

**Year 8**

Subject: Computing

Curriculum and Assessment Progression Map

Holy Family

Catholic High School

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| **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****Layers of computing systems**Exploring the fundamental elements that make up a computer system**Part 2****Media - Vector graphics** Creating vector graphics through objects, layering, and path manipulation.Using Fireworks or Photopea (online) to create the digital graphics | **Part 3****Mobile app development**Using event-driven programming to create an online gaming app**Part 4****Myth busters**Understand that information on the internet could be inaccurate, biased, or untrustworthyBe able to check and comment on the accuracy of the information found on the internetTo understand that searching the internet efficiently leads to better results. | **Part 5****Representations - from clay to silicon**Representing numbers and text using binary digits**Part 6****Binary Coding continued**Looking at the basics of binary code that include text, images and numbers. |
| **Hinterland Knowledge** | Who has built their own computer?How much do computers cost?What is the internet? | Knowledge of programming languagesWho sticks by the rules?Patience when designing – it’s all in the detail. | How do we store our ‘things’?What is data?Do you believe everything you read? |
| **Assessment: -Formative Techniques** **-Summative Pieces** | Student progress will be assessed with the marking of produced pieces of work and testing knowledge through the taking of quizzes and tests based on topic content. |
| **Key Vocabulary** | HardwareSoftwareNetworksHTMLCSSHost | AlgorithmProgramming LanguageSyntax ErrorAnimationFrame RateExposure | ColumnFieldRecordQueryResearchReliability |
| **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 a variety of software to manipulate and present digital content: data and information. |
| **Opportunities Outside the taught****Curriculum.** | Advent of CodeHour of Code | Cipher ChallengeTechnovation Challenge | Alan Turing Cryptography competitionMatrix Challenge |