ICT @ Oakfield – Year 8 2020-21

Autumn Term – Programming 101		
Intent	**Implementation**	**Impact**
The purpose of this unit of work is to introduce learners to coding as a basic literacy in the digital age. It is important for learners to understand and be able to work with the technology around them. Throughout this unit the focus will be to embed the key terms and attributes to build mastery in sequencing skills, counting, problem solving, logical thinking, cause and effect, and critical thinking.	Learners will: • Build upon previous foundations of learning about algorithms and flowcharts • Understand how computers communicate with each other (instruction giving and binary) • Learn basic programming elements such as strings and user input • Learn more complex programming elements such as selection and iteration • Understand the use of functions within programming code	All learners will be able to follow a set of instructions and create a simple set of instructions for someone else to follow All learners will be able to create a set of instructions that are executable by an electronic device (Beebot, Sophero, Scratch, Micro:bit) (DIP ORDER Sophero/Beebot) All Learners will be able to look at their code and debug issues or make improvements to ensure code runs as intended DIP ORDER Sophero/Beebot)

Key Learning

ICT Skills

- Use software skills to demonstrate ability and understanding of key programming concepts (Online Workbook, Video editing)

Digital Literacy

- Audience, purpose and design of IT Products

Computer Science

- Introduction to the basic principles of programming and coding
- Using software and devices to code algorithms (Beebots, Scratch, Micro:bits)

Topic Learning	Skills	Knowledge
Emerging	I can write a simple algorithm with some support	I can explain what algorithms are
Launch	I can write code to create an algorithm independently	I can explain what the outcome of an algorithm will be
Breakthrough	I can write code to solve problems that include the use of strings	I can change an algorithm to change the outcome
Foundation	I can write code to solve problems that include the use of user input	I can comment on the code I have created to explain how it will work
Developing	I can write code to solve problems that include the use of selection and iteration	I can look at code I have created to debug and find errors to help it run as intended
Intermediate	I can write algorithms to solve problems that include the use of functions	I can look at code I haven't created to debug and find errors to help it run as intended

Spring Term – Web Designers		
Intent	**Implementation**	**Impact**
This unit explores how the world wide web allows people to connect, work together and share information. It also develops a conceptual understanding of the web. It involves working with the basic components of website programming, HTML (Hypertext Mark-up Language) by investigating how web pages are constructed Learners will research the layout, design and contents of web pages and how to create these using web design software.	Learners will: • Be able to explain the audience and purpose of different websites along with annotating their design features. • Understand that websites are written in HTML code and be able to read code and alter it to change the outcome. • Be able to plan out the design of webpages and understand the implications of remixing content from the Internet (DIP ORDER: WEEBLY) • Use web design software to create their own web pages and will evaluate their overall effectiveness (Weebly)	All learners to demonstrate their knowledge and understanding of the use of websites and how they are created. Learners have an appreciation of how websites are designed and developed Learners are able to find appropriate content on the Internet and can explain Copyright restrictions and the impact this has on them. Learners will develop part of a web page, a web page or a whole website to showcase their understanding of producing websites and their creative design skills.
Key Learning		
ICT Skills • Research information, images and content online. **Digital Literacy** • An appreciation for Copyright Law and what it means • Producing content that is appropriate for a certain audience and/or purpose **Computer Science** • Understanding of how websites are constructed using HTML		

- Ability to write and decipher HTML Code

Topic Learning	Skills	Knowledge
Emerging	I can identify where content is on a web page	I can label the parts of a website
launch	I can design and create a simple webpage	I can explain what makes a website suitable for an audience
Breakthrough	I can design and create 2 webpages that link together	I can explain what makes a website suitable for a certain audience and purpose
Foundation	I can design and create a website using a navigation bar to allow the user to view the pages	I can explain why my website has been designed in this way and where the content has come from
Developing	I can write simple HTML to produce specific outcomes	I know how to show the work I have used on the Internet belongs to someone else and give them credit for their work
Intermediate	I can decipher simple HTML code and annotate it to explain what the outcome will be	I know the impact that Copyright has on the work that I can remix off the Internet

Summer Term – Music Festival		
Intent	**Implementation**	**Impact**
The purpose of this topic is to focus on developing learner's ICT and Digital Literacy Skills through the research and creation of a range of digital products to help promote and run a Music Festival. This unit will build upon prior knowledge and skills that have been developed throughout years 7 and 8 to showcase learner's development in these key areas	Learners will: • Be able to use the Internet to research different digital products for music festivals and evaluate their content and effectiveness • Create using digital graphic software products to promote and advertise their music festival (DIP ORDER: AFFINITY Photo) • Use video editing software to advertise their music festival (DIP ORDER: VLOG Camera) • Use audio recording equipment to inform the target audience about the music festival (DIP: Microhpones) • Use appropriate software to develop an APP as an information hub for the festival • Create a simple spreadsheet to show the cost of running the music festival	Learners will be able to identify what they like and what they think could be better from pre-created digital products Learners will demonstrate their ability to use digital graphic software to produce documents such as logos, leaflets and flyers Learners will use cameras to record footage and edit this to make trailers Learners will produce radio adverts Learners will develop APPs using appropriate software (PowerPoint, AppShed, Power Apps) Learners will use simple formulas and functions to develop a spreadsheet model
Key Learning		
ICT Skills		

- Research information & images
- Digital Graphic Software, Video Editing Software, Audio editing software
- Spreadsheet Modelling

Digital Literacy

- Reviewing pre-created digital products
- Reviewing and evaluating work
- Communicating and work together to produce a product

Computer Science

- Use of algorithms in APP design to guide users through the platform

Topic Learning	Skills	Knowledge
Emerging	I can create some simple digital products with support	I can state the different parts of a digital product
launch	I can create some digital product independently	I can explain what works well on a digital product
Breakthrough	I can plan out and create some digital products	I can explain how a digital product can be made even better
Foundation	I can design and create some digital product with some explanation of the design	I can review my own designs to say what works well and what could be changed to make it even better
Developing	I can design and create some digital products with reference to the intended audience	I can review my own designs and explain how they are suitable for the audience they were intended for
Intermediate	I can design and create some digital products with reference to the intended audience and purpose	I can annotate my work to show the skills I have used to create digital products and explain how they are appropriate for the intended audience and purpose