KS3 Curriculum Plan

INTENT – Year 7

Our curriculum in ICT will help students to develop and equip them with skills to help utilise their time within education and their future chosen careers. We offer a knowledge rich curriculum that develops a number of specific software skills, developing composite knowledge such as office skills and block-based programming. As well as specific software skills our curriculum also enables students to further develop an ability to problem solve, organise, research, plan and evaluate when completing project-based research activities.

We have developed our curriculum based on the varied range of component knowledge students may already possess from KS2, offering all students an equal opportunity to succeed whether they have completed ICT at primary school or not. The curriculum has also been designed to ensure challenge to the students who have previously studied the subject making this an ambitious curriculum which not only makes links to both Computer Science and Creative Imedia but offers opportunities to develops skills that will benefit them both in education and the wider world.

The first major topic students encounter at the academy is E-Safety which develops the required component skills to ensure they remain safe online. This is an important topic to ensure students can identify and appropriately deal with a wide range of potential situations both in school and at home, allowing them to think about things such as grooming, cyberbullying, online presence and accessing social media.

IMPLEMENTATION - Year 7

Term	**Unit Title**	**Unit Enquiry Question** *Should be the basis of the entire unit, the thing that drives the unit.*	**Intent** *Purpose of the specific unit.*	**Core Disciplinary (Skills) Knowledge Gained**	**Core Substantive (Content) Knowledge Gained**	**Careers Links**	**"Need to Know"** *Core content required to be covered during this unit.*
Autumn Term 1 September – October	**Office Skills**	What is PowerPoint? What are some of the basic and advanced tools used within Power point? What is Word? What are some of the basic and advanced tools used within Word? What is Excel? What are some of the basic and advanced tools used within Excel?	*To allow students to be able to access the full resources as part of the office suite.* *To be able to use basic skills within power point, word and excel.* *To have an understanding of the advanced tools and skills needed to complete projects in power point, word and excel.*	Apply a PowerPoint theme, Bold, Underline, font style, spell check Create a table fit for purpose and be able to edit the size shape and features of the table. shapes, image, text box, animation Cell Reference, Titles, Bold, underline Cell Reference colour, borders, Number Format	Students will be asked to utilise the 3 major pieces of Microsoft Office software in order to complete a tied in mini project, this mini project will require students to: Utilise Microsoft Word Skills to create a ticket price list. Utilise PowerPoint Skills to detail ticket prices and what those tickets include Utilise Microsoft Excel to demonstrate both individual ticket prices as well as ticket prices of families using formula.	Administrative Assistant Accountants Financial Management Business Analyst Information clerk Design consultant	Students will need to know how to set passwords and to understand what is required when logging into the school system. Students to successfully access and utilise Microsoft Teams, this will be required within all ICT lessons at the academy. Students developing basic file structures to ensure work is successfully organised across all subjects at the academy.
Autumn Term 2 November – December	**E-Safety**	What methods are there for staying safe online? What strategies allow you to stay safe when using social media? What strategies are there in maintain safe use of computers?	To allow students to be safe when using the internet both in school and at home. To allow students to protect themselves from external dangers when using computers.	Cyberbullying What is cyberbullying Vs Bullying How can people cyber bully How do people feel being cyber bullied? Video watching of real-life scenarios Social media Listing and recalling social media a	Students need to identify What is cyberbullying Vs Bullying How can people cyber bully Identifying what info goes on social media	Associate Head Child Safety Online · HGV Safety and Compliance Engineer · Health and Safety Advisor	Students will need to know how to log on and be safe on computers including using safe passwords. Students will need to know how to stay safe online including social media. Students will need to know how to protect themselves

		What are the steps to report any concerns with regards online bullying, grooming or county lines?	To be able to explain what cyber bullying is and the effects cyber bullying can have on others. To understand how to ensure you remain safe when utilising social media. To understand how a strong password can be made, understanding what can be included in order to ensure accounts are as secure as possible. To understand what online grooming is in terms of exploiting for drug dealing and county lines.	Identifying what info goes on social media. Replying to tweet activities. Identifying issues with real life. Examples of social media and bullying. Privacy settings on all social media platforms. What is grooming. Ways people can be groomed – how a sexual predator grooms a victim. Signs of grooming.	Identifying issues with real life examples of social media and bullying Privacy settings on all social media platforms Ways in which people can be groomed – how a sexual predator grooms a victim Signs of grooming How strong is your password		against online grooming and online bullying.
Spring term 1 & 2 January – March	**Computing Fundamentals**	What is Binary and how is it related to the basics of computing? How do you complete binary addition? What is the difference between hardware and software?	To understand the meaning of IPO, understanding the 3 major stages and what happens at each stage. To identify and summarize the various hardware components that are found inside of a computer. To understand the various different types of computer software, understanding their purpose. To understand what binary is and how binary can be converted into a decimal number To understand what is meant by binary addition and be able to complete binary addition calculations.	Binary and denary Binary addition Execute binary problems – lots of them Decoding tasks from binary and denary SDR tasks - recommending a suitable computer system for three scenarios - identifying software, hardware and peripherals	Students to identify and accurately name a number of different pieces of computer hardware. Students be able to understand how binary works and how it is used to complete simple calculations. Students be able to complete the steps to complete binary addition calculations.	Application analyst. Website developer. IT consultant. Cybersecurity consultant or information security specialist. Information systems manager. Database administrator. Multimedia programmer.	Students need to know the basics of binary and how computers work Students needs to be aware of how to complete binary calculations including the steps to complete binary addition. Students need to know the difference between hardware and software and be able to name another of both items.
Summer Term 1 & 2 April – July	**Scratch**	What is block based programming? What is a variable?	To Understand the basics of block-based programming To be able to create a sprite and understand its purpose. To understand how to use a variable and a broadcast To understand how Loops & Selection are used to control a game's outcome.	Games Design- Scratch Create a timeline on the history of gaming in the design log. Implement the change costume block Implement the change background block deconstruct your own 8-bit sprite	Students to understand what a variable is and how it is used in block-based programming. Students to be able to create a sprite and understand how it is used in Scratch to improve the game created	Games designer Programmer Software Developer	Students need to understand what a variable is and how this is used in block-based programming. Students need to be able to create a game using the scratch software with block based programming.

			To be able to explain what iteration and selection are and how they can be used within scratch programming.	Create a sprite sheet animation develop skills in movement and collision Use a variable to create scores in a game Implement a broadcast to finish a game	Students to be able to used selection and iteration to support the design of games.		

IMPACT – What do we want students to know at the end of Year 7?

The quality of pupils' work in Computing is consistently and routinely of high quality. Pupils largely store their work electronically in organised and properly labelled hierarchical folder structures. They are increasingly using cloud computing through Microsoft Teams to store and transfer their work securely. They confidently use the school's office suite since these are routine practices and norms of working for them from the start of year 7 onwards. Pupils use their Computing skills across the curriculum in numerous subjects to effectively research, present and organise their work. They are also able to use their Computing skills to work collaboratively where necessary. Their problem-solving skills developed whilst computer programming often build upon their mathematical knowledge and allow them to practice crucial problem-solving skills in a different context.

INTENT – Year 8

Our Year 8 curriculum continues to build upon the knowledge established throughout Year 7 and students will continue to explore and develop these skills as they progress with their studies. We offer a knowledge rich curriculum that further develop and introduces a wide range of specific software skills which are more challenging than those previously studied, building on the composite skills developed during year 7, an example of this would be the progression from block-based programming to text based programming which allows challenge for all students, while continuing to further develop problem solving, programming and analytical skills when completing and debugging code, this will show skills used in the real world and how programmers actual work which will provide future career opportunities.

We have developed our curriculum based on the varied range of component knowledge students may already possess from KS2 and in year 7, offering all students an equal opportunity to succeed regardless of existing prior knowledge. The curriculum offers fun and engaging projects and offer a wide range of component skills including Python, digital graphics and animation. These topics have been chosen to develop on the skills already built-in year 7 such as understanding the process for completing a project including research, plan, create and evaluate, making this an ambitious curriculum which not only makes links to both Computer Science and Creative Imedia but offers opportunities to develops skills that will benefit them both in education and the wider world.

IMPLEMENTATION - Year 8

Term	**Unit Title**	**Unit Enquiry Question** *Should be the basis of the entire unit, the thing that drives the unit.*	**Intent** *Purpose of the specific unit.*	**Core Disciplinary (Skills) Knowledge Gained**	**Core Substantive (Content) Knowledge Gained**	**Careers Links**	**"Need to Know"** *Core content required to be covered during this unit.*
Autumn Term 1 September – October	**Digital Graphics**	*What is a digital graphic?* *Why are digital graphics used?* *How can an effective digital graphic be produced?* *What software can be used to create a digital graphic?*	*To allow students to develop a specific set of design skills relating to both colour theory and typography, design skills that can then be utilised throughout both education and the beyond.* *This unit will teach students the key process that should be followed when developing a design project including research, planning, creation and evaluation.*	Colour Theories Typography Draw Plus Software Skills Client Brief Analysis Pre-Production Documentation	What colour theories are Understanding of colour theory To understand the various types of typography, understanding when each should be used. Understanding of how to pick out key components of a client brief. Understanding the project design process	Graphics Design Skills for specific designing jobs General Graphics skills for marketing.	The importance of colour The impact of Typography How client requirements can be identified The process that a successful project should follow.
Autumn Term 2 November – December	**Interactive Banner**	*What is an interactive banner?*	*To allow students to develop an understanding of the production cycle of*	Pre-production planning documentation skills	Understanding of the various types of animation that are available	Animator (Covering examples such as Disney & Wallace and Gromit)	The main types of animation

		Why are client requirements important? *How can software be utilised to create an effective banner?*	*an animation, understanding the stages that must be followed in order to effectively produce a project.* *This unit will be used as a vessel to begin introducing a number of key photoshop tools in a less over whelming manner.*	Animation analysis skills Research skills Fireworks Skills Logo production skills	Understanding of how to pick out key components from a client brief. Furthering understanding of the project design process. Understanding the process of a good design An understanding of the evaluation process	General graphics Design roles	How to correctly plan a project using appropriate pre-production documentation How to develop a basic animation using Adobe Fireworks.
Spring Term 1 & 2 January – March	**Python**	What is Python? How can python be used to develop a program? How can problems be identified using IDLE?	To develop an understanding of the stages that go into developing a piece of software that students will use within their day-to-day life, developing an understanding of the complexity of the software they use. This unit will be used to enable students to develop effective and appropriate trouble shooting and problem-solving skills.	Python development Skills Pseudo Code Algorithms Data Types Trouble Shooting skills IDLE as a development tool Mathematical Skills	An understanding of how code should be structured appropriately when developing python programs An understanding of how maths can be applied to programs An understanding of trouble shooting programs to identify syntax errors within code.	Software Developer General job roles requiring problem solving and an ability to trouble shoot code.	The various types of data type that can be used within a program The meaning of key words such as Syntax, Algorithm and Variable. How to develop code within the IDLE development tool.
Summer Term 1 & 2 April – July	**Mobile App Development – Tappy App**	What is a mobile app? Why are mobile apps effective? How can mobile apps be created and controlled?	This unit will be used to enable students to develop a clear understanding of the design logging process with students needing to clearly document the various stages of their programs production providing details on what they have accomplished, teaching students it's importance. This unit will also provide students an opportunity to reinforce the skills previously developed within both Scratch and Python.	Event driven programming knowledge Design logging and Diary production during a project App Lab as a tool for development	An understanding of how problems can be de-composed in order to find solutions An understanding of how-to diary a programs production Further understanding of the importance of selection within program development. Knowledge relating to both self feedback and peer feedback when developing programs.	Mobile phone application developer General project development roles	How and why a project should be documented and logged throughout its product The benefits of paired programming What is trouble shooting and why is it important?

IMPACT – What do we want students to know at the end of Year 8?

By the end of year 8 students should have built upon knowledge from year 7, students should now be able to more efficiently utilise the Microsoft Office software suite with students able to effectively produce timely and high-quality documentation for their own personal work. Students should have begun to develop an understanding of the design process having utilised the research, plan, create and evaluation process throughout a number of year 8 projects including Digital Graphics and Animation, this planning process will be crucial to students throughout later years within ICT. Students will further develop programming knowledge accumulated throughout year 7, continuing to develop effective troubleshooting and problem-solving skills throughout their own programs.

INTENT – Year 9

Our Year 9 curriculum continues to build upon the knowledge established throughout Year 7 and Year 8, students will continue to explore and develop skills as they progress with their studies. We offer a knowledge rich curriculum that further develop and introduces a wide range of specific software skills which are more challenging than those previously studied, building on the composite skills developed during year 7 and 8. Building on skills learnt from both block and text-based programming using the techniques and methods accumulated to create their own website using different website creation software as well as HTML code. The ability to use HTML and create websites provides them with future skills such as resilience, problem solving, troubleshooting and organisation all of which will be crucial for both school and the wider world.

Students will be offered opportunities to use software which is used in the wider worlds and in industry including photoshop, developing key design skills and further building upon the composite knowledge established during year 7 and year 8. The project completed with photoshop will allow students to develop an understanding of the process required to successfully complete a project that simulates a client based working environment.

Our curriculum offers a number of engaging, fun and challenging projects that offers a pathway to both I media and computer science developing an initial understanding of the topics covered within GCSE Computer Science this will involve students learning content such as networks, binary which develop skills learnt in year 7, while also further developing programming skills taught within year 8 enabling them to successfully access the computer science content when it is implemented as part of the options changes or use in future careers or in further education. A number of external opportunities are scheduled within the Curriculum in order to offer support and links to future career opportunities and the wide range of careers within the local area including software engineer.

IMPLEMENTATION - Year 9

Term	**Unit Title**	**Unit Enquiry Question** *Should be the basis of the entire unit, the thing that drives the unit.*	**Intent** *Purpose of the specific unit.*	**Core Disciplinary (Skills) Knowledge Gained**	**Core Substantive (Content) Knowledge Gained**	**Careers Links**	**"Need to Know"** *Core content required to be covered during this unit.*
Autumn Term 1 & 2 September – December	**Website Development**	*What is a website?* *What is the purpose of a website?* *What changes a website to suite its purpose?* *How do we build a website* *How do we host a website effectively*	*To gain a strong understanding of what a website is and the different uses and purposes for them.* *To develop the skills needed to create and maintain a website and other forms of interactive multimedia, to set students up for potential KS4 study.*	The ability to evaluate the suitability of different features of an interactive product to suit its purpose. Knowledge of the different planning aspects that are needed before creating a website. An understanding of how to use software to create and publish a website.	Gain a further understanding of target audience and build upon knowledge from year 8. Understanding of the different purposes of websites Knowledge of the different features utilised in successful websites Understanding of the different connection methods that are used to access the internet and the theoretical knowledge behind these.	Website designer Graphics design Network engineer Product design	What are the different purposes of websites? What is a target audience? How does a target audience and a purpose effect a website? How to make a website
Spring Term 1 & 2 January – March	**Photoshop project**	What is Photoshop? How is it used? Why is it used?	To understand the planning and research requirements needed for effective	Further understanding of Pre-production document design skills	Knowledge of pre-production documents and processes further built upon.	Graphic designer Photographer Editor	What are the different purposes of Digital graphics? Why do we need a client brief? How do we interpret a client brief?

			production of a digital graphic. To be able to effectively use photoshop to repurpose images in preparation for potential KS4 study.	Further build upon Interpretation of client briefs A range of different skills and techniques using photoshop.	Further Understanding of the different purposes and requirements of digital graphics A firm understanding of the different techniques used in photoshop	Marketing executive Social media manager Content producer	What are the applications of photoshop? What are the effects of Photoshop? How can photoshop be used to repurpose assets?
Summer Term 1 & 2 April – July	**Computing (Networks)**	*What is a network?* *What is a computer network?* *How does a computer network work?* *What makes an effective computer network?*	Students should have a strong understanding of computer networks and how these are used in the world around them. To improve upon computational thinking skills developed previously and be able to effectively apply these to given scenarios.	Students will be able to create a network diagram showing the different components of a network. Students will be able to effectively discern suitability of different networks for different scenarios. Application of computational thinking to effectively problem solve	A knowledge of different network topologies and the use cases for these. Firm understanding of the different types of transmission media and connectivity methods Confident in the different steps of the computational thinking method to problem solving Algorithmic understanding improved	Network engineer Network Admin System Admin Programmer Software engineer Data analyst Security consultant	What is the different area-based networks and the best use cases for these? What do networks do and why do we need them? What is transmission media? What is computational thinking? How can we apply computational approaches to problem solving?
	Links between Units: Allows students to develop the skills required for imedia at KS4 and build upon design skills previously covered. Also gives students an understanding of how websites are built and structured and some of the skills required to do this themselves.						
	Links between Units: Students develop the skills needed for repurposing assets in Imedia. Also covering client briefs and interpreting these correctly. This has strong links to RO82 in Imedia and the client brief aspect of the unit links towards business and practices key English skills for interpreting text.				
	Links between Units: This unit links towards Computer science at GCSE providing students with the foundational knowledge for this. This unit includes links to business with working through business related scenarios. Mathematical skills are utilised in the algorithms and computational thinking lessons of the unit.				
	Computing (Searching and sorting)	How is data on a computer stored in all layers? How is this data sorted? How is this data searched when needed to be? What is an algorithm?	To know the different methods that are used for sorting and searching data sets and why this is important in the field of computer science. Students should also be able to comment on the efficiency of any given search or sort.	Students will be able to explain how 2 different searching algorithms work Students will be able to explain how 2 different sorting algorithms work Students will be able to comment on the efficiency of both searches and sorting algorithms	Students will be able to explain the importance of searching and sorting algorithms. Students will have an understanding of the principles of algorithmic thinking	• Network engineer • Programmer • Software engineer • Data analyst • Security consultant • Electrical engineer	What are the different kinds of searching algorithms and how do they work? What are the different kinds of sorting algorithms and how do they work? To be able to comment on the efficiency of different searching and sorting algorithms accurately

IMPACT – What do we want students to know at the end of Year 9?

By the end of year 9 students should have the foundational knowledge that they will need to go on to study Creative imedia or Computer science at key stage 4. Students will be able to effectively use all of the Microsoft office suite to produce high quality work and they will know the correct program for a given task. Students will have a concrete understanding of the design process allowing them to progress into imedia to further develop these skills. Students will have practiced this through the cycle of research, plan, create and evaluate that is a key part of both the website development and photoshop schemes at work. Students will have gained more computing based knowledge through the Networking and Searching and Sorting units that they will have completed giving them a good understanding of two of the fundamental parts of GCSE computer science.

LINKS – How does our curriculum link between the year groups?

Key Theme	Year 7	Year 8	Year 9
Office Skills	Students will be introduced to the office suite and will be able to use a number of basic and more advanced tools in power point, word and excel this will support work completed in other lessons.	Students will be required to regularly use Microsoft Office in order to document the work they have both completed as well as develop reports detailing key content or topics.	Students will be required to use Microsoft office in order to complete pre production documentation and evaluations throughout the year.
Research	Students will research strategies to support their knowledge of E-Safety and methods they are able to stay safe online.	Students will be completing a number of research-based activities identifying existing examples of the products they will be developing.	Students complete many research based activities to identify similar products to what they will be creating, this is then used in pre-production documentation
Design	Students will design an E-Safety booklet identifying the dangers of both online and using computers, students will be designing their own games in the final project completed in scratch which is block based programming.	Students will be completing a number of design-based activities including mind map, mood board and visualisation diagram designing what they intend to make throughout various projects.	Students will be creating many design-based activities such as the pre-production documentation for website development and photoshop
Production using a range of software types	Students will be producing a number of different projects throughout year 7 including using, excel, word, power point, scratch and Microsoft Teams.	Students will be producing a number of different projects utilising a range of software, some of these will include Draw Plus, IDLE Python and Mobile Appy Tapp	Students will be using software such as Rocket cake and photoshop to produce websites and digital graphics.
Evaluate	Students will be asked to both self-evaluate and peer evaluate their projects completed both in the office suite and scratch programming tasks.	Following the conclusion of the project's students will be required to complete some form of evaluation this will either be a peer evaluation or a solo self-evaluation.	Following the conclusion of project work that students completed they will complete evaluations.
Programming	Students will be introduced to block-based programming in the format of scratch some students may have used this software at KS2 but all levels will be accounted for.	Students will be completing block-based programming using Mobile Appy Tap while also completing a text-based piece of programming using IDLE Python.	Students will look into text-based programming during searching and sorting. Students will also learn some basic HTML during website development

YEAR: 8 TIME: Autumn Half Term 1	UNIT TITLE: Digital Graphics	ENQUIRY QUESTION: Why are digital graphics produced? How can an effective graphic be created?
	AIMS OF THIS UNIT (SUBSTANTIVE KNOWLEDGE): To assist in the development of design expertise, covering core areas such as colour, font and placement before utilising these skills when developing a design project.	

LINKS: Initial Design unit enabling students to learn a large number of design basics for the first time, this unit will require students to utilise Microsoft Office skills they have developed within year 7.			
HOW DOES THIS LINK TO OUR LAST UNIT?	First topic of year 8, basic links to Scratch work with students previously completing some planning documentation.	HOW DOES THIS LINK TO THE NEXT UNIT?	Beginning to introduce a number of design concepts to students such as colour theory, typography, these will be extremely beneficial when working on the animated banner.

TITLE OF LESSON	*Purpose of Digital Graphics*	Typography	Colour Theory	Career	Client Brief	Moodboard	Logo Creation	Background Creation	Background Creation	Character Creation	Character Creation	Final Assessment	Evaluation
LESSON AIM(S)	To demonstrate and identify the different purposes of graphics	To understand the various types of typography	To understand colour harmonies and the meanings of colour.	To identify and explore digital graphic careers	To understand what a client brief is and how it should be analysed	To develop an understanding of what ta mood board is and the benefits of making one	To understand what a logo is and the benefits a logo can have for a project.	To utilise draw plus tools to create a background for our project fully matching the clients brief.	To utilise draw plus tools to create a background for our project fully matching the clients brief.	To utilise draw plus tools to produce a character for our project fully matching the clients brief.	To utilise draw plus tools to produce a character for our project fully matching the clients brief.	To utilise the skills from the previous lessons to finalise the development of the character and background in line with the brief.	To understand how to effectively and fairly analysis another person's work.
KEY FEATURES OF LESSON	5 main graphic purposes, inform, advertise, educate, promote and entertain	Reading task featuring a number of scenarios, students to identify appropriate fonts	Discussions relating to meaning of a number of colours, task requiring students to discuss what associate colours with	Research based activity with students attempting to identify qualifications available for graphics designers	Reading and comprehension-based task with students needing to identify key components from a client brief.	Students will be developing a mood board plan relating to brief analysed in previous lesson	Provide students with introductory DrawPlus skills and enable them to produce a logo.	To begin developing a background using DrawPlus tools that meets the requirements set out within the brief.	To continue developing a background using DrawPlus tools that meets the requirements set out within the brief.	Students beginning work on characters for Digital Graphics project	Students to continue to work on characters for Digital Graphics project	Students will be making finishing touches to DrawPlus project including things such as shadow and glow.	Students will be completing 2 peer assessments of other members of the groups to identify areas for improvement.
ASSESSMENT OPPORTUNITIES	Student work to be looked over to ensure examples match purposes.	Verbal questioning cold called and group wide.	Verbal questioning used to check interpretation	Feedback and discussion opportunities given to students throughout lesson	Class discussion held to identify which client requirements have been spotted within brief.	Mood boards to be assessed and verbal feedback provided throughout lesson	Class questioning used when discussing existing logos.	Verbal feedback throughout lesson, final product assessed	Verbal feedback throughout lesson, final product assessed	Verbal feedback throughout lesson, final product assessed	Verbal feedback throughout lesson, final product assessed	Final project to be rubriced once complete to enable students to receive quick feedback.	Peer assessment of digital graphics project to be completed.

KEY SKILLS (DISCIPLINARY KNOWLEDGE)	CAREERS OPPORTUNITIES	TIER 2 & 3 VOCABULARY	STRETCH AND CHALLENGE OPPORTUNITIES	QUESTIONS TO CONSIDER WHEN PLANNING AND DELIVERING EACH LESSON
• Pre-production documentation creation skills • DrawPlus	- Discussion relating to purpose of digital graphics, teacher to discuss how certain graphics	**Tier 2** Design Research Develop Evaluate Target Audience **Tier 3** E-commerce Pre-Production Application Typography	Frayer Models relating to prior topics to further expand on students understanding. Additional advanced tools utilised within final drawplus project.	• **INTENT:** ○ **What is the intention of this lesson?** ○ **How does this lesson build on from the previous lesson?** ○ **How does this lesson link to the forthcoming lesson?** ○ **How does this lesson link to forthcoming topics in this Key Stage and the forthcoming Key Stages?** ○ **Why is this being taught now?** ○ **Why is this being taught in the way it is?** • **IMPLEMENTATION:** ○ **Is tier 3 vocabulary being effectively taught in this lesson?** ○ **How can I effectively assess students within this lesson?** ○ **Are students recalling prior knowledge effectively?** ○ **Is the right level of support being given for all students?** ○ **Are students being pushed enough in this lesson?** ○ **Are misconceptions prompted, prevented and/or addressed effectively?** • **IMPACT:** ○ **How will I know students have achieved the aims of the lesson?** ○ **Do students have the opportunity to develop their personal knowledge?** ○ **What skills will students develop during this lesson?**

YEAR: 8 TIME: Autumn half term 2	UNIT TITLE: Interactive Banner	ENQUIRY QUESTION: What makes an interactive multimedia and how can software be used effectively to produce one?
	AIMS OF THIS UNIT (SUBSTANTIVE KNOWLEDGE): This unit has been developed to allow students to further expand on the basic production sequence (Covering research, planning, creation and evaluation)	

LINKS: Students will be required to utilise skills learnt during year 7 relating to Microsoft Office when completing documentation for this unit.			
HOW DOES THIS LINK TO OUR LAST UNIT?	Students will be expected to utilise the design skills from Digital Graphics when developing the Colour and Typography for their interactive banner	HOW DOES THIS LINK TO THE NEXT UNIT?	Students will be working on Python programming in the next unit, this will require students to utilise client requirement identification skills learnt in this unit

TITLE OF LESSON	*Banners and Animation*	Client Brief	Mind map	Mood board	Fireworks Practice (Pac Man)	Logo Creation	Banner Creation	Banner Creation	Finalising Banners	Evaluation
LESSON AIM(S)	To understand what a web banner is and what the purpose of one is. To understand what an animation is and how it can be used to create interactive products.	To understand what a client brief is, understanding how a client brief should be analysed and how to extract key information.	To understand what a mind map is, understanding what they should include To understand how a mind map can be produced.	To understand what a mood board is, understanding what the benefits of creating one are. To develop a mood board for a given client brief.	To understand what Adobe Fireworks CS6 is, understanding the tools available. To utilise the tools discussed to produce an animated Pac Man Banner	To understand what a logo is and to understand the purpose of creating a logo To utilise appropriate tools to create a logo for a specified client.	To create a banner suitable for the requirements given to you within the client brief using Adobe Fireworks	To continue the development of banner suitable for the requirements given to you within the client brief using Adobe Fireworks	To finalise the development of banner suitable for the requirements given to you within the client brief using Adobe Fireworks	To understand what an evaluation is, understanding what an evaluation should include and why they would be important
KEY FEATURES OF LESSON	Students to learn about what animation is and the various types available. Students to learn about the various purposes of a graphic and how they can be identified.	Discussion into the content found within a client brief modelling how content should be extracted Students to highlight key components within a project brief.	Discussion into what a mind map is and how they should be produced Students will then be asked to produce a mind map based on the given Client Brief.	Students to learn what a mood board is, what it should include and how they can be laid out Students will then be producing a mood board for the client brief.	Teacher demonstration showing tools available within Adobe Fireworks Students to develop a basic animation based on Pac-Man	Teacher demonstration demonstrating a number of the tools available within Adobe Fireworks Students to begin producing logos for the client	Teacher demonstration of additional skills found within Adobe Fireworks Students to begin developing a banner meeting client requirement	Teacher demonstration of additional skills found within Adobe Fireworks Students to continue developing a banner meeting client requirement	Teacher demonstration of additional skills found within Adobe Fireworks Students to continue developing a banner meeting client requirement	Teacher to explain the importance and stages required for a successful evaluation Students to produce an evaluation for the work produced.
ASSESSMENT OPPORTUNITIES	Students to submit work for consideration on Microsoft Teams Students expected to share answers during the lesson	Questioning used with the class utilising cold calling Students to complete tasks on Microsoft Teams	Verbal feedback given throughout lessons Students to upload final mind map to Microsoft Teams	Questioning used to check prior knowledge. Verbal feedback and support given to students while producing mood board	Verbal feedback and support given throughout lesson Students to use the snipping tool to save screenshot of completed work to teams	Class wide questioning and discussion utilised to identify class logo knowledge Final product to be snipped, added to teams to be marked	Students to screenshot evidence of what has been completed so far and add these to Microsoft Teams	Students to screenshot evidence of what has been completed so far and add these to Microsoft Teams	Students to screenshot evidence of final product and add these to Microsoft Teams	Final work to be uploaded onto Microsoft Teams Rubric to be completed.

KEY SKILLS (DISCIPLINARY KNOWLEDGE)	CAREERS OPPORTUNITIES	TIER 2 & 3 VOCABULARY	STRETCH AND CHALLENGE OPPORTUNITIES	QUESTIONS TO CONSIDER WHEN PLANNING AND DELIVERING EACH LESSON
• Client Brief Analysis Skills • Pre-Production documentation Skills • Adobe Fireworks Knowledge • Evaluation skills	• Discussions into the importance of pre-production documentation throughout project work in the real world • Development of animation skills	**Tier 2.** Research Design Plan Evaluate **Tier 3.** Pre-production Export Typography	Additional Animation tasks made available to students who have completed assigned brief ahead of task. Challenge to incorporate additional animation tools into work.	• **INTENT:** ○ **What is the intention of this lesson?** ○ **How does this lesson build on from the previous lesson?** ○ **How does this lesson link to the forthcoming lesson?** ○ **How does this lesson link to forthcoming topics in this Key Stage and the forthcoming Key Stages?** ○ **Why is this being taught now?** ○ **Why is this being taught in the way it is?** • **IMPLEMENTATION:** ○ **Is tier 3 vocabulary being effectively taught in this lesson?** ○ **How can I effectively assess students within this lesson?** ○ **Are students recalling prior knowledge effectively?** ○ **Is the right level of support being given for all students?** ○ **Are students being pushed enough in this lesson?** ○ **Are misconceptions prompted, prevented and/or addressed effectively?** • **IMPACT:** ○ **How will I know students have achieved the aims of the lesson?** ○ **Do students have the opportunity to develop their personal knowledge?** ○ **What skills will students develop during this lesson?**

YEAR: 8 TIME: Spring Half term 1	UNIT TITLE: Python part 1	ENQUIRY QUESTION: What is a python program and how can one be developed?
	AIMS OF THIS UNIT (SUBSTANTIVE KNOWLEDGE): **This unit has been developed to begin teaching students the basics of a text-based programming language, students have previously completed some block-based programming using Scratch.**	

LINKS: Students will have completed some block-based programming previously in year 7 (and potentially primary school) this will be an extension of this with students being introduced to text-based programming.			
HOW DOES THIS LINK TO OUR LAST UNIT?	Students will be utilising peer review, trouble shooting and critical thinking skills developed throughout animation to create effective accurate programs.	**HOW DOES THIS LINK TO THE NEXT UNIT?**	**Students will be producing basic mobile phone applications; this will be set up in a way that will enable students to re-visit and utilise programming concepts**

TITLE OF LESSON	*Hello World*	Hello World 1.5	Variables	Variables 2.5	Maths	Maths 3.5	Input	Input 4.5	Selection	Selection 5.5
LESSON AIM(S)	To understand python is, understanding how a program can be developed using a text-based language.	To continue to develop an understanding of python continuing to utilise skills learnt during main specialist lesson	To develop an understanding of what a variable Is To utilise variables within our programs	To further develop and utilise knowledge of variables within IDLE Python	To develop an understanding of Maths within Python, understanding what the maths operators are and how programs will use them.	To continue to develop knowledge of maths within python.	To begin developing an understanding of input within Python.	To continue to utilise input function within Python programs	To understand what importance of a selection within a program To understand how selection can be effectively integrated into a program	To further utilise selection skills developed during previous lesson.
KEY FEATURES OF LESSON	Students to develop first program that will involve utilising the printing functions to print basic messages.	Students will be continuing to utilise the print function within Python IDLE to print out a range of messages.	Teacher to explain and discuss what variables are with real world links Students to utilise variables within IDLE.	Students will be continuing to utilise variables within Python beginning to integrate variables into print functions	Students to identify and discuss mathematical operators Students will then be utilising these within main task.	Students will be required to complete a number of tasks requiring them to utilise skills learnt in main Maths lesson.	Students will be learning about the range of data types available within programming. Students will be utilising a new function to allow user interaction	Students will be working on a series of python tasks requiring them to use the input function within python	Students to be challenged to learn what selection is Teacher to model how selection can be added to a program Students to add selection to their own programs	Students will be completing a series of python tasks requiring them to use selection within Python.
ASSESSMENT OPPORTUNITIES	Students to be assessed verbally throughout lesson. Students to upload screenshot evidence to teams.	Spot the mistake activities utilised during lessons with cold calling used to assess students Students to upload screenshots to teams	Verbally feedback provided to students throughout the lesson Evidence of completed work uploaded to teams	Teacher to demonstrate code with modelled errors, students expected to identify Evidence of completed work added to teams.	Class questioning and white boards used to test understanding of mathematical operators Task to be evidenced on teams.	Students to identify issues within provided code. Final program screenshots to be added to teams.	Verbal feedback provided for programs throughout lesson Final program screenshot to be added to teams.	Students to add screenshots of completed challenges to Microsoft Teams	Verbal feedback utilised throughout lesson Teacher to cold call students requesting information relating to what selection is	Students to add screenshots of completed challenges to Microsoft Teams.

KEY SKILLS (DISCIPLINARY KNOWLEDGE)	CAREERS OPPORTUNITIES	TIER 2 & 3 VOCABULARY	STRETCH AND CHALLENGE OPPORTUNITIES	QUESTIONS TO CONSIDER WHEN PLANNING AND DELIVERING EACH LESSON

• Client Brief Analysis Skills
• Pre-Production documentation Skills
• Adobe Fireworks Knowledge
• Evaluation skills
	• Discussions into the importance of pre-production documentation throughout project work in the real world
	• Development of animation skills
		Tier 2.
		Input
		Output
		Sequence
		
		Tier 3.
		Syntax
		Logic
		Algorithms
			Additional Animation tasks made available to students who have completed assigned brief ahead of task.
			
			Challenge to incorporate additional animation tools into work.
				• **INTENT:**
				  ○ **What is the intention of this lesson?**
				  ○ **How does this lesson build on from the previous lesson?**
				  ○ **How does this lesson link to the forthcoming lesson?**
				  ○ **How does this lesson link to forthcoming topics in this Key Stage and the forthcoming Key Stages?**
				  ○ **Why is this being taught now?**
				  ○ **Why is this being taught in the way it is?**
				• **IMPLEMENTATION:**
				  ○ **Is tier 3 vocabulary being effectively taught in this lesson?**
				  ○ **How can I effectively assess students within this lesson?**
				  ○ **Are students recalling prior knowledge effectively?**
				  ○ **Is the right level of support being given for all students?**
				  ○ **Are students being pushed enough in this lesson?**
				  ○ **Are misconceptions prompted, prevented and/or addressed effectively?**
				• **IMPACT:**
				  ○ **How will I know students have achieved the aims of the lesson?**
				  ○ **Do students have the opportunity to develop their personal knowledge?**
				  ○ **What skills will students develop during this lesson?**

YEAR: 8 TIME: Spring Half term 1	UNIT TITLE: Python part 2	ENQUIRY QUESTION: What is a python program and how can one be developed?
	AIMS OF THIS UNIT (SUBSTANTIVE KNOWLEDGE): **This unit has been developed to begin teaching students the basics of a text-based programming language, students have previously completed some block-based programming using Scratch.**	

LINKS: Students will have completed some block-based programming previously in year 7 (and potentially primary school) this will be an extension of this with students being introduced to text-based programming.			
HOW DOES THIS LINK TO OUR LAST UNIT?	Students will be utilising peer review, trouble shooting and critical thinking skills developed throughout animation to create effective accurate programs.	**HOW DOES THIS LINK TO THE NEXT UNIT?**	**Students will be producing basic mobile phone applications; this will be set up in a way that will enable students to re-visit and utilise programming concepts**

TITLE OF LESSON	*Advanced Selection*	IDEA	Iteration	IDEA	Turtle Introduction	IDEA	More Turtle	IDEA	Turtle House	IDEA	Revision	Assessment
LESSON AIM(S)	To understand methods of advanced selection that can be integrated into a program.	To understand IDEA and the different challenges that can be completed utilising it	To utilise iteration within Python programs allowing programs to include loops	To understand IDEA and the different challenges that can be completed utilising it	To understand what python turtle is understanding how it can be utilised.	To understand IDEA and the different challenges that can be completed utilising it	To further develop knowledge of python turtle understanding what else can be completed with it.	To understand IDEA and the different challenges that can be completed utilising it	To utilise existing turtle skills to enable the turtle to draw a house image.	To understand IDEA and the different challenges that can be completed utilising it	To understand the importance of revision ahead of assessments.	To understand the overall subject of Python, demonstrating knowledge of the unit
KEY FEATURES OF LESSON	Starter activity recapping previous lessons relating to selection Teacher to demonstrate use of else if within Python.	Students to utilise own accounts to begin working on individual solo projects using the IDEA platform.	Students to view an existing program and identify expected outcomes Teacher to demonstrate Iteration before allowing students to utilise it.	Students to continue to utilise own accounts working on individual solo projects using the IDEA platform.	Teacher to demonstrate what python turtle is Students to attempt to draw basic shapes using Python turtle.	Students to continue to utilise own accounts working on individual solo projects using the IDEA platform.	Students to re-cap knowledge covered within Turtle Introduction Teacher to demonstrate additional turtle skills before allowing students to attempt.	Students to continue to utilise own accounts working on individual solo projects using the IDEA platform.	Students to utilise existing skills to attempt to draw a house utilising Python turtle.	Students to continue to utilise own accounts working on individual solo projects using the IDEA platform.	Students to complete revision relating to the topics we have covered in this unit.	Students to complete online end of unit assessment relating to the content learnt throughout Python.
ASSESSMENT OPPORTUNITIES	Microsoft Forms relating to previous python knowledge	Students IDEA accounts can be tracked identifiying what has been completed and how successful students have been.	Verbal feedback provided throughout lesson Students to screenshot work completed and add it to teams.	Students IDEA accounts can be tracked identifiying what has been completed and how successful students have been.	Students to upload completed work to Microsoft Teams at the end of the lesson.	Students IDEA accounts can be tracked identifiying what has been completed and how successful students have been.	Verbal feedback and cold call questioning used in lesson Students to add work to teams at the end of the lesson.	Students IDEA accounts can be tracked identifiying what has been completed and how successful students have been.	Verbal feedback provided throughout lesson Students to upload final work onto Microsoft Teams.	Students IDEA accounts can be tracked identifiying what has been completed and how successful students have been.	Verbal feedback provided throughout lesson Cold calling questioning utilised during.	Students overall unit knowledge to be assessed using a Microsoft Forms Quiz.

KEY SKILLS (DISCIPLINARY KNOWLEDGE)	**CAREERS OPPORTUNITIES**	**TIER 2 & 3 VOCABULARY**	**STRETCH AND CHALLENGE OPPORTUNITIES**	**QUESTIONS TO CONSIDER WHEN PLANNING AND DELIVERING EACH LESSON**
• IDLE Software knowledge • Python programming skills • Trouble shooting and debugging skills	• Discussions into software development • Programming roles discussed.	**Tier 2.** Input Output Sequence **Tier 3.** Syntax Logic Algorithms	Additional python challenges made available to students that will require them to utilise the skills they have learnt within lesson to complete further additional tasks with greater independence.	• **INTENT:** ○ **What is the intention of this lesson?** ○ **How does this lesson build on from the previous lesson?** ○ **How does this lesson link to the forthcoming lesson?** ○ **How does this lesson link to forthcoming topics in this Key Stage and the forthcoming Key Stages?** ○ **Why is this being taught now?** ○ **Why is this being taught in the way it is?** • **IMPLEMENTATION:** ○ **Is tier 3 vocabulary being effectively taught in this lesson?** ○ **How can I effectively assess students within this lesson?** ○ **Are students recalling prior knowledge effectively?** ○ **Is the right level of support being given for all students?** ○ **Are students being pushed enough in this lesson?** ○ **Are misconceptions prompted, prevented and/or addressed effectively?** • **IMPACT:** ○ **How will I know students have achieved the aims of the lesson?** ○ **Do students have the opportunity to develop their personal knowledge?** ○ **What skills will students develop during this lesson?**

YEAR: 8 TIME: Summer term	UNIT TITLE: Mobile App	ENQUIRY QUESTION: What is a mobile app and how should they be developed
	AIMS OF THIS UNIT (SUBSTANTIVE KNOWLEDGE): This unit has been developed to begin teaching students the basics of a text-based programming language, students have previously completed some block-based programming using Scratch.	

LINKS: Students will be utilising block based programming similar to that found within year 7 and Scratch.			
HOW DOES THIS LINK TO OUR LAST UNIT?	Students will be continuing to utilise skills such as variables, input, selection and sequencing that they have learnt during python unit.	**HOW DOES THIS LINK TO THE NEXT UNIT?**	**Students will be completing a website production based unit as there first work during year 9 this will require them to utilise some of the diary skills found within this unit.**

TITLE OF LESSON	*Decomposing a problem*	IDEA	Program flow	IDEA	Variable and Scores	IDEA	Input	IDEA	Sequence & Selection	IDEA	Project Completion	IDEA
LESSON AIM(S)	To understand how and when a problem should be decomposed	To understand IDEA and the different challenges that can be completed utilising it	To understand the events that can be used to control the flow of a program	To understand IDEA and the different challenges that can be completed utilising it	To continue to develop the Tappy Tap App to display the user's score	To understand IDEA and the different challenges that can be completed utilising it	To understand how user input can be included within a block-based program	To understand IDEA and the different challenges that can be completed utilising it	To understand what is ment by sequence and selection in block-based programming	To understand IDEA and the different challenges that can be completed utilising it	To understand the importance of clear and accurate completion of a project	To understand IDEA and the different challenges that can be completed utilising it
KEY FEATURES OF LESSON	Students will be identifying a specific problem before decomposing it to identify the steps that should be taken.	Students to utilise own accounts to begin working on individual solo projects using the IDEA platform.	Students to begin utilising events similar to those found in scratch to start a program	Students to continue to utilise own accounts working on individual solo projects using the IDEA platform.	Students to continue development of mobile applications adding variables in as a method of tracking score.	Students to continue to utilise own accounts working on individual solo projects using the IDEA platform.	Students to continue development of there mobile apps utilising user input to further develop the program	Students to continue to utilise own accounts working on individual solo projects using the IDEA platform.	Students to begin utilising if and else if statements within there apps to add selection to there programs.	Students to continue to utilise own accounts working on individual solo projects using the IDEA platform.	Students will be adding final touches to there mobile applications	Students to continue to utilise own accounts working on individual solo projects using the IDEA platform.
ASSESSMENT OPPORTUNITIES	Cold calling and questioning used. Verbal feedback provided throughout	Students IDEA accounts can be tracked identifiying what has been completed and how successful students have been.	Students to follow the instructions given completing the challenges on the worksheet further developing the game.	Students IDEA accounts can be tracked identifiying what has been completed and how successful students have been.	Students to continue to develop mobile apps work to be added to the worksheet	Students IDEA accounts can be tracked identifiying what has been completed and how successful students have been.	Students to add the work they have completed to the relevant work sheet detailing what has been completed within that lesson.	Students IDEA accounts can be tracked identifiying what has been completed and how successful students have been.	Students to add completed work to the worksheet found on teams. Verbal feedback provided throughout lesson.	Students IDEA accounts can be tracked identifiying what has been completed and how successful students have been.	Students to complete an evaluation of there work and upload this to teams for rubric assessment.	Students IDEA accounts can be tracked identifiying what has been completed and how successful students have been.

KEY SKILLS (DISCIPLINARY KNOWLEDGE)	CAREERS OPPORTUNITIES	TIER 2 & 3 VOCABULARY	STRETCH AND CHALLENGE OPPORTUNITIES	QUESTIONS TO CONSIDER WHEN PLANNING AND DELIVERING EACH LESSON
• Block based programming skills • Tappy App development skills	• Discussion into the development of mobile applications • Discussion into the software development side of it.	**<u>Tier 2.</u>** Input Output Sequence **<u>Tier 3.</u>** Syntax Logic Algorithms	Students challenged to utilise skills learnt to develop an independent side project alongside there main in class work.	• **INTENT:** ○ **What is the intention of this lesson?** ○ **How does this lesson build on from the previous lesson?** ○ **How does this lesson link to the forthcoming lesson?** ○ **How does this lesson link to forthcoming topics in this Key Stage and the forthcoming Key Stages?** ○ **Why is this being taught now?** ○ **Why is this being taught in the way it is?** • **IMPLEMENTATION:** ○ **Is tier 3 vocabulary being effectively taught in this lesson?** ○ **How can I effectively assess students within this lesson?** ○ **Are students recalling prior knowledge effectively?** ○ **Is the right level of support being given for all students?** ○ **Are students being pushed enough in this lesson?** ○ **Are misconceptions prompted, prevented and/or addressed effectively?** • **IMPACT:** ○ **How will I know students have achieved the aims of the lesson?** ○ **Do students have the opportunity to develop their personal knowledge?** ○ **What skills will students develop during this lesson?**

YEAR:9 TIME: Autumn 1	UNIT TITLE: Website Development	ENQUIRY QUESTION: What is a website and what should it include?
	AIMS OF THIS UNIT (SUBSTANTIVE KNOWLEDGE): • **To be able to understand the different purposes for website** • **To gain an understanding of some of the methods to create websites**	

LINKS Networking and Photoshop			
HOW DOES THIS LINK TO OUR LAST UNIT?	This is the first unit of the year.	**HOW DOES THIS LINK TO THE NEXT UNIT?**	This links to photoshop due to the structure of the units and the uses of pre-production documents. It also allows students an insight into not only web design but also of the full design process.

TITLE OF LESSON	*Purposes*	Target audience	Features	Connection Methods	Online assessment	Client brief and planning	Site diagram and wire frame	Website development	Website development	Strength development and response
LESSON AIM(S)	LO: To be able to identify a range of different websites, successfully identifying what the purpose of them is.	LO: To understand the contributing factors of a target audience and how products can adapt to suit them	LO: To understand the various features that can be found within a website, understanding what they do and how they can improve a website	LO: To understand the various ways that you can connect to the internet and the advantages / disadvantages of them.	LO: To assess the knowledge students have gained so far in the topic.	LO: To be able to understand and interpret a client brief and create pre-production documents	LO: To understand what site diagram & wire frame design are and what they should include.	LO: To understand the importance of relevant assets To begin to understand the tools needed to produce a successful website.	LO: To understand the importance of relevant assets To begin to understand the tools needed to produce a successful website.	LO: To understand the different strengths and developments with each website
KEY FEATURES OF LESSON	Quiz Purposes of a website Identifying features of a website	Different target audiences. Identification of target audiences and influences on products.	Different features of the websites. Identification of features in accordance with target audience	Mobile data Wireless data Wired connections	Students completing online test on forms	Introduction of client brief Analyse a client brief to extract the requirements needed.	Re cap on wire frames Site diagram examples	Begin the development of a website	Continuing the development of the website	Analysis of websites Peer reviews
ASSESSMENT OPPORTUNITIES	Quiz Features of websites	Target audience identification task	Features identification task	Connection methods work sheet.	Online test	Pre-production documentation	Starter Wire frame and visualisation diagram	Website progression	Website progression	Peer reviews of websites

KEY SKILLS (DISCIPLINARY KNOWLEDGE)	CAREERS OPPORTUNITIES	TIER 2 & 3 VOCABULARY	STRETCH AND CHALLENGE OPPORTUNITIES	QUESTIONS TO CONSIDER WHEN PLANNING AND DELIVERING EACH LESSON
• Client brief analysis • Pre production documentation skills • Rocket cake knowledge • Evaluation skills	• Discussions into the importance of pre production documentation throughout project work in the real world • Development of web design skills	**<u>Tier 2</u>** Research Design Plan Evaluate **<u>Tier 3</u>** Pre-production Connection Server House style	Additional web design tasks made available to students who have completed assigned brief ahead of task Challenge to include more advanced web design features	• **INTENT:** ○ **What is the intention of this lesson?** ○ **How does this lesson build on from the previous lesson?** ○ **How does this lesson link to the forthcoming lesson?** ○ **How does this lesson link to forthcoming topics in this Key Stage and the forthcoming Key Stages?** ○ **Why is this being taught now?** ○ **Why is this being taught in the way it is?** • **IMPLEMENTATION:** ○ **Is tier 3 vocabulary being effectively taught in this lesson?** ○ **How can I effectively assess students within this lesson?** ○ **Are students recalling prior knowledge effectively?** ○ **Is the right level of support being given for all students?** ○ **Are students being pushed enough in this lesson?** ○ **Are misconceptions prompted, prevented and/or addressed effectively?** • **IMPACT:** ○ **How will I know students have achieved the aims of the lesson?** ○ **Do students have the opportunity to develop their personal knowledge?** ○ **What skills will students develop during this lesson?**

YEAR:9 TIME:Spring	**UNIT TITLE: Photoshop**	**ENQUIRY QUESTION: How can photoshop be utilised to effectively create a digital graphic fit for purpose?**
	AIMS OF THIS UNIT (SUBSTANTIVE KNOWLEDGE): • **To be able to understand the purposes of different digital graphics** • **To be able to effectively use photoshop to create a digital graphic** **To understand and complete the pre-production process for creation of a digital graphic**	

LINKS: Imedia (KS4)			
HOW DOES THIS LINK TO OUR LAST UNIT?	This links to the previous unit as digital graphics are a common feature on websites and this allows for a more complete skill set allowing students to edit graphics that then go on to websites.	**HOW DOES THIS LINK TO THE NEXT UNIT?**	This links to the next unit of work through the use of researching components in this unit that ties in with the crucial research skills that will be needed in the computing modules.

TITLE OF LESSON	*Client requirements*	Moodboard	Mindmap	Book Cover research	Visualisation diagram	Photoshop- Layers	Photoshop – Advanced tools	Photoshop- final product	Photoshop- final product	Peer feedback
LESSON AIM(S)	LO: To identify what is meant by a client brief, what client requirements include and investigate what project we are completing	LO: To investigate what a mood board is, what is included and produce a mood board for the brief created last lesson	LO: To investigate what is included in a mind map and applications of these	LO: To identify the different features of book covers and be able to explain the importance of some cover features	LO: To identify what visualisation diagrams are and their uses,	LO: To understand what photoshop is and understand the positives and negatives for the use of photoshop	LO: To understand how text is added to a photoshop canvas and to have an understanding of the advanced effects that can be added to images in photoshop	LO: To be able to complete the creation of a book cover following a given client brief	LO: To be able to complete the creation of a book cover following a given client brief	LO: To be able to give a balanced and fair review of a digital graphic
KEY FEATURES OF LESSON	Given a client brief Analysis of client brief Complete client requirements table	Casual vs Structured mood boards Creation of mood board	Purpose of a mind map Use cases of a mind map Creation of mind map	Book cover analysis Features and their purpose	What is a visualisation diagram? Examples Creation	What is photoshop? Class discussion of the positives and negatives for the use of photoshop Layers demonstration.	Text tool demonstration Demonstration of advanced tools	Students refer to wireframe and client brief and begin completing the book cover.	Students continue working on book cover and referring to the client brief.	Students learn what features to look for Reminder of client brief Students review each other's work
ASSESSMENT OPPORTUNITIES	Client requirement table	Starter questions Mood board creation	Starter questions Mind map creation	Starter Questions Features identification sheet	Starter questions Creation	Practical photoshop work	Practical photoshop work	Practical photoshop work	Practical photoshop work	Students peer reviewed work.

KEY SKILLS (DISCIPLINARY KNOWLEDGE)	**CAREERS OPPORTUNITIES**	**TIER 2 & 3 VOCABULARY**	**STRETCH AND CHALLENGE OPPORTUNITIES**	**QUESTIONS TO CONSIDER WHEN PLANNING AND DELIVERING EACH LESSON**
• Client brief analysis skills • Pre-production documentation skills • Photoshop knowledge • Evaluation skills	• Discussions into the importance of pre-production documentation throughout project work in the real world • Development of graphical design skills	**<u>Tier 2</u>** Research Design Plan Evaluate **<u>Tier 3</u>** Pre production Export Selection	Additional photoshop tasks available to students expanding the range of skills students can employ. Challenge to incorporate further photoshop skills into work	• **INTENT:** ○ **What is the intention of this lesson?** ○ **How does this lesson build on from the previous lesson?** ○ **How does this lesson link to the forthcoming lesson?** ○ **How does this lesson link to forthcoming topics in this Key Stage and the forthcoming Key Stages?** ○ **Why is this being taught now?** ○ **Why is this being taught in the way it is?** • **IMPLEMENTATION:** ○ **Is tier 3 vocabulary being effectively taught in this lesson?** ○ **How can I effectively assess students within this lesson?** ○ **Are students recalling prior knowledge effectively?** ○ **Is the right level of support being given for all students?** ○ **Are students being pushed enough in this lesson?** ○ **Are misconceptions prompted, prevented and/or addressed effectively?** • **IMPACT:** ○ **How will I know students have achieved the aims of the lesson?** ○ **Do students have the opportunity to develop their personal knowledge?** ○ **What skills will students develop during this lesson?**

YEAR:9 TIME: Summer	UNIT TITLE: Computing (Networks)	ENQUIRY QUESTION: How do networks transmit and receive data
	AIMS OF THIS UNIT (SUBSTANTIVE KNOWLEDGE): • **To be able to understand how Networks work to send and receive data and information** • **To be able to suggest the suitability based on the characteristics of different topologies** • **To analyse the uses of different topologies**	

LINKS			
HOW DOES THIS LINK TO OUR LAST UNIT?	This unit explores how data is transmitted and received between devices as well as the role of networks in completing this task. This unit also looks at the different features and characteristics of networks and how this in turn lead to the internet.	**HOW DOES THIS LINK TO THE NEXT UNIT?**	This unit links to the next unit as it begins the discussion and thought about data as well as introduces the students to the concept of data and information and how this is used in networks and computing

TITLE OF LESSON	*Wireless and Wired networks*	Wireless and wired 1.5	Introduction to networks	Introductions to networks 2.5	Network Hardware	Network Hardware 3.5	Network Topologies	Network Topologies 4.5	The internet	The internet 5.5	Assessment	
LESSON AIM(S)	LO: To be able to compare and understand Wired and wireless networks	LO: To further understanding of comparing wired and wireless networks	LO: To be able to explain the difference between a LAN and a WAN	LO: To further understand the difference between area-based networks	**List** the hardware makeup of a network **Explain** the usage of the individual pieces of hardware in a network system **Evaluate** the effectiveness of different network topologies	LO: To be able to further understand the different types of networks hardware and make suggestions to suit a scenario	LO: TO be able to understand and differentiate between the different kinds of network topologies	LO: To further understand the different applications of network topologies	LO: TO develop an understanding of the internet as a network of computers	LO: To create a timeline for the creation of the internet	LO: To assess knowledge that students have gained throughout year 9	
KEY FEATURES OF LESSON	Spot the devices Bandwidth Research	Students to compare wired and wireless networks and the suitability of each	Network examples Network types Match the networks Draw a network	Students to describe different area based networks.	Hardware descriptions Match up the hardware Research	Students are given scenarios and must recommend the hardware needed and why	Topologies advantages and disadvantages Topological drawing	The students will draw different network topologies and list the key features and use cases.	History of internet IP Addresses Workbook Questions	The students will be creating a timeline showing the key information that lead to the creation of the internet	Exam paper	
ASSESSMENT OPPORTUNITIES	Spot the devices Frayer Model	Network Comparisons	Match the network activity Draw the network	Area based networks worksheet	Match the hardware	Hardware recommendations Frayer Model	Starter Questions Frayer model Topology drawing	Topology drawings Correct use cases	Assessment questions	Timeline	Exam paper	

KEY SKILLS (DISCIPLINARY KNOWLEDGE)	**CAREERS OPPORTUNITIES**	**TIER 2 & 3 VOCABULARY**	**STRETCH AND CHALLENGE OPPORTUNITIES**	**QUESTIONS TO CONSIDER WHEN PLANNING AND DELIVERING EACH LESSON**

• Client brief analysis skills
• Network diagram drawing
• Evaluation skills
	• Basic understanding of network management
	• Evaluation of suitability of networks to carry out a given task
		<u>Tier 2</u>
		Connect
		Analyse
		Suitability
		Purpose
		
		<u>Tier 3</u>
		Topology
		Transmission
		Bandwidth
			Additional tasks expanding upon topological knowledge given to students.
			
			Further network evaluation tasks provided for students.
				• **INTENT:**
				  ○ **What is the intention of this lesson?**
				  ○ **How does this lesson build on from the previous lesson?**
				  ○ **How does this lesson link to the forthcoming lesson?**
				  ○ **How does this lesson link to forthcoming topics in this Key Stage and the forthcoming Key Stages?**
				  ○ **Why is this being taught now?**
				  ○ **Why is this being taught in the way it is?**
				• **IMPLEMENTATION:**
				  ○ **Is tier 3 vocabulary being effectively taught in this lesson?**
				  ○ **How can I effectively assess students within this lesson?**
				  ○ **Are students recalling prior knowledge effectively?**
				  ○ **Is the right level of support being given for all students?**
				  ○ **Are students being pushed enough in this lesson?**
				  ○ **Are misconceptions prompted, prevented and/or addressed effectively?**
				• **IMPACT:**
				  ○ **How will I know students have achieved the aims of the lesson?**
				  ○ **Do students have the opportunity to develop their personal knowledge?**
				  ○ **What skills will students develop during this lesson?**

YEAR: **TIME:**	**<u>UNIT TITLE: Searching and sorting</u>**	**ENQUIRY QUESTION: How do computers execute algorithms to search and sort through data**
	AIMS OF THIS UNIT (SUBSTANTIVE KNOWLEDGE): • **To understand what the difference is between data and information** • **To understand how different searching algorithms work** • **To understand how different sorting algorithms work**	

LINKS			
HOW DOES THIS LINK TO OUR LAST UNIT?	This links to the last unit of work in year 9 as it allows students to understand how data is managed inside of a computer and the different processes that need to take place for computers to work.	**HOW DOES THIS LINK TO THE NEXT UNIT?**	This links to the next unit that the students will undertake as it builds upon previous knowledge of basic computer science principals. This also allows students to have an understanding of how computers search and sort data in programs to organise this for use.

TITLE OF LESSON	*Data + information and how they work*	What is an algorithm	Searching data (Linear search)	Sorting data (Bubble sort)	Searching data (Binary search)	Sorting data (Insertion sort)	Assessment
LESSON AIM(S)	LO: To be able to understand the difference between data and information and how both are stored.	LO: To be able to understand, design and create algorithms.	LO: To be able to perform a linear search and understand the efficiency of this.	LO: To be able to perform a bubble sort and understand the need for this.	LO: To be able to perform a binary search and understand the efficiency.	LO: to be able to perform an insertion sort on a set of data.	LO: To assess student knowledge of searches and sorting algorithms
KEY FEATURES OF LESSON	What is data? What is information? How are they stored on a computer?	What is an algorithm demonstration? Examples of algorithms Problem solving with algorithms	Linear search example Discuss and explore efficiency of search Perform linear searches	Bubble sort example Discuss and explore efficiency of bubble sort Perform bubble sort	Binary search example Discuss and explore efficiency of search Perform binary searches	insertion sort example Discuss and explore efficiency of bubble sort Perform insertion sort	Exam Paper
ASSESSMENT OPPORTUNITIES	Frayer Model	Starter Questions Formative assessment during examples	Linear search work sheet	Bubble sort work sheet Frayer model	Binary Search work sheet Frayer model	Insertion sort work sheet Tiered questioning	Exam Paper

KEY SKILLS (DISCIPLINARY KNOWLEDGE)	**CAREERS OPPORTUNITIES**	**TIER 2 & 3 VOCABULARY**	**STRETCH AND CHALLENGE OPPORTUNITIES**	**QUESTIONS TO CONSIDER WHEN PLANNING AND DELIVERING EACH LESSON**

• Understanding of data and information and practices relating to these • Algorithmic thinking • Further programming skills • Evaluation skills	• System engineer skills developed through knowledge of data retrieval and sorting • Development of programming skills	**<u>Tier 2</u>** Evaluate Research Search Sort **<u>Tier 3</u>** Algorithm Binary Efficiency	Students provided research tasks and presentation tasks relating to merge sorting. Challenge to evaluate and describe the efficiency and reasoning of searches and sorts Further application of searching and sorting skills.	• **INTENT:** ○ **What is the intention of this lesson?** ○ **How does this lesson build on from the previous lesson?** ○ **How does this lesson link to the forthcoming lesson?** ○ **How does this lesson link to forthcoming topics in this Key Stage and the forthcoming Key Stages?** ○ **Why is this being taught now?** ○ **Why is this being taught in the way it is?** • **IMPLEMENTATION:** ○ **Is tier 3 vocabulary being effectively taught in this lesson?** ○ **How can I effectively assess students within this lesson?** ○ **Are students recalling prior knowledge effectively?** ○ **Is the right level of support being given for all students?** ○ **Are students being pushed enough in this lesson?** ○ **Are misconceptions prompted, prevented and/or addressed effectively?** • **IMPACT:** ○ **How will I know students have achieved the aims of the lesson?** ○ **Do students have the opportunity to develop their personal knowledge?** ○ **What skills will students develop during this lesson?**