

## ICT Key Stage 4 Curriculum Overview



Key Stage 4 Curriculum Journey: ICT Year 10

|                                    | Week 1 Week 3  |  |  |   |  |  |
|------------------------------------|--|--|--|---|--|--|
|                                    | Autumn   |  | Spring   |   | summer   |  |
| Key content<br>(know thatKnow how) | <ul> <li>Computing devices</li> <li>Solid state devices</li> <li>Magnetic storage</li> <li>Optical storage</li> <li>Cloud storage</li> <li>Internal components</li> <li>Systems software</li> </ul>  | <ul> <li>Planning a digital graphic</li> <li>Elements of logo design</li> <li>Image properties</li> <li>Static image files</li> <li>Designing an image</li> <li>Sourcing assets</li> <li>Photoshop skills</li> </ul> | <ul> <li>Utility software</li> <li>Applications         software</li> <li>Online services</li> <li>Smart technology</li> <li>Artificial intelligence</li> <li>Autonomy</li> <li>Immersive         technology</li> </ul>  | <ul> <li>Intro to databases</li> <li>Entity relationship modelling</li> <li>Table design</li> <li>Data interrogation</li> <li>Data entry</li> </ul> | <ul> <li>Image capture and manipulation</li> <li>Management information systems</li> <li>E-commerce services</li> <li>Assistive technologies</li> <li>Create and modify a database</li> <li>Database functionality</li> <li>Queries and reports</li> <li>Creating forms</li> <li>Testing the database</li> <li>Evaluating the database</li> <li>NEA scrapbook</li> </ul> |  |
| Prior Knowledge                    | Students will have a basic understanding of what computing devices are, They will have heard of solid state drives and understand that they are a type of storage device. Students will be aware of cloud storage (google drive/one drive). Students will be familiar with essential internal components of a computer and they will know the basic functions of them, | Year 7 – ICT project – presentations Year 8 – Hawkley travels – Information presentation Year 9 – Digital Imagery  | Networks – concept of utility software and some knowledge of application software, including word processors, spreadsheet programs and presentation software. The will be aware f online email platforms and cloud storage and will understand the basics of creating accounts and communicating online and sharing content. | KS3 – Digital Literacy<br>databases   | Students will understand what a database is and how it can store data.   |  |
| Assessments                        | Multiple choice questions knowledge assessed; computing devices, solid state, magnetic storage Knowledge assessed – portfolio that demonstrates planning a digital graphic, logo design, image properties multiple choice questions knowledge assessed: optical storage, cloud storage, internal components, systems software  |  | Assessment – multiple choice and extended answers key knowledge assessed: utility software, application, online services, smart technology Assessment queries and reports Assessment – multiple choice and extended answers key knowledge assessed artificial intelligence, autonomy, immersive technology                   |   | Assessment – management information systems, e-commerce services, assistive technologies Assessment – modify a database, produce queries and customised report Assessment NEA practice that covers all sections  |  |

| Assessment – knowledge assessed – computing devices, solid state devices, magnetic storage, optical storage, cloud storage, internal components, systems software | Assessment – utility software, application software, online services, smart technology, artificial intelligence, autonomy, immersive technology |  |
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|                                 | Week 1  | Key Stage 4 Curriculum Journey: ICT Year 11   |          |  |
|---------------------------------|---|---|----------|--|
|                                 | Autumn  | Spring  | <u> </u> |  |
| Key content (know thatKnow how) | <ul> <li>Planning and designing a spreadsheet</li> <li>Creating and formatting a spreadsheet</li> <li>Use of appropriate data formatting and adding suitable validation rules</li> <li>Use of appropriate formulae and functions to meet set outcomes</li> <li>Arranging, reducing and outputting data to help make decisions</li> <li>Modifying data and formulae to model 'what if' scenarios</li> <li>Testing and evaluating spreadsheets</li> </ul> | <ul> <li>Controlled assessment – planning, creating, modifying and using databases</li> <li>Controlled assessment -planning, creating, modifying and using spreadsheets</li> <li>controlled assessment - Planning, creating and modifying an automated document</li> <li>controlled assessment - Planning, creating, manipulating and storing images</li> </ul>   |          |  |
| Prior Knowledge                 | Year 8 – Hawkley travels- spreadsheet introduction. Students will understand what a spreadsheet is and their applications. Students will be familiar with the basic interface of spreadsheet software and will be able to enter data into cells and format the cells.  Year 10 -  | Students will apply their knowledge from the units of work in year 10. They will also have some knowledge from KS3 and will be able to apply that knowledge to a given scenario.  |          |  |
| Assessments                     | Assessment – create a design document outlining a specific scenario – appropriate formatting features such as cell styles, fonts colours and borders, data formatting techniques appropriate Assessment – dataset presented to students to organise, filter and analyse to answer questions. Data modified and formulae's to simulate what if situations.   | Assessment — controlled assessment  Knowledge assessed: Planning and creating a database, creating and modifying a database, interrogating a database, creating user interfaces, testing and evaluating a database, planning and designing a spreadsheet, creating and formatting a spreadsheet, use of appropriate data formatting and adding suitable validation rules, use of appropriate formulae and functions to meet set outcomes, arranging, reducing and outputting data to make decisions, modifying data and formulae to model 'what if' scenarios. Testing and evaluating spreadsheets, planning and designing an automated |          |  |

| document, creating an effectively structured data source and linking to a standard document, appropriately structuring the content of the standard document and inserting fields as required, merging and outputting final documents, planning and designing an image, creating and modifying an image using appropriate tools and techniques, storing the image appropriately and outputting the final image in a format that is fit for purpose. |  |
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|                                    | Week 1   |  |                         |      | Week              |
|------------------------------------|--|--|-------------------------|------|-------------------|
|                                    | Autu   | mn   | Spi                     | ring | summer            |
| Key content<br>(know thatKnow how) | Planning and designing a spreadsheet Creating and formatting a spreadsheet Use of appropriate data formatting and adding suitable validation rules Use of appropriate formulae and functions to meet set outcomes Arranging, reducing and outputting data to help make decisions | <ul> <li>Modifying data and formulae to model 'what if' scenarios</li> <li>Testing and evaluating spreadsheets</li> <li>Planning and designing an automated document</li> <li>Creating an effectively structured data source and linking this to a standard document</li> <li>Appropriately structuring the content of the standard document and inserting fields as required</li> <li>Merging and outputting final documents</li> </ul> | Unit 2 assessment (NEA) |      | • Unit 1 revision |

| Prior Knowledge |  |  |  |
|-----------------|--|--|--|
| Assessments     |  |  |  |