|  |
| --- |
| **Year 8 Curriculum Overview [2024-2025]** **Computing**  |
|  **Autumn Term** | **Knowledge & Understanding** | **Literacy Skills****Opportunities for****developing** **literacy skills** | **Employability Skills** | **Assessment Opportunities** |
| **Composites** | **Components****[KEY concepts & subject specific vocab]** | **Formal Retrieval****[if any]** |
| **Sept – Nov 2 lessons a fortnight** | **Computer systems – Networks****Presentation skills - infographic** | * Network hardware
* Network topologies
* Packet Switching
* The internet
* The internet of things
* Broadband
 | Do Now activitiesMCQs at mid-point | * Keyword definitions
* Sentence starters
* Use of Bloom’s Taxonomy
* Extended writing tasks
 | * Communication
* Digital Literacy
 | * Mid-point formative assessment
* MCQ
* Summative end of topic assessment
 |
| **Catholicity in this unit** – *Digital citizenship and ethical use of technology* – students learn about the need to create robust networks that reduce the digital divide. *Recognising technology as a vocation* – students are introduced to the IT Industry, specifically Network managers. *Stories of service in technology careers* – students learn about Tim Berners Lee who created the Internet and shared the technology for free to give as many communities as possible access to the internet. |
| **Year 8 Curriculum Overview [2024-2025]** **Computing**  |
| **Spring****Term** | **Knowledge & Understanding** | **Literacy Skills****Opportunities for****developing** **literacy skills** | **Employability Skills** | **Assessment Opportunities** |
| **Composites** | **Components****[KEY concepts & subject specific vocab]** | **Formal Retrieval****[if any]** |
| **Nov-Feb****2 lessons a fortnight** | **Data Handling – Low level language – Binary/Logic** | * How computers process data
* Binary and denary conversions
* Hex conversions
* Logic Gates and truth tables
* Binary addition
* Image representation
* Sound representation

eSafety – Safe storage of data | Do Now activitiesMCQ at mid-point | * Keyword definitions
* Sentence starters
* Use of Bloom’s Taxonomy
* Extended writing tasks
 | * Numeracy
* Problem solving
* Problem solving
 | * Mid-point formative assessment
* MCQ
* Summative end of topic assessment
 |
| **Catholicity in this unit** – *Encouraging minimalism in coding and storage* – understanding different number base systems and the impact using hexadecimal rather than binary can have on data storage requirements. *Understand the broader impact of technology* – students consider the need for character sets to represent a greater number of characters as technology becomes more accessible around the world. |
| **Year 8 Curriculum Overview [2024-2025]** **Computing**  |
| **Summer** **Term** | **Knowledge & Understanding** | **Literacy Skills****Opportunities for****developing** **literacy skills** | **Employability Skills** | **Assessment Opportunities** |
| **Composites** | **Components****[KEY concepts & subject specific vocab]** | **Formal Retrieval****[if any]** |
| **Feb-March 2 lesson per fortnight**  | **Physical Programming - Microbit** | * Computational Thinking
* Input and outputs
* Sequence
* Selection
* Iteration
* Testing
 | Do Now activitiesMCQ at mid-point | * Keyword definitions
* Sentence starters
* Use of Bloom’s Taxonomy
* Extended writing tasks
 | * Problem solving
* System design
* Algorithmic thinking
 | * Mid-point formative assessment
* MCQ
* Summative end of topic assessment
 |
| **Year 8 Curriculum Overview [2024-2025]** **Computing** |
| **Summer** **Term** | **Knowledge & Understanding** | **Literacy Skills****Opportunities for****developing** **literacy skills** | **Employability Skills** | **Assessment Opportunities** |
| **Composites** | **Components****[KEY concepts & subject specific vocab]** | **Formal Retrieval****[if any]** |
| **June – July 2 lessons per fortnight** | **High level language – Introduction to Text based programming** | * Computational Thinking
* Variables and Lists
* Datatypes
* Methods of selection – IF and ELIF
* Methods of iteration – WHILE and FOR
* Sequencing – Algorithmic Thinking

e-safety – creating robust computer systems through defensive design | Do Now activitiesMCQ at mid-point | * Keyword definitions
* Sentence starters
* Use of Bloom’s Taxonomy
* Extended writing tasks
 | * Problem solving
* System design
* Algorithmic thinking
 | * Mid-point formative assessment
* MCQ
* Summative end of topic assessment
 |
| **Catholicity in this unit** – *Integrity and honesty in digital work* – students learn that everyone will create individual code as there is more than one way to solve a problem. Risk taking and problem solving are valued skills that promote integrity in work. *Combating plagiarism and dishonesty* – pupils work together to discuss solutions but work independently to create systems, creating a collaborative culture that engages pupils in the whole process.  *Recognising technology as a vocation* – students discuss the impact technology is having on jobs and the need for everyone to be able to talk about how systems should work, even if they aren’t the programmer. Pupils also learn about the problem solving skills required to create robust system solutions. |