



## Computing department curriculum intent

### Department curriculum intent:

#### Our Vision: we are aiming to make sure that all students:

- ♣ Can understand and apply the fundamental principles and concepts of computer science, including abstraction, logic, algorithms and data representation
- ♣ Can analyse problems in computational terms, and have repeated practical experience of writing computer programs in order to solve such problems
- ♣ Can evaluate and apply information technology, including new or unfamiliar technologies, analytically to solve problems
- ♣ Are responsible, competent, confident and creative users of information and communication technology.

It is the aim of the department to enable students to develop skills and knowledge in computer science and digital technologies to prepare them for a future in a world where the use of this technology is fully embodied. We wish to enthuse students to have an understanding far deeper than the interface that they currently operate, particularly in our current climate where Computing skill and understanding has become even more crucial.

We aim to enable students to develop a love of learning for the subject and an understanding that there are no limits to their own development in programming and IT. An important life skill for anyone is to problem solve. Using the strands of computational thinking will aid learners with their Computer Science studies and, as it is embedded within everyday life activities, they will understand that they cannot run before they can walk. Students will be given guidance on how to work safely online so that it will be second nature to carry out all the necessary steps for their own safety as well as those around them.

At KS3, students are given the opportunity to develop their computer coding and digital technology skills. Learning the language of code is an important added bonus as students who develop their coding skills will be able to grasp the magic behind the computers. This will allow them to take their studies onto KS4 and to Further and Higher education if they desire and ultimately secure a career within a large range of industries. Our KS3 Computing curriculum covers the full range specified by the DFE and prepares our KS3 for GCSE by including challenging tasks or topics found in the next level of education, such as quick sort, recursion and big O notation, which is more often seen at GCSE and A level. Additional aspects, such as Machine learning, allow students to have a deeper understanding of how the digital world works around them. Covering aspects such as looking for the cables that connect their computers to the server in school, looking out for the 3G/4G mast in their area and comparing rural vs urban data transfer speeds forges a connection to their local environment.

At KS4, we offer 2 pathways, GCSE Computing and Cambridge technical in Creative imedia, thus catering for the 'Programmers' and the 'creatives'. In the past, we have drawn inspiration from their local area via their Controlled assessment briefs, for example, the photography unit for the summer exam series 2020, we had planned for and were ready to photograph Settle town architecture and had liaised with local businesses to identify potential issue areas. A previous website unit had students looking for activities in their local area to encourage teens to rediscover their local area.

At KS5, Cambridge Technical in IT, students can, and do, draw from experience in both GCSE Computing and Creative imedia to develop an in depth understanding of Computing fundamentals and Global data. They undertake 3 creative projects, including the opportunity to program via the games unit, thus allowing them to undertake a variety of career pathways in the IT industry.



## Year 7

| <b>Overall curriculum intent for year 7:</b> To become confident in the use of Settle College's online network and productivity tools (365, Teams and Arbor), to be aware of online risks and how to counter them and to develop and apply skills in various software to create digital products (Web page, video, scratch). |  |  |  |  |  |   |
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|  | Half term 1  | Half term 2  | Half term 3  | Half term 4  | Half term 5  | Half term 6   |
| Intent for the half term   | Know my way around the school's network and learning platforms<br>Apply knowledge to use them appropriately          |  | Understand how to keep yourself safe online and be a responsible Internet user<br>Develop skill in specialist software |  | To know what an algorithm is and write them using pseudocode and flowcharts<br>Learn programming constructs and apply them to develop a game |   |
| Content mapping  | One drive, email, Word, PowerPoint and Teams chat, assignments and meetings  | Teams class notes, sway to plan research create a web publication, iDEA  | Packet switching, internet risks (personal), video creation, internet risks and prevention to devices and data,        | HTML and CSS web authoring   | Flowcharts and pseudocode, program analysis, programming constructs, game development on Scratch   |   |
| Assessment mapping (Quizizz every lesson)  | PowerPoint   | Sway end of unit test  | esafety video & internet risks<br>Classnotes page  | Web page end of unit test  | Flowcharts worksheet<br>Program analysis   | Scratch game end of unit test   |
| Personal development mapping<br><br>15. Sense of enjoyment – all sections  | 2&21. equality of opportunity-social development- collaborative work on PowerPoint and what makes good peer feedback | 5. Developing pupils' character- emphasis on accessing all apps at home. (troubleshooting& encouraging independence) | 1. Responsible, respectful and active citizens<br>7. Recognise online and offline risks                                | 11&12. Careers/next stage - this is what web developers need to use to make websites<br>16. Creativity | 11&12. Careers/next stage - this is what programmers use to plan their applications  | 16. Creativity  |
| Literacy focus for the half term   | Reading – Reading instructions carefully before doing. (Teams and 365 booklet to be issued.)                         | Grammar & vocabulary<br>Non-subject specific – passive and cohesive devices in Sway                                  | Writing – to give information  | Spoken English – Peer feedback on their web page, debate changes to be made.                           | Reading – Computational fairytales HL  | Grammar & vocabulary<br>Scratch evaluation  |
| Numeracy links   |  |  | Reading and ordering numbers during packet switching. If time, check sum calculation.                                  | Hex number system used to assign colour value to webpage. Use of values to determine asset sizes.      | Logic, following a step by step sequence or creating one.  | Values in programming, predicting program flow = addition and subtraction, X and Y co-ordinates, negative numbers |



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| Cross-curricular links to other subjects   | PowerPoint – talk about other subjects and what they mean/are  |  |  |   | Languages – audio to be recorded in another language   |  |
| Careers  | Use of Teams and Office 365 prepares our students in using the most widely used productivity software in the working environment.      |  |  | Link to web development industry  | Link to application development industry   |  |
| Support for all<br><br>*All lessons are on Classnotes and can be viewed using immersive reader | Step by step demos/videos, how to guides, effective use of TAs and lots of opportunities to practice the same skill set.               |  | Information for the tasks and key words are on class notes pages*, Step by step demos/videos, how to guides, effective use of TAs                |   | Algorithm place mat provided, algorithms worked out in pairs and on the board.<br>Class notes *                                    | Step by step demos/videos, how to guides, effective use of TAs |
| Challenge ideas  | Either improving on work or challenging them to work out how to do something extra on each application i.e. add a video on class notes |  | Challenging them to work out how to do something extra on each task – i.e. you have covered the main risks, find out what these extra risks are. | Challenging them to work out how to do something extra at each stage – e.g. once they have a web page with colour, how do they change that colour? How can they add google font styles? | Algorithm place mat has a challenge task<br><br>Challenging them to work out how to do something extra at each stage of their game |  |



## Year 8

| Overall curriculum intent for year 8: Develop understanding in how computers and networks work. Know how binary is used to represent numbers, text and images. Develop skills in key specialist software, used in GCSE. Further develop understanding and use of programming constructs via the use of Python. |   |  |  |   |   |  |
|--|---|--|--|---|---|--|
|  | Half term 1   | Half term 2  | Half term 3  | Half term 4   | Half term 5   | Half term 6  |
| Intent for the half term   | Develop understanding in how computers and networks work                                | Understand Binary representation of images<br>Develop photoshop skills   | Develop project development process (imedia)       | Develop skill and understanding of programming constructs using a based programming language  | Develop project development process   | Website creation using a WYSIWYG editor  |
| Content mapping  | Input output, computer components, binary, networks, operating systems, H&S             | Explain how a device (PC) stores reads and displays binary images. To explain how computers can represent bitmap image. Photoshop skills (layers, tools, workflow). Analysis of existing magazine covers, research assets for the magazine, design (visualisation) and creation (photoshop), image properties HL |  | Output text and calculations, functions escapes, casting, comments, sequence, selection, loops, data structures, external file handling | Existing website research, website design (sitemaps and wireframing), source website assets, masterpage set up and folder structure creation, website creation (linking, testing and content editing), evaluation |  |
| Assessment mapping (Quizizz every lesson)  | Operating system review<br>End of unit test   | Binary images<br>spreadsheet<br>Visualisation  | Finished magazine cover<br>End of unit test        | Evidence document<br>End of unit test   | Design documents  | Final website<br>End of unit test  |
| Personal development mapping   | 12. Next phase of education- GCSE Computing<br>21.Social development – working in teams | 12. Next phase of education- imedia<br>16. Creativity<br>21. Social development- peer support and feedback   |  | 12. Next phase of education GCSE Computing<br>16. Creativity<br>21.Social development- paired programming                               | 12. Next phase of education – imedia<br>16. Creativity<br>21.Social development- peer support and feedback  |  |
| Literacy focus for the half term   | Reading<br>Computational fairy tales  | Grammar & vocabulary<br>Correct use of spelling and grammar  | Writing<br>Persuasive writing on front of magazine | Spoken English<br>Paired programming – effective communication and talking through their programs to find the bug                       | Reading<br>Reading through existing websites, identify writing style and plan on a style for their website  | Grammar & vocabulary<br>Proof reading for correct standard English. Choose a writing style for effective website content |



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| <p>Numeracy links</p>   | <p>Binary to denary conversion relies on number columns, to the power of 10, 2, 16 – awareness of number systems other than denary</p> | <p>Inch to cm conversion. Data representation includes number conversion, binary to denary, colour depth - how many pixels in a 4-bit image.</p>       | <p>Use of integers in programming and data types.<br/>Calculation needed to check answers on programs written are correct. Logic reasoning used to detect errors on programming</p> | <p>Measurement, image quality related to resolution = pixel sizes. Resizing a frame = ratio and calculating to scale a frame up or down. Use of Hex numbers to choose a colour</p>  |
| <p>Cross-curricular links to other subjects</p>   | <p>Maths- binary, number conversions and calculating</p>   | <p>Maths- binary, number conversions and calculating<br/>Encourage student choice to pick up on subject specific topics. E.g. National Geographic.</p> | <p>Maths – logical reasoning<br/>Drama – Shakespearean insult generator</p>   | <p>Music and English – Website topic is musical pop up shop.<br/>Persuasive and informative writing skills covered<br/>Music – what genre of music are these? How do you know? What images /text would help the reader know this?</p> |
| <p>Careers</p>  | <p>Link to IT industry</p>   | <p>Link to Graphic design industry</p>   | <p>Link to programming careers</p>  | <p>Link to web development industry</p>   |
| <p>Support for all<br/><br/>*All lessons are on Classnotes and can be viewed using immersive reader</p> | <p>Work on class notes, including objectives, relevant information/guides and keywords *<br/>Writing frames also provided</p>          | <p>Step by step demos/videos, how to guides*, effective use of TAs and opportunities to practice the same skill set. Examples shown,</p>               | <p>Step by step how to guides*, opportunities to practice the same skill set. Tasks broken down, examples, paired programming</p>   | <p>Step by step demos/videos, how to guides*, effective use of TAs and opportunities to practice the same skill set.<br/>Writing frames/templates and examples</p>  |
| <p>Challenge ideas</p>  | <p>Either improving on work or challenging them to work out how to do something extra</p>  |  | <p>Challenging them to work out how to do something extra or setting a difficult question</p>   | <p>Either improving on work or challenging them to work out how to do something extra</p>   |



## Year 9

| <b>Overall curriculum intent for year 9:</b> To build on students' prior knowledge and skills and provide a feel for both GCSE options to enable effective decision making at GCSE. |   |  |   |  |  |   |
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|   | Half term 1   | Half term 2  | Half term 3   | Half term 4  | Half term 5  | Half term 6   |
| Intent for the half term  | Develop a more in depth understanding of how computers work   |  | Develop and create a Game in game maker   |  | Understand several key algorithms e.g. searching and sorting   | Understand how Machine learning and big data shapes our digital world                     |
| Content mapping   | CPU, fetch decode execute, transistors, logic gates & circuits, software, network hardware and protocols, encryption, cyber security      |  | Game analysis, sprites and objects. Object orientated programming, programming constructs, testing and assessment   |  | Searches, sorts, pseudocode and flowcharts, algorithm efficiency   | What is it? Benefits, programming an AI, moral compass                                    |
| Assessment mapping (Quizz every lesson)   | Workbook – CPU Quizzes  | End of unit test   | Game analysis quizzes   | Finished game<br>End of unit test  | Workbook<br>End of unit test   | Machine learning model<br>End of unit test  |
| Personal development mapping  | 1. Responsible, respectful and active citizens<br>7. Recognise online and offline risks<br>12. Next phase of education- GCSE Computing    |  | 12. Next phase of education – GCSE<br>16. Creativity<br>21.Social development- peer support and feedback  |  | 12. Next phase of education – GCSE<br>21.Social development- peer support and feedback   |   |
| Literacy focus for the half term  | Reading<br>Reading information to inform your answer  | Grammar & vocabulary<br>Proofread work, what writing style should you use? | Writing<br>Game analysis  | Spoken English<br>Paired programming and testing and feedback with peers | Reading<br>Computational fairy tales   | Grammar & vocabulary<br>Ethical discussion – which writing style and how to structure it. |
| Numeracy links  | Binary calculation, Logical reasoning   |  | Logical reasoning, measurement and calculating sizes.   |  | Logical reasoning  |   |
| Cross-curricular links to other subjects  | Maths – binary  |  |   |  |  |   |
| Careers   | IT career   |  | Game developer  |  | Programmer and big data analysis   |   |
| Support for all<br><br>*All lessons are on Classnotes and can be  | Work on class notes, including objectives, relevant information/guides and keywords *<br>Writing frames also provided and teacher support |  | Step by step demos/videos, how to guides*, effective use of TA and opportunities to practice the same skill set. Examples shown, all lessons on class notes |  | Work on class notes, including objectives, relevant information/guides & keywords*<br><br>Step by step, how to guides*, effective use of TA. All lessons on class notes and paired programming |   |



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| viewed using immersive reader |  |  | Writing frames also provided and teacher support   | writing frame for the moral discussion  |
| Challenge ideas               | Either improving on work or challenging them to work out how to do something extra |  | Challenge tasks are in the workbook- look at going into more advanced theory e.g. Quicksort and big O notation are A level topics. | Deeper thinking – getting them to think about how their data is used and what are the moral issues /pros & cons |



## Year 10 & 11 Computing

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| <p><b>Overall curriculum intent for year 10 &amp; 11:</b> Introduce students to the central processing unit (CPU), computer memory and storage, wired and wireless networks, network topologies, system security and system software. We also look at ethical, legal, cultural and environmental concerns associated with computer science. Develop skills and understanding in computational thinking: algorithms, programming techniques, producing robust programs, computational logic, translators and data representation. Apply these skills, using python to produce a complex application to solve a given problem.</p> |   |  |  |  |  |
|  | <b>Half term 1</b>  | <b>Half term 2</b>   | <b>Half term 3</b>   | <b>Half term 4</b>   | <b>Half term 5</b>   |
| Intent for the half term   | Cover theory for Unit 1 paper   |  | Cover theory for Unit 2 paper and prepare for NEA  | Complete NEA and Cover theory for Unit 2 paper   | Cover theory for Unit 2 paper and prepare for the exams  |
| Content mapping  | CPU, von Neumann, embedded systems, storage, RAM&ROM, memory, data capacity, networks, network theory   | Threats, software systems, issues, abstraction, decomposition, algorithmic thinking, search and sort algorithms, | Programming constructs, file handling, data structures, SQL, verification, validation, testing | NEA project<br>Binary, logic circuits, low level programming, assemblers, compilers and interpreters, IDEs       | Binary conversion, shift, hexadecimal, check digits, character sets, bitmaps, sound, compression<br>Exam preparation |
| Assessment mapping   | <p style="text-align: center;">End of topic test for each unit – about once a fortnight. Workbooks also checked and feedback given.<br/>           Smart revise HL tracks their understanding, checked fortnightly.<br/>           Cornell notes completed for each topic not marked BUT checked for understanding and completeness.<br/>           NEA checked and feedback given.</p> |  |  |  |  |
| Personal development mapping   | 11. Careers<br>12. Next phase of education<br>21.Social development-peer support and feedback   | 7. Recognise online and offline risks<br>11. Careers<br>12. Next phase of education                              | 11. Careers<br>12. Next phase of education<br>21.Social development-peer support and feedback  | 11. Careers<br>12. Next phase of education<br>21. Social development-peer support and feedback                   | 11. Careers<br>12. Next phase of education<br>21. Social development-peer support and feedback                       |
| Literacy focus for the half term   | Reading<br>Reading theory on flipped learning videos and applying information to exam questions   | Grammar & vocabulary<br>Key Vocab is always listed on their Cornell notes  | Writing<br>Learning to write the NEA report  | Spoken English<br>Rubber duck when creating the NEA program. (they discuss their program problems with the duck) | Reading<br>Reading theory and applying it.<br>Reading and interpreting exam questions                                |
| Numeracy links   | Calculation, logic, sequencing  |  | Calculation, logic, conversion, sequencing, algebraic thinking                                 |  |  |
| Cross-curricular links to other subjects   | Maths – see numeracy links<br>Science – radio waves   | Maths – see numeracy links   | Maths – see numeracy links   | Maths – see numeracy links<br>Science- electricity & circuits  | Maths – see numeracy links<br>Science - sound  |





| Careers         | IT industry  | Cyber security and programming industry | Programming industry | IT industry | IT industry |
|-----------------|--|---|----------------------|-------------|-------------|
| Support for all | Workbooks for each unit to aid organisation, are clearly set out. Clear guide to support NEA task. Teacher support, examples shown/modelled.   |   |                      |             |             |
| Challenge ideas | Challenge tasks, set throughout the course, are an extension of the tasks done in lesson. E.g. in programming, they have a worked example, then given a task/some tasks with some guidance. Once they finish the set tasks. They get another that uses the same knowledge learnt, but it is harder and with no guidance. |   |                      |             |             |



## Year 10 & 11 Creative imedia

**Overall curriculum intent for year 10 & 11:** Students are introduced to a range of essential pre-production techniques used in the creative and digital media, including client brief, time frames, deadlines and preparation techniques. Students explore where and why digital graphics are used and the techniques that are involved in their creation. They apply their skills and knowledge in creating digital graphics against a specific brief. Students explore the different properties, purposes and features of multipage websites. They demonstrate their creativity by combining components to create a functional, intuitive and visually pleasing website. They will do the same again for one other imedia discipline i.e. games development or Photography. This is to be decided as a group, each year.

|                                  | Half term 1   | Half term 2   | Half term 3  | Half term 4   | Half term 5  |
|----------------------------------|---|---|--|---|--|
| Intent for the half term         | Completion of R082 Digital graphics   | Completion of R082 Digital graphics and R085 Website  | Completion of R085 Website and 3 <sup>rd</sup> imedia project  | Completion of 3 <sup>rd</sup> imedia project  | Completion of 3 <sup>rd</sup> imedia project and preparation for R081 exam                               |
| Content mapping                  | Sectors, purpose, graphics theory, existing example analysis, design brief analysis, mood board, mind map | Visualisation, Workplan, legislation, asset gather, repurp, create the graphic product<br><br>Website theory, client and audience requirements, workplan, sitemap | Visualisation, house style, legislation, test plan, gather, create and modify assets, build website.<br><br>3 <sup>rd</sup> project purpose, theory, existing example analysis, Design brief analysis, preproduction documents | 3 <sup>rd</sup> project legislation, test plan, gather, create and modify assets, build                                     | Test and evaluate 3 <sup>rd</sup> project.<br><br>Exam revision and preparation: preproduction documents |
| Assessment mapping               | Fortnight check-ins on coursework progress  |   |  |   | Fortnight check-ins on coursework progress and mock exam   |
| Personal development mapping     | 11. Careers<br>16. Creativity<br>21. Social development-peer support and feedback                         | 11. Careers<br>15. Sense of enjoyment<br>16. Creativity<br>21. Social development-peer support and feedback   | 11. Careers<br>15. Sense of enjoyment<br>16. Creativity<br>21. Social development-peer support and feedback  | 11. Careers<br>15. Sense of enjoyment<br>16. Creativity<br>21. Social development-peer support and feedback                 | 11. Careers<br>21. Social development-peer support and feedback  |
| Literacy focus for the half term | Reading<br>Read the theory and apply it to your report  | Grammar & vocabulary<br>Proofread your report and use relevant key words  | Writing<br>Write reviews to add to your website  | Spoken English<br>Peer assessment during testing. Students are also encouraged to support one another during all 3 projects | Reading<br>Reading and interpreting exam questions   |
| Numeracy links                   | Measurement, conversion, scale, proportion  |   | Ratio/scale, units   |   |  |



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| Cross-curricular links to other subjects | English – book cover, write a book blurb and reviews for the back   | English – write reviews for website                 |  |   | English – structuring evaluation 12-mark exam question |
| Careers                                  | Link to Graphic design industry   | Link to Graphic design and web development industry | Link to Graphic design and other topic industry, e.g. game development animation, or photography | Link to chosen industry e.g. game development animation, or photography | Link to all digital production industries              |
| Support for all                          | Step by step guides, teacher support, examples, guidebook for each unit and tasks broken up               |   |  |   |  |
| Challenge ideas                          | Self-assessment sheet for each unit – what do you need to do for the top mark bands? How can you do that? |   |  |   |  |



## Year 12

**Overall curriculum intent for year 12:** Students will gain the right combination of knowledge, understanding and skills required for the 21st century, enabling them to demonstrate the skills of writing specifications, and the design, build, testing and implementation of applications. They will develop a solid foundation in the fundamentals of hardware, networks, software, the ethical use of computers and how businesses use IT. Students will have a greater understanding of how organisations use information sources both internally and externally and the types of information they will encounter. The skills gained by completing this unit will give them knowledge of the functionality of information and how data is stored and processed by organisations. They will also learn about how individuals use information of various types.

|                              | Half term 1  | Half term 2  | Half term 3   | Half term 4   | Half term 5   | Half term 6  |
|------------------------------|--|--|---|---|---|--|
| Intent for the half term     | Induction<br>Prepare for Unit 2 exam   | Prepare for Unit 2 exam  | Learn Phases of development lifecycle<br>Application development models   | Learn Constraints, website components and cyber security  | Prepare for resit if needed<br>Website research                                     | Website design   |
| Content mapping              | Introduction and big picture for the project.<br>Unit 2 exam - Understand where information is held globally and how it is transmitted | Understand: styles, classification and the management of global information; the use of global information and the benefits to individuals and organisations; the legal and regulatory framework governing the storage and use of global information; the process flow of information.<br>Case study | Requirements analysis, design, coding/ implementation, testing, deployment, maintenance, comparison of development models | Constraints upon product development, website components, security risks, threats and prevention, market analysis | Case study and revise all of unit 2<br>Market analysis, user interview and analysis | Design brief analysis, functional requirements, target user profile, constraints and limitations, feasibility study, site maps, DFDs |
| Assessment mapping           | Website research<br>Unit 2 section 1 test  | Unit 2, sections 2-6 test,<br>Case study and Mock exam   | Report on phases of development lifecycle and<br>Comparison of development models   | Constraints report<br>Website Components writeup<br>Cyber security writeup  | Mock exam<br>Research analysis  | Research analysis<br>Specification documents and design documents  |
| Personal development mapping | 11. Careers<br>12. Next phase of education   | 1. Responsible, respectful and active citizens   | 11. Careers<br>12. Next phase of education  | 1. Responsible, respectful and active citizens  | 11. Careers<br>12. Next phase of education  | 2. equality of opportunity<br>11. Careers  |



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|  |  | 7. Recognise online and offline risks  |  | 7. Recognise online and offline risks<br>11. Careers<br>12. Next phase of education |  | 12. Next phase of education  |
| Literacy focus for the half term         | Reading<br>Reading information and relaying it back                              | Grammar & vocabulary case study answers, structure and writing to justify/discuss/evaluate | Writing<br>Clearly describe the life cycle and effectively compare 2 subjects  | Spoken English<br>Discussion on topics mentioned before writing up                  | Reading<br>Deeper reading and research into case study topics                          | Grammar & vocabulary<br>Good use of standard English   |
| Numeracy links                           | Data collection  | Data collection  |  |   | Data collection  |  |
| Cross-curricular links to other subjects | Business – events ticket booking website   |  | DT –links to the product lifecycle   |   |  | Business – what do they need to be successful as a business?<br>DT – design lifecycle            |
| Careers                                  | Careers in IT – data scientist/analyst   |  | Careers in IT –web development, project development and app development<br>Mr Wilcock to visit and be involved via email as the client |   | Careers in IT – data scientist/analyst   | Careers in IT – data scientist/analyst, web development, project development and app development |
| Support for all                          | Workbook breaks the topics down, online resources on Teams site, teacher support |  | In class support, clear guide to support tasks set, teacher support  |   | Workbook breaks the topics down, online resources on Teams site, teacher support       |  |
| Challenge ideas                          | Deeper reading into topics for the unit 2 exam                                   | Deeper reading into topics for the unit 2 exam<br>In depth research for the Case study     | Deeper reading and application on topics covered   | Deeper reading and application on topics covered                                    | Deeper reading into topics for the unit 2 exam<br>In depth research for the Case study | Deeper reading and application on topics covered   |



## Year 13

**Overall curriculum intent for year 13:** Students will gain the right combination of knowledge, understanding and skills required for the 21st century, enabling them to demonstrate the skills of writing specifications, and the design, build, testing and implementation of applications. They will develop a solid foundation in the fundamentals of hardware, networks, software, the ethical use of computers and how businesses use IT. Students will have a greater understanding of how organisations use information sources both internally and externally and the types of information they will encounter. The skills gained by completing this unit will give them knowledge of the functionality of information and how data is stored and processed by organisations. They will also learn about how individuals use information of various types.

|                              | Half term 1  | Half term 2   | Half term 3   | Half term 4   | Half term 5                                     |
|------------------------------|--|---|---|---|---|
| Intent for the half term     | Complete the website prototype and accompanying evidence<br>Prepare for Unit 2 exam  | Prepare for Unit 2 exam   | Agree website designs with client<br>Adapt website designs and create prototype website                           | Create, test and present prototype website<br>Final meeting with client   | Prepare for resit of unit 2                     |
| Content mapping              | Web development, testing, client presentation<br><br>Unit 2 exam - Understand where information is held globally and how it is transmitted | Understand: styles, classification and the management of global information; the use of global information and the benefits to individuals and organisations; the legal and regulatory framework governing the storage and use of global information; the process flow of information<br>Case study | Email dialogue to determine changes and agree on acceptance test plan, testing tables, website prototype creation | Complete prototype, unit, product, implementation, acceptance and immersion testing. security and maintenance                         | All of unit 2 topics and case study preparation |
| Assessment mapping           | Final website and updated report<br>Unit 2 section 1 test  | Unit 2, sections 2-6 test<br>Case study And Mock exam   | Evidence of dialogue<br>Acceptance testing plan   | Final website<br>Test plans, test report, final formal report, security and maintenance report and final meeting evidence             | Case study and mock exam                        |
| Personal development mapping | 2. Equality of opportunity<br>11. Careers<br>12. Next phase of education   | 1. Responsible, respectful and active citizens<br>7. Recognise online and offline risks   | 11. Careers<br>12. Next phase of education  | 1. Responsible, respectful and active citizens<br>7. Recognise online and offline risks<br>11. Careers<br>12. Next phase of education | 11. Careers<br>12. Next phase of education      |



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|--|--|--|--|---|--|
| Literacy focus for the half term         | Reading<br>Reading information and relaying it back                              | Grammar & vocabulary<br>Case study answers, structure and writing to justify/discuss/evaluate    | Writing<br>How to communicate formally with a client   | Spoken English<br>Verbal feedback and interaction with acceptance testers | Reading<br>Deeper reading and research into case study topics                          |
| Numeracy links                           | Measurement, ratio   | Data collection  | Measurement, ratio   | Measurement, ratio  | Data collection  |
| Cross-curricular links to other subjects | Business – events ticket booking website   |  | Business – events ticket booking website- target audience, what they want to see, legal obligations etc. |   |  |
| Careers                                  | Careers in IT – data scientist/analyst   | Careers in IT – data scientist/analyst, web development, project development and app development |  |   | Careers in IT – data scientist/analyst   |
| Support for all                          | Workbook breaks the topics down, online resources on Teams site, teacher support |  | In class support, clear guide to support tasks set, teacher support                                      |   | Workbook breaks the topics down, online resources on Teams site, teacher support       |
| Challenge ideas                          | Deeper reading into topics for the unit 2 exam                                   | Deeper reading into topics for the unit 2 exam<br>In depth research for the Case study           | Consider front end and back end element – can you add a back-end data base to the site?                  | Ask for detail in analysis, drawing clear conclusions and steps forward   | Deeper reading into topics for the unit 2 exam<br>In depth research for the Case study |

NB:

Year 12 and 13 both do the same exam unit (unit 1 or 2) then we switch to the alternate unit the following year

Unit 1 plans are below:

|                                  |   |
|----------------------------------|---|
| Intent for the half term         | Prepare for the unit 1 exam   |
| Content mapping                  | fundamentals of hardware, networks, software, the ethical use of computers and how businesses use IT.                                 |
| Assessment mapping               | Sections 1 to 5 in the work book marked once a fortnight and end of topic tests and mock exams  |
| Personal development mapping     | 11. Careers<br>12. Next phase of education<br>1. Responsible, respectful and active citizens<br>7. Recognise online and offline risks |
| Literacy focus for the half term | Grammar & vocabulary<br>Case study answers, structure and writing to justify/discuss/evaluate   |



|  |  |
|--|--|
| Numeracy links                           | Calculation, binary, Hexadecimal, storage capacity                               |
| Cross-curricular links to other subjects |  |
| Careers                                  | Career in IT- all areas  |
| Support for all                          | Workbook breaks the topics down, online resources on Teams site, teacher support |
| Challenge ideas                          | Deeper reading into topics for the unit 1 exam                                   |