Curriculum Overview Document
Computing and IT

Our whole School curriculum intent believes:

Our aim at Hadley Learning Community is to provide an excellent education for all our students; an education which brings out the best in all of them and prepares them for success in life.

Our curriculum is designed to provide children with the core knowledge they need for success in education and later life, to maximise their cognitive development, to develop the whole person and the talents of the individual and to allow all children to become active and economically self-sufficient citizens. By drawing on the best that's been thought, said and done in each subject, alongside the promotion of our local environment, we hope that our curriculum at Hadley Learning Community enables children to appreciate and participate in the full richness of the human experience. Subjects work together to identify knowledge, thematic and skills-based links between their disciplines and exploiting those through careful joint planning will enable students to make connections that will help them to understand the world around them and their place in it.

Within that framework, each subject must consider our core values and as a result needs to embed activities that promote our community alongside our 5 key words: Belong, Respect, Inspire, Succeed and Enjoy

At KS3 students study a wide range of areas covering the three main areas of Digital Literacy, Computing and Information Technology. At KS3 students should be challenged but contented with the introduction and continuation in the study of Computing. We are always adapting our schemes of learning just like the landscape of the Computing industry, making sure we keep up to date with changes in the world. The passion and belief of the Department ensures that students enjoy their computing lessons and make excellent progress from their starting points. It is an absolute passion of the department to make sure we instil a love of computing whilst still delivering the National Curriculum.
At KS4 students can opt to study Digital Information Technology which is a course that follows on from the KS3 curriculum keeping the three strand of Computing, Digital literacy and Information Technology. The Award gives students the opportunity to develop sector-specific knowledge and skills in a practical learning environment, including: development of key skills that prove their aptitude in digital information technology, such as project planning, designing and creating user interfaces, creating dashboards to present and interpret data, processes that underpin effective ways of working, such as project planning, the iterative design process, cyber security, virtual teams, legal and ethical codes of conduct, knowledge that underpins effective use of skills, processes and attitudes in the sector, such as how different user interfaces meet user needs, how organisations collect and use data to make decisions, virtual workplaces, cyber security and legal and ethical issues.

Linking our curriculum intention to our local community:

The curriculum, through enrichment during the school day and within enrichment opportunities, will maximise the use of the local area. We will link our curriculum to the following:

- Telford – Capgemini and Avara foods mentors and career specific activities
- Shrewsbury/Bridgnorth – Marches Centre of Manufacturing and Training
- Harper Adams University – Data collection and Analysis
- Big Bang Fair – existing and emerging Technology and STEM based careers and activities

Linking our curriculum intention to our Country:

- Teen Tech – Technology based projects
- Shell – Big Assembly
- iDEA – Digital Literacy
- F1 in Schools – CAD/CAM

Implementation

Computing and IT lessons are engaging because they are demanding for students. We have enthusiastic and engaged students who are excited by the lessons that they are taught. Our students want to achieve, make a difference and thrive in Computing and IT and they do this through hard work and determination to succeed. Demonstration and student led learning is a large part of the curriculum when studying digital literacy, IT and computer Science. Our students are expertly taught all three strands that are intertwined to aid retention of powerful and invaluable knowledge for all. Regular milestone points are assessed to ensure the long-term retention to be able to apply the knowledge through to KS4. All of the units of work are based around real life/world situations to give a clear context to each lesson that students can easily relate to or gain knowledge about. The Computing and IT curriculum is also taught outside of lessons with extended projects encapsulating creative projects and artefacts and Digital Literacy through the iDEA awards. Students are exposed to a variety of opportunities that open their eyes to the world and how they can apply their knowledge from the classroom for their futures. This is a very powerful concept that enthuses awe and wonder in the students and is then directly related to the lessons back in the classroom.

Year 7 Curriculum implementation

The Computing and IT Curriculum aims to equip students to be responsible users of IT through Esafety, Digital Literacy, Information Technology and Computing. There is a focus on the ideas and principles that underpin computation and how digital technology works, and this sits alongside the experience of programming, as this is the best way for students to learn how to apply computer science. Our aim is to have students that can understand and apply the fundamental principles and concepts of computer science, including abstraction, logic, algorithms and data representation. They will be able to analyse problems in computational terms, and have repeated

practical experience of writing computer programs in order to solve such problems. They are also taught to evaluate and apply information technology, including new or unfamiliar technologies, analytically to solve problems and to become responsible, competent, confident and creative users of information and communication technology. Through lesson time, extended projects and extra opportunities students will all have a well-rounded, thorough subject knowledge that has a clear foundation and solid understanding for KS4 and the future.											
1	END POINT TEST & THERAPY	2	END POINT TEST & THERAPY	3	END POINT TEST & THERAPY	4	END POINT TEST & THERAPY	5	END POINT TEST & THERAPY	6	END POINT TEST & THERAPY
Esafety The overall aim is that students become responsible and resilient users of technology, able to make confident and safe use of the web and of other internet-based services, and able to detect and deal with issues when they arise. People are living more of their lives online and students will be made aware of the dangers that exist on the internet from their own personal conduct, contact with other people, and from their access to different types of content. They will become aware of their legal and ethical their computers and		**Passport to Computing** Gaining a passport to the Computing Curriculum at HLC is vitally important not just for IT lessons but cross curricular as it shows students are prepared and skilled when using the computers. They will look at the rules of a computing room and how to successfully log on and off the computers. We will understand how to productively use the school network and all of the drives available to you including saving, opening and crating documents. The final part of this unit will show you how to communicate via email and use Microsoft 365 effectively.		**Scratch Programming** The aim of this unit is to build Students' confidence and knowledge of the key programming constructs. Importantly, this unit does not assume any previous programming experience, but it does offer Students the opportunity to expand on their knowledge throughout the unit. The main programming concepts covered in this unit are sequencing, variables, selection, and count-controlled iteration. Students will build on their understanding of the control structures' sequence, selection, and iteration (the big three), and develop their problem-solving skills. Students will learn how to create their own subroutines, develop their understanding of decomposition, and learn how to create and use lists, and build upon their problem-solving skills by working through a larger project at the end of the unit.		**Networking, Semaphores and the Internet** Imagine a world without computer networks, and how different your life would be. There would be no more YouTube, Google, instant messaging, online video gaming, Netflix, and iTunes. There would be no online shopping, or quickly looking up directions to a location at the click of a button. There would be no more sharing of files or peripherals such as a printer, and no more central backups of information. As networks have evolved, society has become increasingly		**Media, Impact of Technology** During this unit, Students develop their understanding of information technology and digital literacy skills. They will use the skills learnt across the unit to create a blog post about a real-world cause that they would like to gain support for. Students will develop software formatting skills and explore concerns surrounding the use of other people's work, including licensing and legal issues.	

online data from threats. They will understand the importance of keeping their computers and software up to date, and of using tools such as virus scanners. Students will understand what constitutes safe practice when accessing websites and opening email attachments. They will become familiar with secure websites that use https; including basic cryptography such as the Caesar cipher. Students will become aware of their online identity and take steps to protect it. They will understand what strong passwords are and how they are used to protect A digital footprint is the data that is stored about a person's online activities. It can include information that people have willingly uploaded or that others have recorded about them			reliant on the services that they provide. They have changed the way we learn, work, play, and communicate. This unit begins by defining a network and addressing the benefits of networking, before covering how data is transmitted across networks using protocols. The types of hardware required are explained, as is wired and wireless data transmission. Students will develop an understanding of the terms 'internet' and 'World Wide Web', and of the key services and protocols used. Practical exercises are included throughout to help strengthen understanding.	

without their knowledge. All this data may be available to people, such as future employers, and students should consider taking steps to limit access to their personal data, because of this students will be aware that the internet is not an anonymous space; their activities can be tracked through their IP address and browser cookies.				

Esafety is taught first in the Computing and IT curriculum as it is the fundamental foundation to make sure that students are safe when using technology and understand the risks and benefits of technology.
In the current climate in Hadley, it is massively important to face the implications of use of technology to commit crimes against Students. We see it as our duty to educate our students to make informed decisions about their safety and responsibility.
Scratch
Computational thinking is core to the programme of study for Computer Science. It is the process of recognising aspects of computation in the world that surrounds us, and applying tools and techniques from computing to understand and reason about both natural and artificial systems and processes. Computational thinking provides a powerful framework for studying computing, with wide application beyond computing itself. It allows students to tackle problems, to break them down into solvable chunks (decomposition and abstraction) and to devise algorithms to solve them.
Computational thinking involves: decomposition, pattern recognition, abstraction, pattern generalisation, algorithm design. All of which are taught as part of the computer science unit of work. Throughout the concepts are taught to instil a clear sense of how a professional programmer would utilse these skills in the real world and getting the students to mirror this process.

For some students, the fact that there are often several possible answers to a problem can be daunting. Others aren't used to the 'rapid fail – correct – fail better' model of computer programming. The aim to create a classroom environment of mutual respect, and acceptance were the students learn through

their mistakes. It is not unusual for professional programmers to spend over 50% of their time locating and fixing mistakes in their programs and this is something we try and recognise that it's ok to fail as long as you keep trying. This can be very challenging for the novice, and it is important to teach students techniques for locating and correcting the mistakes they have made.
When students begin programming, they often need assistance in debugging. This can quickly become chaotic if their default is to immediately ask the teacher for help. We alleviate this problem by implementing three before me. Students can then only seek help from the teacher once they have exhausted the other routes of support.
Computational Thinking is a skill that can be used and transferred not only within the subject but across other subjects and for the future.

Year 8 Curriculum Implementation

Building on from the Year 7 curriculum covering Digital Literacy, Computer Science and Information Technology we then continue with all three strands through lessons and extended projects as well as extracurricular provision. The units of work completed build from pictorial based programming languages (scratch) to text based language that is used in industry. Again, we apply the industry based protocols to the principals so that students can identify with the importance of them. The Computer Science unit of work adds a lot more complexity to the programming incorporating higher order commands. The use of code blocks are compared to the text based alternatives and subroutines and functions are introduced, as are nesting, structures and attributes. In Year 8 we broaden the curriculum with extended projects based on Digital literacy, building skills to support all areas of the curriculum and careers through the iDEA Awards. We also provide the opportunity to create, revise, re use or repurpose a digital artefact with attention paid to trustworthiness, design and usability.

1	END POINT TEST & THERAPY	2	END POINT TEST & THERAPY	3	END POINT TEST & THERAPY	4	END POINT TEST & THERAPY	5	END POINT TEST & THERAPY
Online Safety Using the Think U Know resources from the National Crime Agency and Child Exploitation and Online Protection provision, online safety is delivered as an engaging learning resource for Students.		**Python** This unit introduces Students to text-based programming with Python. The lessons form a journey that starts with simple programs involving input and output, and gradually moves on through arithmetic operations, randomness, selection, and		**MicroPython** To solve computational problems, a set of basic programming concepts need to be mastered, beginning with sequence, selection and repetition. An example of these in use might be in creating a password log-in system.		**Heros** In this unit, students will look at Data and Information and how using structure and context is vitally important. The topic used is the Heroes of computing, looking at many famous women and men who have been inspirational in this field. Students will research appropriately using the internet which they will create a questionnaire from to gather		**Cyber Security** This unit takes the Students on an eye-opening journey of discovery about techniques used by cybercriminals to steal data, disrupt systems, and infiltrate networks. The Students will start by considering the value of their data to organisations and what they might use it for. They will then look at social engineering techniques used by cybercriminals to try to trick users into giving away their personal data. The unit	

Supporting Students to explore the information, advice and guidance at Thinkuknow.co.uk will enable them: • develop confident, healthy approaches to relationships and the internet • identify any negative behaviour they encounter, and respond with resilience • know where they can access advice and guidance on these issues, in their own time • know where to go for help if they ever feel anxious or threatened online. All lessons ensure Students feel safe to engage by establishing a nurturing environment of self-discovery and mutual respect where Students feel comfortable using words related to sensitive topics, and where all questions and comments are considered worthy of consideration.	iteration. Emphasis is placed on tackling common misconceptions and elucidating the mechanics of program execution. A range of pedagogical tools is employed throughout the unit, with the most prominent being pair programming, live coding, and worked examples.	Sequence: putting instructions in the right order to make something happen. For example, "Enter username; Enter password; Check details". Selection: using conditions to control the flow of a program. For example, "IF username = "Sam" and password = "j377y78" THEN display welcome message ELSE display error message". Repetition: the ability to execute a sequence of instructions many times until a certain condition has been met. For example, "WHILE username incorrect or password incorrect DO ask for username and password". A data structure is a way of storing and organising related data items so that they can be treated as a single, more abstract, item. Structured data is an important tool when solving computational problems. Students should be familiar with the idea of a named	data and import into spreadsheet software. • select and apply the data manipulation methods to manipulate data in order to provide appropriate summaries of the data. They will then use the most popular Hero to create a magazine cover for using a graphics package and including the data and information that they have gathered and manipulated.	will look at the more common cybercrimes such as hacking, DDoS attacks, and malware, as well as looking at methods to protect ourselves and our networks against these attacks.

		variable from KS2 – a small-sized short-term data store used in a program to store a single value such as test_score or name. A single name may also be used to refer to an organised collection of simple variables (a data structure), such as an array, a table or a list. An array is a sequence of data items of fixed length, in which each item is referred to by its position. A list is a sequence of data items whose length can vary over time. Students should be familiar with tables if they have used spreadsheets. Tables allow data to be structured and sorted by user-defined labels. For example, students might create a table to record the food that people ordered in a restaurant. Note that the mechanisms for structuring data, and for naming and referencing data structures, differ from language to language. Modular design is very important when solving		

		complex problems as it allows programmers to decompose problems into manageable chunks (modules) that can be independently tackled and tested. These modules are then combined to make a whole functioning program. A solution to a problem can be broken down into sub-problems. These can be called procedures, functions, methods or subroutines, depending on what they do and what language they are written in.		

Additional Project: Duke of York iDEA Award

The Duke of York Inspiring Digital Enterprise Award (iDEA) is an international programme that helps people to develop digital, enterprise and employability skills free, and enhances their chances in the job market.

It has never been more important to invest in building a set of essential skills in our children and Students: the ability to creatively solve problems, to manage themselves, to communicate effectively, or to work well with others. The demand for these skills from employers is well documented, but colleges and universities are just as strident about the importance of these skills for Students to thrive.

Through the concept of “badge your brilliance”, Students complete a series of online learning challenges and events to unlock new opportunities. This creates a pathway to gain industry-recognised Awards to help students stand out from the crowd.

The Duke of York Inspiring Digital Enterprise Award (iDEA) is an international programme aiming to help address the digital skills gap. The programme provides free digital skills education in the form of engaging online modules (badges). The iDEA curriculum has been curated to help inspire people all over the world to become Digital Citizens, Workers, Makers, Entrepreneurs and Gamers to enhance their employability; and to help them become economically active. iDEA is a blended learning approach that aspires to be a digital and enterprise equivalent of The Duke of Edinburgh Award.

Participants take on a series of challenges that earn them points which aggregate towards their Bronze, Silver or Gold Inspiring

Digital Enterprise Award. iDEA’s different learning categories Citizen, Worker, Maker, Entrepreneur, Gamer and Independence cover topics as diverse as cyber security, cloud computing and e-safety; and animation, growth hacking, customer relationship management and web development. All the digital badges are short modules which can be completed anywhere a learner can be online.

• CITIZEN BADGES
Digital awareness, safety and ethics.
• WORKER BADGES
Tools and techniques, which are useful in the workplace, and employability skills.
• MAKER BADGES
Digital creativity, building, and making in the digital world.
• ENTREPRENEUR BADGES
How to originate ideas and bring them to life.
• GAMER BADGES
Gamification techniques and help people learn how to make games.
There are many cross-curricular links with the iDEA award all of the entrepreneur badges are linked to the business and enterprise curriculum and their extracurricular young enterprise and tenner challenge projects. The maker badges are linked to the Graphics department as they look at developing graphics, sound and animation in a variety of ways. The Citizen badges are closely linked to the Citizenship and careers curriculum and cover some of the Gatsby benchmarks: experiences of different workplaces, further and higher education and employer links.

Year 9 Curriculum implementation

The digital sector is a major source of employment in the UK, with 1.46 million people working in digital companies and around 45,000 digital jobs advertised at any one time. Digital skills span all industries; almost all jobs in the UK today require employees to have a good level of digital literacy. The UK has positioned itself to be the 'digital capital of Europe' as it continues to invest billions every year in digital skills and commerce. The units give students the opportunity to develop sector-specific knowledge and skills in a practical learning environment, including: development of key skills that prove their aptitude in digital information technology, such as project planning, designing and creating user interfaces, creating dashboards to present and interpret data, processes that underpin effective ways of working, such as project planning, the iterative design process, cyber security, virtual teams, legal and ethical codes of conduct, knowledge that underpins effective use of skills, processes and attitudes in the sector, such as how different user interfaces meet user needs, how organisations collect and use data to make decisions, virtual workplaces, cyber security and legal and ethical issues. Students get the opportunity to apply knowledge and skills practically through project work, such as planning and designing a user interface and developing a dashboard to interpret trends in data.
The units are work and assessment objectives are taught in this particular way as the User interface starts with developing ideas, planning techniques and designs. This is fundamentally the foundation of any project in both the classroom and the real world. The students plan and design their project as their starting point to then move on to create the user interface with review points throughout that refer to the planning documents. After this the conclusions objectives asks the students to look at their product md make clear decisions about changes needed and why but again linking back to the planning stage. The process for these units are the same in that they follow a strict standards guideline that are used professionally in the real world. The data collection unit requires more technical ability, which can be partially taught through the first unit giving a good base for building on in the data unit.

1	2	END POINT TEST & THERAPY	3	4	5	6	END POINT TEST & THERAPY
Exploring User Interface Design Principles and Project Planning Techniques. Students will select and investigate a user interface. They will assess how: • effectively the user interface meets the audience's requirements, including their accessibility needs, skills level and demographics • effectively different design principles have been used to allow both appropriate and effective user interactions with hardware devices • techniques have been used to allow users to efficiently interact with the interface Students will investigate different project planning techniques. Teachers will provide students with a brief for the design requirements of a user interface. • select appropriate project planning tools and methodologies to create a project plan, including outlining the timescales, possible constraints and risks in their project • produce an initial design for a user interface that meets user, input, output and accessibility needs. Their initial design should show the designs for at least four different screens in their user interface. Students are not allowed to use the dashboard they created in Component 2 as evidence of creating a user interface. They are required to design, create and refine a different user interface for a different set of user requirements.			**Effective Digital Working Practices** Students will explore how organisations use digital systems and the wider implications associated with their use. Opportunities to explore how the developments in technology over recent years have enabled modern organisations to communicate and collaborate more effectively than ever before. The component is designed to allow students to explore the digital systems available to organisations and how their features have an impact on the way organisations operate. They will explore how developments in technology have led to more inclusive and flexible working environments, and how regulation and ethical and security concerns influence the way in which organisations operate.	**Collecting, Presenting and Interpreting Data** Students will be given a scenario outlining the data collected. The scenario will outline the data collection methods and features. Students will be provided with a large data set, which they will import into spreadsheet software. • select and apply the data manipulation methods listed in B1 to manipulate data in order to provide appropriate summaries of the data • produce a dashboard to display the summaries of data using appropriate presentation features and presentation methods. Students will use their dashboard to draw conclusions and make appropriate recommendations. They will assess how the presentation features used in their dashboard affect how well the information is understood. Interpreting and displaying data is cross-curricular subjects through analysing experimental results in Science to display rainfall data in Geography. We link with the Geography, Maths and Science departments throughout this module to look at the various graphs they use to display their data. In Maths, Statistics and sampling allows students to look at real life data and how to collect, analyse and eliminate bias.		

Year 10 Curriculum Implementation

The Year 10 curriculum aims to build on the units of work from the previous year when students study the hybrid of the BTEC course to develop their skill set and knowledge. Students will develop their understanding of what makes an effective user interface and how to effectively manage a project. They will use this understanding to plan, design and create a user interface. Aims of the unit are set out as: **A** Investigate user interface design for individuals and organisations **B** Use project planning techniques to plan and design a user interface and **C** Develop and review a user interface.
Students will understand the characteristics of data and information and how they help organisations in decision making. They will use data manipulation methods to create a dashboard to present and draw conclusions from information. Aims of the unit are set out as **A** Investigate the role and impact of using data on individuals and organisations, **B** Create a dashboard using data manipulation tools and **C** Draw conclusions and review data presentation methods.
The units are work and assessment objectives are taught in this particular way as the User interface starts with developing ideas, planning techniques and designs. This is fundamentally the foundation of any project in both the classroom and the real world. The students plan and design their project as their starting point to then move on to create the user interface with review points throughout that refer to the planning documents. After this the conclusions objectives asks the students to look at their product md make clear decisions about changes needed and why but again linking back to the planning stage. The process for these units are the same in that they follow a strict standards guideline that are used professionally in the real world. The data collection unit requires more technical ability, which can be partially taught through the first unit giving a good base for building on in the data unit.

1	2	END POINT TEST & THERAPY	3	4	5	6	END POINT TEST & THERAPY
Exploring User Interface Design Principles and Project Planning Techniques - Develop and review a user interface Students will produce a written document, report or presentation demonstrating how user interfaces meet different user needs and design principles. They will be able to say how two different types of interface meet a range of specific user needs and design principles. They will explore the relationship between design principles and how they can be used to meet user needs.	**Exploring User Interface Design Principles and Project Planning Techniques - Use project planning techniques to plan and design a user interface** Students will select and use a variety of project planning tools to plan out the different parts of their project. They will then put together a design specification that shows an initial design of a user interface that meets both user requirements and design principles. Their initial design should show the designs for at		**Exploring User Interface Design Principles and Project Planning Techniques - Develop and review a user interface** Students are required to design, create and refine a different user interface to meet a different set of user requirements. They will be able to select appropriate project planning tools and be able to comment as to why they are suitable. They will include all major	Collecting, Presenting and Interpreting Data - Investigate the role and impact of using data on individuals and organisations Students will provide a written document showing an understanding of how two different sectors use data to make decisions. This will include how the data collection methods and its features affect the quality of information. They will be able to provide relevant examples in the context of each sector. They will be able to make a link	Collecting, Presenting and Interpreting Data - Create a dashboard using data manipulation tools and draw conclusions and review data presentation methods. Students will assess in comprehensive detail how data is used across two different sectors in order to make decisions. They will be able to select and use different data manipulation tools to manipulate the data in a large data set and produce data	Collecting, Presenting and Interpreting Data - Draw conclusions and review data presentation methods. Students will be able to use their dashboard effectively to make relevant and specific conclusions. They will then be able to use their conclusions to make appropriate recommendations. They will show full awareness of how the presentation methods used lead to data not being biased, misunderstood or being used to make inaccurate decisions. They will then be able to use their conclusions to make appropriate	

Students will carefully consider how effectively two different types of user interface meet a wide range of user interface design principles. They will be critical in their assessment of each user interface and will assess the positive and negative effects that each design principle has on the user and their ability to positively interact with the device using detailed relevant examples.	least four different screens in their user interface. Students are not allowed to use the dashboard they created in component two as evidence of creating a user interface. We have great links with the Art and Design Graphics department who we work alongside when developing graphics and professional user interfaces as they have some similar objectives such as designing graphics for a shop or vinyl sleeve covers.	parts of their project plan, including timescales, constraints and contingencies. Students will put together a comprehensive design specification. Their designs will be effective and cover the vast majority of elements. Students will use different design principles effectively to design an effective and efficient solution. They will use their plan to create a user interface and assess the strengths and weaknesses of their project plan.	between the data collection methods used and how these can affect the data. Students will be able to make a direct link between the collection methods/features and how they affect the quality of data. weaknesses of both their project plan and their user interface. The user interface should focus purely on the overall look and feel, and the user navigation methods. In Maths, Statistics and sampling allows students to look at real life data and how to collect, analyse and eliminate bias.	summaries. They will then show their data summaries on a dashboard. Students will be able to use their dashboard to make conclusions and recommendations. They will show understanding of how the presentation features affected the conclusions and recommendations made. They will be able to use their dashboard effectively to make relevant and specific conclusions. We link with the Geography, Maths and Science departments throughout this module to look at the various graphs they use to display their data.	recommendations. They will show full awareness of how the presentation methods used lead to data not being biased, misunderstood or being used to make inaccurate decisions. Interpreting and displaying data is cross-curricular subjects through analysing experimental results in Science to display rainfall data in Geography.

Year 11 Curriculum implementation

The Year 11 curriculum aims to combine build on the units of work from the previous years when students study the hybrid of the BTEC course to develop their skill set and knowledge. This will be in addition to the external assessment, which is based on key tasks that requires the students to demonstrate that they can identify and use effectively an appropriate selection of skills, techniques, concepts, theories and knowledge from across the whole qualification in an integrated way. Modern organisations are increasingly reliant on the use of digital systems to complete every day, business-critical tasks. The development of these systems has presented organisations with many opportunities to work in new, inventive and flexible ways to achieve their aims. The systems have also brought new challenges and a range of responsibilities. Students have opportunity to explore how the developments in technology over recent years have enabled modern organisations to communicate and collaborate more effectively than ever before.

1	2	END POINT TEST & THERAPY	3	4	END POINT TEST & THERAPY
Demonstrate knowledge of facts, terms, processes and issues in relation to digital information technology How current and modern technologies are used by and have an impact on organisations and their stakeholders. Students need to know the ways in which organisations and associated individuals use modern technologies to exchange information, communicate, and complete work-related tasks. Students must be able to apply their knowledge to a range of vocational contexts. Students should understand how modern technologies impact on the way organisations perform tasks. Students should understand how technologies are used to manage teams, to enable stakeholders to access tools and services, and to communicate effectively. Students should understand the positive and negative impact that the use of modern technologies has on organisations and stakeholders.	**Apply an understanding of facts, terms, processes and issues in relation to digital information technology** Students must understand how the increased reliance of organisations on digital systems to hold data and perform vital functions presents a range of challenges and dangers. They should understand the nature of threats to digital systems and ways that they can be mitigated through organisation policy, procedures and the actions of individuals. They should be able to apply knowledge of cyber security to a range of vocational contexts. Students should understand how different measures can be implemented to protect digital systems. They should understand the purpose of different systems and how their features and functionality protect digital systems. Students should understand how one or more systems or procedures can be used to reduce the nature and/or impact of threats. Students should understand the need for and nature of security policies in organisations. They should understand the content		**Analyse, evaluate and make reasoned judgements about the use, factors and implications influencing digital information technology** Students should understand the wider implications of digital systems and their use. Students should understand how legislation covering data protection, computer crimes and intellectual property has an impact on the way that organisations and individuals use digital systems and data. Students should understand the procedures that organisations must follow in order to conform to legal requirements and professional guidelines. Students should consider the responsible use of digital systems, including how	**Make connections with the concepts, issues, terms and processes in digital information technology** Students should understand how individuals in the digital sector plan solutions and communicate meaning and intention. They should understand how different forms of written and diagrammatical communication can be used to express understanding and demonstrate the flow of data and information.	

	that constitutes a good security policy and how it is communicated to individuals in an organisation. To ensure that potential threats and the impact of security breaches are minimised, students should understand how procedures in security policies are implemented in organisations.	systems and services share and exchange data as well as the environmental considerations of increased use. Students should understand the scope and purpose of legislation (valid at time of delivery) that governs the use of digital systems and data, and how it has an impact on the ways in which organisations use and implement digital systems. Students should understand the wider ethical considerations of use of technologies, data and information, and organisations' responsibilities to ensure that they behave in an ethical manner.		

Impact of our curriculum:

Impact is measured over terms, years and key stages, measuring progress through many forms of assessment such as: Self-assessment, Effective digital creators are independent students. Part of the process of becoming an independent student is being able to assess your own progress and evaluate your work. Self-assessment goes hand in hand with students setting their own goals. Reporting self-assessment can take the form of a learning journal, blog or screencast.
Peer assessment, building on the idea of constructionism and making digital artefacts for other people, peer assessment provides discussion and feedback, helping the creator and assessor to understand what a finished product would look like, and how to improve it. Peer assessment can happen in the classroom but it also takes place online, through communities such as Scratch. Pair programming and code reviews are industry techniques that can be used in the classroom.
Target setting, setting challenging realistic targets can help students recognise areas for development, an important step in becoming an independent student. Open questioning, the theory elements of computing run the risk of being taught in a 'tell and recall' way, with students being passive receivers of information. Open questioning allows students to understand the implications of theory. Programming and IT project tasks can be assessed by asking questions such as, "Why did you

choose to do it this way and not another?" and "Can you explain how this works?". Asking students to state what they already know, what they want to learn and what they have learned provides a perfect platform for student self-assessment and target setting. It can also inform your future lesson planning.

Feedback plays a crucial role in assessing depth of student understanding and analysing other students' answers allows students to assess their own progress based upon the feedback from the teacher. Mastery is achieved through regular opportunities to practice recalling key information, and redrafting and improving work based on feedback from the teacher. Assessment objectives are tracked throughout the year and tested in a summative assessment at the end of each topic and cumulatively at the end of the year. Data from end of unit assessments will be entered into a spreadsheet for teachers to use to review and reteach parts of the curriculum. Gaps are addressed and closed at the end of each topic to ensure students have a solid understanding before another topic is taught. This may lead to classes starting topics in different weeks, but will ensure all students are secure in their understanding.

Computing and IT are popular areas of the curriculum with a healthy uptake at KS4, we have oversubscribed STEM clubs that allow students to further develop their enjoyment, knowledge and skills within the clubs and take part in national competitions do develop and present artefacts to industry experts covering many different areas of STEM and building better futures. All of these projects and competitions are linked directly to the STEM curriculum at HLC.

Visits to local businesses, live chats with industry experts and visiting experts are really engaging for students to identify, recognise and develop their understanding and skills that are taught in the classroom and how it correlates with local and national picture and in the real world.