1 L2 L3 L4 L5	L1 L2 L3 L4 L5 L6		
	Lesson Content	L1 Folder & File management	L2 Email	L3 Phishing	L4 Office 365	L5 Escalate	L6 Cyber Bullying	L7 Searching the Web	L7 Assessment		
Unit 2	Unit 2 Flowol										
	Unit 2 Memory Recall		L1	L1 L2	L1 L2 L3	L1 L2 L3 L4	L1 L2 L3 L4 L5	L2 L3	L1 L2 L3 L4 L5 L6 L7	L1 L2 L3 L4 L5 L6 L8	
	Lesson Content	L1 Introduction to Flow Charts	L2 Pelican crossing	L3 Robots	L4 School bus	L5 Car mobile	L6 Variables	L7 train set 1	L8 Train set 2	L9 Assessment	
Unit 3	Unit 3 Scratch										
	Unit 3 Memory Recall		L1	L1 L2	L1 L2 L3	L1 L2 L3 L4	L1 L2 L3 L4 L5	L1 L2 L3 L4 L5 L6	L1 L2 L3 L4 L5 L6 L7		
	Lesson Content	L1 Sprites	L2 Movement	L3 Co-Ordinates	L4 Variables	L5 Catch the Ball	L6 Duck Shoot	L7 Helicopter	L8 Assessment		
Unit 4	Unit 4 Spreadsheet Modelling										
	Unit 4 Memory Recall		L1	L1 L2	L1 L2 L3	L1 L2 L3 L4	L1 L2 L3 L4 L5	L1 L2 L3 L4 L5 L6	L1 L2 L3 L4 L5 L6 L7		
	Lesson Content	L1 Spreadsheet Basics	L2 IF statements	L3 What If	L4 VLOOKUP	L5 Absolute Cells	L6 Named ranges	L7 Spreadsheet functions	L8 Assessment		
Unit 5	Unit 5 Micro Bits										
	Memory recall								Unit 1 & 2		
	Unit 5 Memory Recall		L1	L1 L2	L1 L2 L3	L1 L2 L3 L4	L1 L2 L3 L4 L5	L1 L2 L3 L4 L5 L6			
	Lesson Content	L1 Micro Bit Introduction	L2 Dice Roll	L3 Compass	L4 Games	L5 Pong	L6 Catch the Ball	L7 Assessment			



Computing Topic Descriptors

Year 7

Unit 1 Introduction to Computing



This unit is an introduction to Computing at Parkside Community School. Students will be introduced to different components to equip them with the basic knowledge and skills when working with Computers. Students begin by looking at file management and security. Students will know how to use the school email system and Office 365 which all students have access to at home. Students will look at online dangers and understand how to protect themselves online and how to effectively search the Internet and understand that not all information on the Web is accurate or truthful.

Unit 2 Flowol

Flowol 4

This unit introduces students to computer programming logic using the software Flowol which is a Flow chart programming language. This unit enables students to create their own simulations using the software Flowol. Each lesson builds on the previous lessons work to create a fully playable and interactive game. Students arrive at Parkside with very little previous experience of using Flow chart and logical programming.

Unit 3 Scratch



This unit introduces students to computer programming using the software Scratch which is a block-based visual programming language. This unit enables students to create their own "Super Mario" game using the software Scratch. Each lesson builds on the previous lessons work to create a fully playable and interactive game. Students arrive at Parkside with very little previous experience of using Scratch to program.



Unit 4 Spreadsheet Modelling



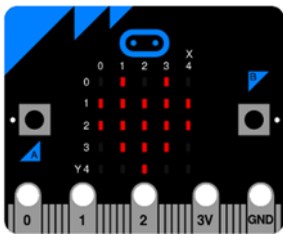
Microsoft Excel

This is a practical, skills-based unit covering the principles of creating and formatting basic spreadsheets to produce and use simple computer models. It is suitable for pupils who have a basic knowledge of spreadsheets including cell references, simple formulae and formatting, although these topics are

revised in the first lesson, making it also suitable for pupils new to spreadsheets due to the inconsistencies of ability from KS2.

The unit is centred around creating a financial model for a Bumper cars company. Students start by looking at different types of model and then use basic spreadsheet techniques to create. The model is then extended to include sales from merchandising, with the introduction of “what if” scenarios. Spreadsheet features covered include SUM, MAX, IF and COUNTIF functions, cell naming for absolute referencing, conditional formatting, validation, charting and simple macros. Microsoft Excel software is used in this unit.

Unit 5 Micro bits



This is a practical, skills-based unit covering the principles of creating and formatting basic coding, to produce and use simple computer models. Key concepts students can know about the different types of programming structures, selection sequence and iteration for the starting then building and developing this knowledge into more complex programs. This unit is directly

linked to BBC : MICROBIT which is free website set up by the BBC to encourage students in simple and basic programming, this is aimed at year 7 students throughout the country . Procedural knowledge will also be valued with students reading websites, practicing numeracy skills within programming, decision making and inferring from texts and other support materials. We want students to be curious investigators who work from a concrete knowledge base as they seek to make sense of increasingly unfamiliar contexts. Students will use a learning portfolio to evidence the tasks they have completed throughout this unit.



Year 8: Topic summary

How we interleave topics to enable pupils to build and recall knowledge.

KS3 Year 8 Computing - Interleaving Approach

Year 8

Unit 1

Unit 2

Unit 3

Unit 4

Unit 5

Year 8

Unit 1 Spreadsheet Modelling										
Unit 1	Unit 1 Memory Recall	L1	L1 L2	L1 L2 L3	L1 L2 L3 L4	L1 L2 L3 L4 L5	L1 L2 L3 L4 L5 L6	L1 L2 L3 L4 L5 L6 L7	L1 L2 L3 L4 L5 L6 L7	
Lesson Content	L1. Spreadsheet Basics	L2. IF statements	L3. What If	L4. Vlookups	L5. Absolute Cells	L6. Named ranges	L7. Spreadsheet functions	L8. Assessment		

Unit 2 Understanding Computers										
Unit 2	Memory recall								Unit 1	
Unit 2 Memory Recall		L1	L1 L2	L1 L2 L3	L1 L2 L3 L4	L1 L2 L3 L4 L5	L1 L2 L3 L4 L5 L6 L7			
Lesson Content	L1. Input, Output and Storage Devices	L2. Inside a computer	L3. Binary to Decimal	L4. Binary Addition	L5. Storage Devices	L6. New technology	L8. Assessment			

Unit 3 Edublocks										
Unit 3	Memory recall				Y7 Unit 2 Scratch				Unit 1&2	
Unit 3 Memory Recall		L1	L1 L2	L1 L2 L3	L1 L2 L3 L4	L1 L2 L3 L4 L5	L1 L2 L3 L4 L5 L6	L1 L2 L3 L4 L5 L6 L7		
Lesson Content	L1. Introduction and Interface	L2. Sequence of Code	L3. User input	L4. Variables	L5. Functions	L6. Extended Project	L7. Extended Project	L8. Assessment		

Unit 4 2D Animation										
Unit 4	Memory recall				Y7 Unit 3 Using Fireworks				Unit 1&2	
Unit 4 Memory Recall		L1	L1 L2	L1 L2 L3	L1 L2 L3 L4	L1 L2 L3 L4 L5	L1 L2 L3 L4 L5 L6	L1 L2 L3 L4 L5 L6 L7		
Lesson Content	L1. Stick Figures	L2. Stick People	L3. Stick Animals	L4. Custom Animals	L5. Backgrounds	L6. Library Characters	L7. 2D motion	L8. Assessment		

Unit 5 Introduction to Python										
Unit 5	Memory recall				Y7 Unit 2 Scratch				Unit 1&2	
Unit 5 Memory Recall		L1	L1 L2	L1 L2 L3	L1 L2 L3 L4	L1 L2 L3 L4 L5	L1 L2 L3 L4 L5 L6 L7			
Lesson Content	L1. First Steps in Python	L2. Crunching numbers	L3. Crossroads	L4. Branches	L5. Round and Round	L6. Pulling all code together	L8. Assessment			

Computer & Creative I Media Curriculum Learning Journey

Computing Topic Descriptors

Year 8

Unit 1 Spreadsheet Modelling



Microsoft Excel

This is a practical, skills-based unit covering the principles of creating and advanced formatting spreadsheets to produce and use simple computer models. It is suitable for pupils who have a basic knowledge of spreadsheets (from year 7) including cell references, simple formulae and formatting, although these topics are revised in the first lesson, making it also suitable for pupils new to spreadsheets.

The unit is centred around a variety of skills linking to job and career opportunities which the students may wish to pursue when leaving the school. Students start by looking at basic formatting, moving on to If statements and costing for a food chain restaurant. Students also cover advanced spreadsheet skills including Vlookups, Absolute cell references and relative cell references. Students will use a learning portfolio to evidence the tasks they have completed throughout this unit.

Unit 2 Understanding Computers



The unit is subdivided into six learning hours. It is a theoretical unit covering the basic principles of computer architecture and use of binary. Students will revise some of the theory on input and output covered in previous learning and continue to look at the Input-Process-Output sequence and the Fetch-Decode-Execute cycle through practical activities. Students will then look at some simple binary to

decimal conversion and vice versa, and learn how text characters are represented using the ASCII code. This will be followed by some simple binary addition. Students will learn more in depth how storage devices represent data using binary patterns and physically save these patterns. Finally, they will look at a brief history of communication devices, how new technologies and applications are emerging and the pace of change. Students will use a learning portfolio to evidence the tasks they have completed throughout this unit.

Unit 3 Edublocks



The unit is subdivided into six learning hours. It is a practical unit covering the basic principles of Edublocks, which is a step for students between block based coding and text coding. Students will learn some basic principles of coding in different languages. These will include key aspects

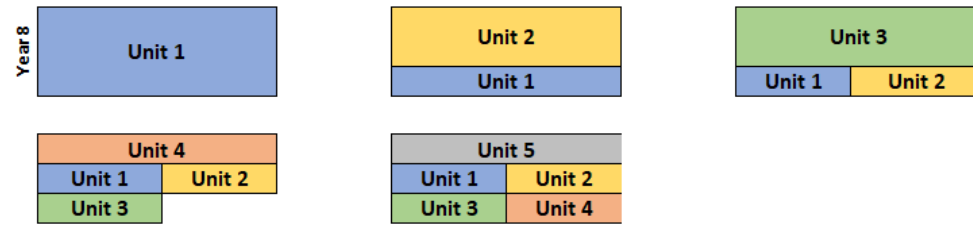
such as sequences, functions and variables. Finally, they will look at integrating all the skills together to create an interaction coded game. Students will use a learning portfolio to evidence the tasks they have completed throughout this unit.



Year 9: Topic summary

How we interleave topics to enable pupils to build and recall knowledge.

KS3 Year 9 Computing - Interleaving Approach



		Unit 1 Advanced Python						
Unit 1	Memory recall			Y7 Unit 5 Python			Unit 1&2	
	Unit 6 Memory Recall		L1	L1 L2	L1 L2 L3	L1 L2 L3 L4	L1 L2 L3 L4 L5	L1 L2 L3 L4 L5 L6 L7
	Lesson Content	L1. First Steps in Python	L2. Crunching numbers	L3. Crossroads	L4. Branches	L5. Round and Round	L6. Pulling all code together	L7. Assessment
		Unit 2 Computer Graphics						
Unit 2	Memory recall			Unit 1&2				
	Unit 4 Memory Recall		L1	L1 L2	L1 L2 L3	L1 L2 L3 L4	L1 L2 L3 L4 L5	L1 L2 L3 L4 L5 L6 L7
	Lesson Content	L1. Shapes	L2. Multiple objects	L3. Paths	L4. Making new images	L5. Behind the scenes	L6. Showcase	L7. Assessment
		Unit 3 3D Animation						
Unit 3	Memory recall		Unit 1&2					
	Unit 2 Memory Recall		L1	L1 L2	L1 L2 L3	L1 L2 L3 L4	L1 L2 L3 L4 L5	
	Lesson Content	L1. Move, rotate, scale and colour	L2. Animation and names	L3. Extrude	L4. Loop cut	L5. Knife tool	L6. Assessment	
		Unit 4 HTML						
Unit 4	Memory recall							
	Unit 4 Memory Recall		L1	L1 L2	L1 L2 L3	L1 L2 L3 L4	L1 L2 L3 L4 L5	
	Lesson Content	L1. Website building blocks	L2. CSS	L3. Web design	L4. Collecting Assets	L5. Development	L6. Assessment	
		Unit 5 Audacity						
Unit 5	Memory recall							
	Unit 4 Memory Recall		L1	L1 L2	L1 L2 L3	L1 L2 L3 L4	L1 L2 L3 L4 L5	
	Lesson Content	L1. Digitizing sound	L2. Working with sound effects	L3. Listening and planning	L4. Creating an advert	L5. Finishing and exporting	L6. Evaluation and assessment	



Computing Topic Descriptors

Year 9

Unit 1 Advanced Python



This unit introduces students to text-based programming with Python. This unit is the second in this programming language the first being in year 8. The lessons form a journey that starts with simple programs involving input and output, and gradually moves on through arithmetic operations, randomness, selection, and iteration. Emphasis is placed on tackling common misconceptions and elucidating the mechanics of program execution. A range of pedagogical tools is employed throughout the unit, with the most prominent being pair programming, live coding, and worked examples. Students will evidence their creations and knowledge in their student portfolio presentations.

Unit 2 Computer Graphics



This unit offers students the opportunity to design graphics using vector graphic editing software. By the end of the unit students will have produced an illustration, a logo, or some icons using vector graphics. The lessons are tailored to Inkscape (inkscape.org), which is open source and cross-platform, but the resources should be readily adaptable to any vector graphics editor.

Vector graphics can be used to design anything from logos and icons to posters, board games, and complex illustrations. Through this unit, students will be able to better understand the processes involved in creating such graphics and will be provided with the knowledge and tools to create their own. Students will evidence their creations and knowledge in their student portfolio presentations.

Unit 3 HTML



Students will learn the basics of HTML and CSS. They will learn how to create text styles and add content, including text and graphics, in a specified position on a page, as well as navigation links to other pages on their website and to external websites. The basics of good design are covered and students will develop their own templates using Notepad as a text editor. Students will decide on a topic for their websites, document their designs and collect suitable text and images. They will then use their HTML templates to create their websites, including a web form. Students will use a learning portfolio to evidence the tasks they have completed throughout this unit.

Unit 3D animation



Films, television, computer games, advertising, and architecture have been revolutionised by computer-based 3D modelling and animation. In this unit students will discover how professionals create 3D animations using the industry-standard software package, Blender. By completing this unit students will gain a greater understanding of how this important creative field is used to make the media products that we consume. Lessons will take students through the basics of modelling, texturing, and animating. Links are made throughout to computer science, computational thinking, and the world of work. Students will use a learning portfolio to evidence the tasks they have completed throughout this unit.



Unit 5 Sound



In this unit students will learn how sound is digitized and stored on computers. Students will learn basic sound editing techniques and how to add sound effects and mix tracks. Students will learn ways of creating different sound effects (the job of a “foley artist”) are described. Students will undertake a creative project to analyse, plan, record and edit a short sound file. This could take the form of a radio advertisement or short podcast.




Core Knowledge Concepts

Computer Science Curriculum implementation


Knowledge concepts used to form Schemes of Learning

Year 7 Core Knowledge Concepts


Unit	Student Learning Outcomes	Disciplinary Literacy Word Power
<p>Unit 1 Introduction to Computing</p> 	<ul style="list-style-type: none"> • I can send and reply to emails and send attachments • I can use an email signature • I can identify a probable phishing email and deal with it appropriately • I can explain the advantages and disadvantages of email as a method of communication • I can manage a Contacts list efficiently for email • I know how to access Office 360 at home • I understand the term “cloud” computing • I understand how I can use “OneDrive” • I can create an online document and save it in my OneDrive so I can access at home/school • I can explain what Social Networking means • I can explain what cyberbullying is and how to report it • I can explain why using privacy settings on Social Networking sites is important • I can explain how to create an online profile that will keep me safe • I can explain what a search engine is and give examples • I can use a search engine to locate information on the internet • I can explain why information on the internet is not always accurate • I can use advanced searches to locate meaningful information 	<ul style="list-style-type: none"> • Folder • File • Email • Phishing • E-safety • Search engine • Reliable

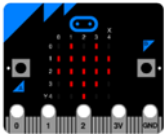


Unit	Student Learning Outcomes	Disciplinary Literacy Word Power
Unit 2 Flowol Flowol 4	<ul style="list-style-type: none"> I can use a mimic to simulate real situations I can use a variable I can identify how a control system can be used I can annotate a simulation of a control system I can create code for a simulation I know how to use inputs, outputs and decisions I understand the term sub-routines I understand how I can use sequences I can create a simulation to mimic a real world situation I can explain what a control system decision is I can explain the difference between input and output 	<ul style="list-style-type: none"> Variable Control system Sub-routine Input Code Output Annotate Simulation Algorithm

Unit	Student Learning Outcomes	Disciplinary Literacy Word Power
Unit 3 Scratch 	<ul style="list-style-type: none"> I can navigate the Scratch environment I can edit and import sprites into Scratch I can add costumes to my sprites I can clearly explain the use of sprites and costumes I can give a sprite basic movement I can use a range of sprites which I can control in different ways I can write code to make a sprite jump I can add comments to my code to clearly explain how it works I can design and create an algorithm that: <ul style="list-style-type: none"> - makes the sprites disappear I can design and create an algorithm that: <ul style="list-style-type: none"> - uses the broadcast function I can write like a Computer Scientist to explain how my algorithms work I can design and create an algorithm that: <ul style="list-style-type: none"> o used variables to set the lives I can write like a Computer Scientist to explain how my algorithms work I can design and create an algorithm that: <ul style="list-style-type: none"> o Allows sprites to interact I can write like a Computer Scientist to explain how my algorithms work I can design and create a stage screen that: <ul style="list-style-type: none"> o Includes at least two suitable images 	<ul style="list-style-type: none"> Scratch Stage Sprite Costume Script Coordinates Variable Annotate Algorithm




Unit	Student Learning Outcomes	Disciplinary Literacy Word Power
<p>Unit 4 Spreadsheet Modelling</p> 	<ul style="list-style-type: none"> • I can describe what is meant by the term computer model • I can use a spreadsheet basics: entering text, numbers and formulae • I can compare different types of model • I can format cells & insert a graphic • I can use and understand relative and absolute referencing • I can make the model as realistic as possible based on known sales figures and prices • I can consider ways of increasing profit to meet a given target • I can use a spreadsheet to model outcomes • I can use functions including Max, Min and If • I can name a cell • I can sort data into different sequences • I can display formulae in a spreadsheet • I can use validation techniques to ensure that only valid data can be entered • I can assign the macro to a button to make the spreadsheet more user friendly • I can explain what a macro is and the advantages of using Macros • I can explain the different types of Charts available and how they are used for different types of data 	<ul style="list-style-type: none"> • Computer model • Spreadsheet • Cell • Format • Function • Formulae • Macro • Chart • Absolute referencing • Relative referencing


Unit	Student Learning Outcomes	Disciplinary Literacy Word Power
<p>Unit 5 Micro bits</p> 	<ul style="list-style-type: none"> • I can describe what is meant by the term Micro:Bit • I can use and understand Basic code blocks • I can use and understand Input code blocks • I can make variables and use them in block code • I can describe what Show LED's means • I can sort data into different sequences • I can try out different If statements to show different outcomes • I can use a compass to show the direction • I can display text on a Micro:Bit • I can display images on a Micro:Bit • I can create Dice on a Micro:Bit 	<ul style="list-style-type: none"> • Computer Program • Microbit • Compass • Variable • Button • Pins • Reset • Shake • Make Code • Loop • Repeat • Simulator • While • If True




Year 8 Core Knowledge Concepts


Unit	Student Learning Outcomes	Disciplinary Literacy Word Power
<p>Unit 1 Advanced Spreadsheets</p> 	<ul style="list-style-type: none"> I can describe what is meant by the term computer model I can identify spreadsheet features: editing text, numbers and formulae I can compare different types of models I can format cells & insert a graphic I can use and understand relative and absolute referencing I can make a model as realistic as possible based on known sales figures and prices I can consider ways of increasing profit to meet a given target I can use a spreadsheet to model outcomes I can use functions including Max, Min, Vlookup and If <ul style="list-style-type: none"> I can name a cell I can use AutoFill function I can sort data into different sequences I can display formulae in a spreadsheet I can use a Countif function in calculations I can use validation techniques to ensure that only valid data can be entered I can add comments to my work to show an increased level of understanding of the formulas, functions and tool I have used. I can use absolute cell references I can use relative cell references 	<ul style="list-style-type: none"> Computer model Spreadsheet Cell Format Function Formulae Macro Chart Absolute referencing Relative referencing




Unit	Student Learning Outcomes	Disciplinary Literacy Word Power
Unit 2 Computer Hardware 	<ul style="list-style-type: none"> • I can describe what is meant by the term computer elements • I can describe input-Process and output devices • I can detail the purpose and function of a CPU • I can detail the purpose and function of a RAM • I can detail the purpose and function of a ROM • I can detail the purpose and function of a Motherboard • I can detail the purpose and function of a Graphics Card • I can provide detail about the FDE cycle • I can count in binary • I can add in binary • I can convert Binary to Denary • I can convert Denary to Binary • I can complete correct calculations using binary addition • I can describe storage devices with relevant purposes • I can create some new technology research and how it will impact on the student 	<ul style="list-style-type: none"> • CPU • Binary • Memory • Monitor • Input device • Output Device • Storage device • RAM • FDE • Graphics card • Motherboard • Binary addition • Denary

Unit	Student Learning Outcomes	Disciplinary Literacy Word Power
Unit 3 Edublocks 	<ul style="list-style-type: none"> • I understand what is meant by the term interface • I can create a sequence of code • I can use a repeat function in code • I can use a range function in code • I can use an iterate function in code • I can describe the term sequence • I can describe the term selection • I can describe the term iterate • I can use code to draw a shape • I can code changes in sizes and shape • I can code changes in colour • I can code ranges into code • I can use integers in code • I can set up and use variables in code • I can set up and use functions in code 	<ul style="list-style-type: none"> • Coding • Python • Import time • Loop • Integer • Interface • User input • Variables • Functions • Sequence • Selection • Iteration




Unit	Student Learning Outcomes	Disciplinary Literacy Word Power
<p>Unit 4 2D animation</p> 	<ul style="list-style-type: none"> • I can explain what is meant by the term animation • I can create an animation using basics: new frame • I can use library characters • I can create new characters • I can import backgrounds • I can change the speed of my animation • I can make the characters as realistic as possible • I can change the joints of the characters • I can create my own character • I can change the colours of the characters • I can move characters effectively • I can flip the characters • I can create a story using animation • I can import an independently designed background • I can export my animation for other purposes 	<ul style="list-style-type: none"> • Animation • Library • Edit figure • Frame • Characters • Background • Import • Export • Rotate • Key Frame




Unit	Student Learning Outcomes	Disciplinary Literacy Word Power
<p>Unit 5 Introduction to Python</p> 	<ul style="list-style-type: none"> • I can describe and use a command in python • I can describe and use a function in python • I can describe and use an algorithm in python • I can describe and use a string in python • I can describe and use a sequence of code in python • I can call a function in python • I can describe and use an argument in python • I can create simple python syntax • I can find, identify and correct bugs in python code • I can use snake-case function names • I can create algorithms to complete sequential tasks • I can describe and use a loop in python • I can describe and use a for loop in python • I can describe and use a while loop in python • I can detail what Python is and some of the applications it is used for • I can run a simple Python program in Interactive mode using the input and print functions • I can write, save and run a program • I can detail what a syntax error is and how to interpret an error message • I can list the rules for variable names and use variables in a program • I can describe the use and value of using comments • I can use statements correctly 	<ul style="list-style-type: none"> • Python • Programming language • String • Variable • Data types • Selection • Algorithms • Command • Function • Sequence • Pseudocode • Debug • Snake – Case • For Loop • While Loop




Year 9 Core Knowledge Concepts


Unit	Student Learning Outcomes	Disciplinary Literacy Word Power
<p>Unit 1 Advanced Python</p> 	<ul style="list-style-type: none"> I know what Python is and some of the applications it is used for I can run a simple Python program in Interactive mode using the input and print functions I can write, save and run a program in Script mode I understand what a syntax error is and how to interpret an error message I know the rules for variable names and use variables in a program I understand the use and value of using comments I understand the importance of using correct data types: string, integer or float I can use the int, float and round functions I can describe what algorithms and programs are and how they differ I can recall that a program written in a programming language needs to be translated in order to be executed by a machine I can write simple Python programs that display messages, assign values to variables, and receive keyboard input I can locate and correct common syntax errors I can describe the semantics of assignment statements I can use simple arithmetic expressions in assignment statements to calculate values I can send input from the keyboard and convert it to a numerical value I can use relational operators to form logical expressions I can use binary selection (if, else statements) to control the flow of program execution I can generate and use random integers I can use multi-branch selection (if, elif, else statements) to control the flow of program execution I can describe how iteration (while statements) controls the flow of program execution I can use iteration (while loops) to control the flow of program execution I can use variables as counters in iterative programs I can combine iteration and selection to control the flow of program execution I can use Boolean variables as flags 	<ul style="list-style-type: none"> Python Programming language String Variable Data types Selection While loops Algorithms Pseudocode Debug Syntax Error Integer Float Round




Unit	Student Learning Outcomes	Disciplinary Literacy Word Power
<p>Unit 2 Computer Graphics</p> 	<ul style="list-style-type: none"> • I understand what is meant by the term Computer Graphics • I know Inkscape basics: draw and modify shapes • I know Inkscape basics: Change the position and rotation of shapes • I know Inkscape basics: Z-order and how to use it appropriately • I know Inkscape basics: Align and Distribute • I know Inkscape basics: Grouping several objects • I know Inkscape basics: Grouping in union, intersection and difference • I know Inkscape basics: Vector paths (straight and curved) • I can create my own logo • I can evaluate my project against criteria • I can export my Graphic for other purposes • I can use markup in a vector graphic • I can modify markup code for an object 	<ul style="list-style-type: none"> • Computer Graphics • Position • Align • Logo • Rotation • Z-order • Distribute • Union • Intersection • Difference • Vector paths



Unit	Student Learning Outcomes	Disciplinary Literacy Word Power
Unit 3 HTML 	<ul style="list-style-type: none"> • I can demonstrate that the WWW is a huge collection of websites all over the world • I know what HTML is and what it is used for • I can type basic HTML tags using a text editor to create a page that can be viewed in a browser • I can edit the HTML code and view the changes in a browser • I know how CSS is used to set the styles in web pages and websites • I can write CSS code to set styles, e.g. background colour of sections of the page; size, font, colour and alignment of text • I understand what is meant by responsive design, and create a responsive web page • I know the main principles of good website design • I can complete website designs and gather content • I can use an HTML template to create consistent web pages • I can learn how to create a consistent look and feel throughout a website • I can add well-formatted content, including text and images, to each page • I can identify parts of search engine results 	<ul style="list-style-type: none"> • HTML • Website • Browser • Tag • Alignment • Template • Web form • Replicate • Consistent • CSS • Responsive design

Unit	Student Learning Outcomes	Disciplinary Literacy Word Power
Unit 4 3D animation 	<ul style="list-style-type: none"> • I can detail what is meant by the term animation • I can add, delete, and move objects • I can Scale and rotate objects • I can use a material to add colour to objects • I can join multiple objects together using parenting • I can use edit mode and extrude • I can use loop cut and face editing • I can apply different colours to different parts of the same model • I can use proportional editing • I can use the knife tool 	<ul style="list-style-type: none"> • Animation • Library • Frame • Key frame • Characters • Background • Import • Export • Rotate • Extrude • Parenting • Loop cut • Proportional editing • Knife tool



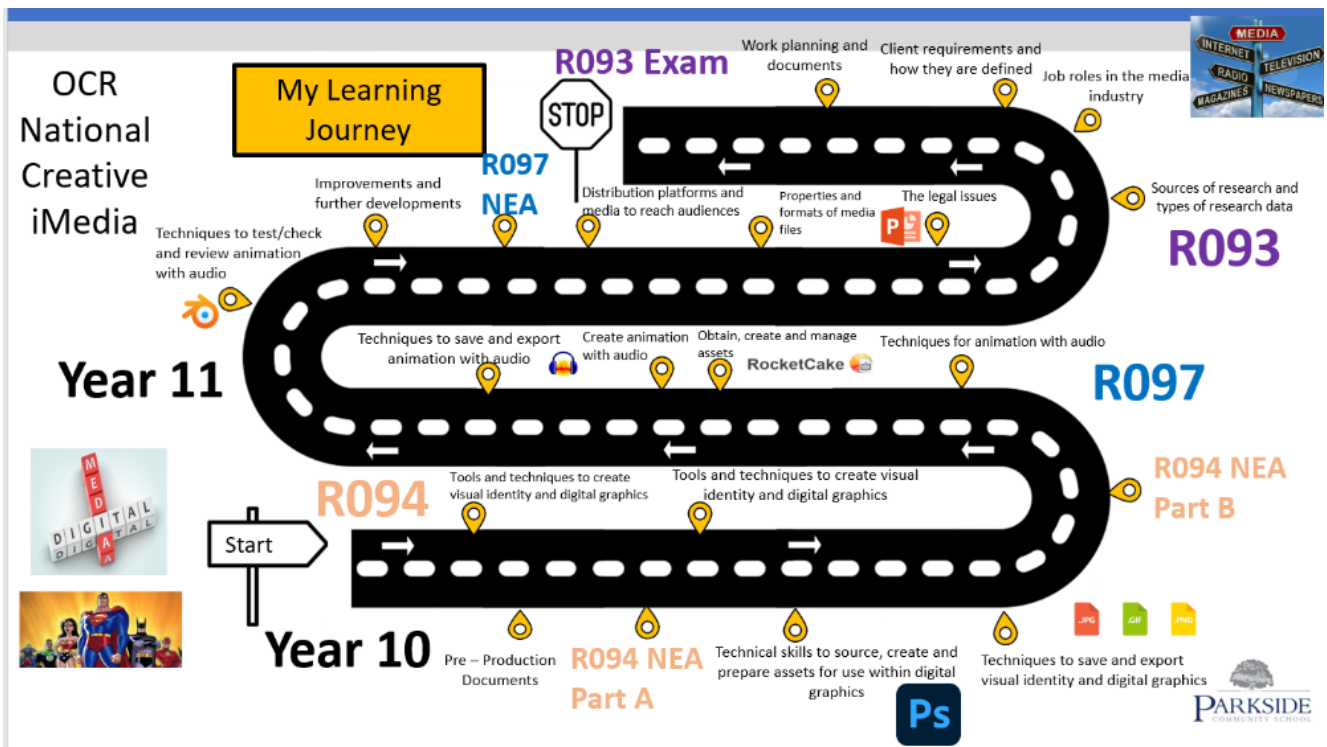
Unit	Student Learning Outcomes	Disciplinary Literacy Word Power
<p>Unit 5 Sound</p> 	<ul style="list-style-type: none"> • I can identify different sound file types • I can record and delete sounds in Audacity • I can apply effects to recordings • I can process of converting analogue sound waves to digital format • I can list job roles in sound editing • I can use of sound effects • I can use stereo effects • I can edit a sound file – trim, move/remove sections, working with multiple tracks • I can identify different elements used in a radio advertisement • I can explain how the advert is suitable for audience and purpose • I can plan an advertisement • I can produce a storyboard from an advertisement • I can edit a sound envelope • I can assemble sound files into a radio advert • I can apply effects to enhance your work • I can ensure it is suitable for audience and purpose • I can be aware of different sound file types and choose an appropriate type to export to • I can evaluate your own work taking into consideration others' opinions • I can evaluate someone else's work • I can review requirements for a sound editing project 	<ul style="list-style-type: none"> • Digital • Analogue • Sound waves • Effects • Dialogue • Purpose • Audience • Storyboard • Elements • Edit • Evaluate • Foley artist • Stereo Sound • Ducking • Envelope tool • Keyframes • Amplitude



KS4 I Media Learning Journey Overview

The media industry is vast, covering both traditional and new media sectors and providing work for individual freelance creatives as well as large teams in design houses and multinational companies. Job roles frequently overlap multiple sectors, and products often need to be suitable for more than one kind of output. However, there are common aspects to all media products. Pre-production and planning are vital; saving clients time and money and enabling creatives and designers to charge appropriately for their services. Products also make use of similar media codes to convey meaning, create impact and engage audiences. In this unit you will learn about the sectors, products and job roles that form the media industry.

Students will learn the legal and ethical issues considered and the processes used to plan and create digital media products. Students will learn how media codes are used within the creation of media products to convey meaning, create impact and engage audiences. Students will learn to choose the most appropriate format and properties for different media products. Completing this unit will provide them with the basic skills for further study or a range of creative job roles within the media industry.



KS4 I Media Core Knowledge Concepts

KS4 I Media: Summary

How we interleave topics to enable pupils to build and recall knowledge.

Unit	Student Learning Outcomes	Disciplinary Literacy Word Power
R094	<ul style="list-style-type: none"> I can produce a visual identity I can detail the purpose, elements and design of visual identity I can describe features of visual identity I can detail what is meant by visual identity I can detail the features of visual identity I can describe the elements of visual identity I can describe how visual identity relates to brand identity I can detail how visual identity elements are influenced by business type, brand values and brand positioning I can produce visual identity elements that are combined to shape perception and create emotional response I can produce visual identity needs to encapsulate brand values and be appropriate/relevant for the audience and type of market I can use appropriate elements to create visual identity suitable for different target audiences/ consumers I can design concepts of a graphic using correct conventions I can add appropriate layout conventions for different graphic products and purposes I can detail technical properties of images and graphics I can detail licenses and permissions of assets I can detail rights and permissions of images I can produce pre production and planning documents I can use software tools to produce a digital graphic I can source assets for digital graphics I can create assets for digital graphics I can modify images and other assets I can create a visual identity using graphic software I can set up new graphic products using conventions I can compile an image using basic techniques 	<ul style="list-style-type: none"> Visual identity Typography Target audiences Business types Brand values Brand positioning Colour palette Application of visual identity Alignment Typography Use of colour and colour systems Use of white space Headlines and copy Image content Titles and mastheads Mood board Mind map Concept sketch Visualisation diagram Image/canvas size Layout tools Drawing tools Adjustments to brightness/contrast and colour Use of selections Use of layers and layer styles Retouching Typography Filters and effects Drop shadows Effects Textures Cloning Healing Blur Colour swatches Colour picker Pencil Brush



Unit	Student Learning Outcomes	Disciplinary Literacy Word Power
<p>R097</p>	<ul style="list-style-type: none"> • I can provide detail on different formats interactive digital media takes • I can show how format is linked to the purpose of interactive digital media products • I can provide detail on how format is linked to the audience of interactive digital media products • I can describe devices used to access interactive digital media products impact on its format • I can detail how each type of content is used in interactive digital media products • I can provide content type is used for • I can collect assets to be used to create content • I can use form and structure of interactive digital media products is affected by digital media content • I can form and structure of interactive digital media products is affected by the audience and purpose • I can list a range of devices used to access interactive digital media • I can detail the devices used to access interactive digital media are linked to purpose and audience of products • I can adapt content to suit different access methods • I can detail user interaction methods for digital media • I can give features of interactive digital media • I can detail what makes an effective GUI • I can detail the differences between interface and interaction styles • I can select appropriate accessibility features • I can detail the difference between imaginative and derivative design • I can detail hardware that is required to create interactive digital media • I can detail software that is required to create interactive digital media • I can create a master page template • I can create Pre -production documents relevant to the scenario • I can choose assets and complete an asset table • I can detail technical compatibility of assets • I can create navigation and hierarchy diagrams • I can create interactive features and controls • I can create an interactive system which allows user interaction • I can use libraries and stock media identify digital media • I can save and export suitable file formats 	<ul style="list-style-type: none"> • Websites • Information points • Mobile apps • E-learning products • Digital maps • Games • Images • Audio • Video • Animation • Text • Tables • Lists • Forms • Navigational buttons • Maps • Quiz • Layers • Computers • Games consoles • Kiosks • Phones • Smart TV • Tablets • Touch screen/stylus • Voice controls • Camera input • Keyboard/buttons • Mouse/joystick control • consistent use of layout • colour scheme • house style • typography selection • white space • touch/gesture • voice control • motion/movement • drag/drop • feedback/closure • alternate text • text readability • captions • contrasting colour • resizable text • flexible input



Computer & Creative I Media Curriculum Learning Journey

	<ul style="list-style-type: none"> • I can edit varieties of vector and bitmap images • I can use techniques to repurpose assets • I can use techniques to repurpose audio • I can use techniques to repurpose video • I can use techniques to repurpose interactive assets • I can use technical skills to create interactive media • I can save interactive digital media products during creation • I can export / publish finished interactive digital media products • I can use techniques to test/ check technical properties of interactive digital media • I can detail constraints which limit the effectiveness of interactive digital media 	<ul style="list-style-type: none"> • mobile device accessibility • screen size and orientation adjustments • Web authoring software • App creation software • Authoring tools • Kiosk interface software • Wire frames • Storyboards • Navigation and hierarchy diagrams • Interactive features and controls • vector • bitmap • adjust brightness/contrast and colour • adjust image/canvas size • apply filters • apply transformations • retouching • File naming conventions • house style • navigation system • fixed/editable content • test plan • success criteria • Further developments • Interactive digital media improvements • Non-linear navigation • User friendly intuitive interfaces • Suitability for target audiences • Imaginative design • Derivative design • suitability of content • Suitability for client requirements • Suitability for target audience • Review of audio-visual quality, • Review of aesthetics, • Review of interaction • Review of engagement • Interactive digital media constraints
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Unit	Student Learning Outcomes	Disciplinary Literacy Word Power
R093	<ul style="list-style-type: none"> I can provide the different sectors that form the media industry and how these are evolving I can detail the types of products produced by, and used in, different sectors I can detail the same product can be used by different sectors I can list the sectors of the media industry (traditional and new) I can list the products in the media industry I can list and detail all Creative job roles in the media industry I can list and detail all Technical job roles in the media industry I can list and detail all Senior job roles in the media industry I can detail how each role contributes to the creation of media products I can detail the main responsibilities of each role in the creation of media products I can give detail on some job roles are specific to preproduction, production or post-production phases I can give detail that some job roles span multiple production phases I can give details that the size and scale of projects/productions means that individuals may perform more than one role I can provide details on the purpose of Products that are designed I can detail style, content and layout detail linked to purpose I can define client requirements I can detail client brief formats I can detail how target audiences are segmented I can define and give examples of primary and secondary research sources I can detail the difference between qualitative and quantitative information I can detail the different media codes I can explain how media varieties impact on the engagement ways I can explain camera techniques I can explain lighting differences 	<ul style="list-style-type: none"> Media industry Media sectors Traditional media Animator content creator copy writer graphic designer illustrator/graphic artist photographer script writer web designer camera operator games programmer/developer sound editor audio technician video editor web developer campaign manager creative director director editor production manager Client requirements Client brief formats Categories of audience segmentation focus groups interviews online surveys questionnaires Secondary research sources Work Plan Mind Map Mood Board Asset log Flow chart Script Storyboard Visualisation diagram Wireframe layout Privacy and permissions



KS4 : Topic summary

How we interleave topics to enable pupils to build and recall knowledge.

<p>Year 10</p>	<p>R093: Media industry sectors and products (TA1)</p> <p>R093: How style, content and layout are linked to the purpose. Client requirements and how they are defined (TA2)</p> <p>R093: Audience demographics and segmentation (TA2)</p> <p>R093: Media codes used to convey meaning, create impact and/or engage audiences (TA2)</p>	<p>R093: Work planning and documents used to support ideas generation (TA3)</p> <p>R093: Documents used to design/plan media products (TA3)</p> <p>R094: Purpose, features, elements and design of visual identity</p> <p>R094: Graphic design concepts and conventions</p> <p>R094: Properties of digital graphics and use of assets</p>	<p>R094: Techniques to plan visual identity and digital graphics</p> <p>R094: Tools and techniques to create visual identity and digital graphics</p> <p>R094: Technical skills to source, create and prepare assets for use within digital graphics</p>	<p>R094: Techniques to save and export visual identity and digital graphics (with integrated R093 TA4 distribution considerations and file formats)</p> <p>R094: NEA Assessment (working on)</p>	<p>R094: NEA Assessment (Working on and submit for moderation)</p> <p>R097 :TA Introduction (with R093 key content embedded)</p>	<p>R097 Features and conventions of animation and audio</p> <p>R097: Creativity in animation and audio</p> <p>R097: Resources required to create animation with audio</p>
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Computer & Creative I Media Curriculum Learning Journey

<p>Year 11</p>	<p>R097 Pre-production and planning documentation and techniques for animation with audio</p>	<p>R097: Techniques to obtain, create and manage assets</p> <p>R097: Techniques used to create animation with audio</p>	<p>R097: Techniques to save and export animation with audio</p> <p>R097 Techniques to test/check and review animation with audio</p> <p>R097: Improvements and further developments</p>	<p>R097: NEA Assessment (Working on)</p> <p>R093: Distribution platforms and media to reach audiences (TA4)</p> <p>R093: Properties and formats of media files (TA4)</p>	<p>R096: (submitError! Bookmark not defined. for moderation)</p> <p>R093: Sources of research and types of research data (TA2)</p> <p>R093: The legal issues that affect media (TA3)</p> <p>R093: Job roles in the media industry (TA1)</p>	<p>R093: Revision and mock papers/tests</p> <p>R093: Examination (Terminal unit)</p>
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