Holy Family
Catholic High School

Curriculum and Assessment Progression Map 2021-2022

Year 7

Subject: Computing

Subject Leader J Wadsworth

Key Learning Constructs to be developed over the academic year. – Core Knowledge	**Scheme of Learning Autumn Term**	**Scheme of Learning Spring Term**	**Scheme of Learning Summer Term**
The aim of the ICT department at Carlton Holy Family is to equip students with the knowledge, understanding and skills to be able to make the most of new technologies across all aspects of their learning. We have identified three key areas and have designed a curriculum which offers our students the opportunity to experience each; * ICT - Equipping students with skills in using software productively. * Digital literacy - Application of skills in a range of real-world contexts. * Computing - The ability to design algorithms and computing code to provide solutions.	**Part 1** **E-Safety** Logging on/school policies To learn to manage files in File Explorer To understand the importance of backup Learn about the possible dangers of social networking sites Cyberbullying Learn how to respond to threats on the Internet Learn how to keep your identity secure Learn how to create a secure, memorable password Learn how to protect your identity online Learn how to avoid being a victim of an email scam **Part 2** **Unifrog Introduction (2 Lessons)** Scratch Understand that Scratch is a programming environment that allows you to create games, animations and other simulations Create a sprite and write code to make it move and bounce Understand the purpose of repeat loops and procedures ("broadcasts") Use a broadcast in your own Scratch program Learn how to adjust x and y coordinates to control the position of a sprite Learn how to make a sprite jump Learn how to add sound to a Scratch game Understand the purpose of testing Understand what makes a specific and measurable test	**Part 3** Fireworks / Photoshop Introduction to software and tools Editing of image within a scenario (Chav Animals) Makes judgements about digital content when evaluating and repurposing it for a given audience. Recognises the audience when designing and creating digital content. **Part 4** Excel Introduce basics of Excel, e.g. terminology - cell, column, row, sheet tabs, etc. Explain that Excel can be used for computer modelling. Make link between rules and formulae. Explore the effects of changing input data. Students can create models based on Chav Gang Resources. Students can add formulae to their model. Students can make predictions about the consequences of their decisions. To be able to create charts in Excel from inputted data. To be able to use chart option features to format and alter the appearance of a chart/graph. To be aware of how a graph can be used to investigate the findings of a model.	**Part 5** Binary Code State why all data is represented in binary in a computer Understand that a particular bit pattern may represent, for example, an instruction to do something, a letter, a number or a tiny piece of a graphical image Define a Bit, Byte, Kb, Mb and Gb Convert integers to binary numbers Convert binary numbers to integers Look up from a table the bit pattern for a given character State how many different characters can be represented using 8 bits Give examples of alphanumeric characters and special symbols that can be represented in ASCII Show that a bit pattern can represent either a character or a decimal number Wick Editor Introduction to online animation **Part 6** Multi-software project
Hinterland Knowledge	How are computers used in the real world? Experience of cyber attack	Business knowledge Industry jargon (Photoshop etc.)	Green on black Is coding fun?

Assessment: -Formative Techniques **-Summative Pieces**	Throughout the year there will be assessments related to the current topics. Assessments will include Quizzes based on topic material and also formative feedback on work produced in the lesson (i.e. leaflet or Scratch game).		
Key Vocabulary	Programming Cyberbullying Hacking Sprite	Image editing PNG Tools Formula Cell Reference Modelling	Binary Ascii Bit Language
Key Skills	Students use software under the control of the teacher to create, store and edit digital content using appropriate file and folder names. Understands that people interact with Shares their experiences of technology in school and beyond the classroom. Talks about their work and makes improvements to solutions based on feedback received	Obtains content from the World Wide Web using a web browser. Understands the importance of communicating safely and respectfully online, and the need for keeping personal information private. Knows what to do when concerned about content or being contacted.	Shares their use of technology in school. Knows common uses of information technology beyond the classroom. Talks about their work and makes changes to improve it. Uses technology with increasing independence to purposefully organise digital content. Uses a variety of software to manipulate and present digital content: data and information.
Opportunities Outside the taught Curriculum.	Advent of Code Hour of Code	Cipher Challenge Technovation Challenge	Alan Turing Cryptography competition Matrix Challenge