St Cuthbert's RC High School
Curriculum Map – ICT

ICT Curriculum Map	
St. Cuthbert's Curriculum Vision 	Here at St. Cuthbert's, our curriculum is rooted in our Catholic faith and the principles laid out in Catholic Social Teaching. Our goal is to help every child shine, feel valued, and make a positive mark in the world. With our core CARE values—Catholicity, Aspiration, Respect, and Excellence—guiding us, we aim to nurture each child's academic, social, emotional, and spiritual growth. We strive to foster an environment where every student feels secure, included, and supported, both inside the classroom and out. Complete curriculum vision.docx
Subject statement of intent	It is the aim of the department to enable students to develop skills and knowledge in Digital ICT through practical applications. Students will engage in project planning and time management to develop digital artefacts to meet a given brief. Students will develop key skills of presenting and interpreting data which can be applied to a variety of future career paths. Students will increase their application knowledge in areas such as cyber security, legal and ethical codes of conduct and virtual workplaces. Students are also able to develop their own personal skills in how to meet user needs, communication and personal management supporting them as independent individuals for their future opportunities.

Curriculum Icons Key				
Catholic Mission	**Careers (CEIAG)**	**Cultural Capital and Enrichment Opportunities**	**Preparing for life in modern Britain**	**Skills for Life**
				

ICT 'at a glance'

KS4: Students have five lessons per fortnight in Year 10 and six lessons per fortnight in Year 11.

AUTUMN	SPRING	SUMMER
Year 10		
Exploring User Interface Design Coursework	**Exploring User Interface Design / Data Task Coursework**	**Collecting, Presenting and Interpreting Data Coursework**

St Cuthbert's RC High School
Curriculum Map – ICT

		
Year 11		
Effective Digital Working Practices: Modern Technologies **Exam** 	**Effective Digital Working Practices: Cyber Security / Implications of Digital Systems** **Exam** 	**Effective Digital Working Practices: Planning and communication / Revision** **Exam** 

Year 10 Curriculum Map

YEAR 10		AUTUMN		SPRING		SUMMER	
Year 10	Theme						
	Knowledge	**Substantive Knowledge**	**Disciplinary Knowledge**	**Substantive Knowledge**	**Disciplinary Knowledge**	**Substantive Knowledge**	**Disciplinary Knowledge**
		• Types of User Interface • Range of Uses and Devices • Choice of UI • Hardware and Software • Accessibility Needs • Skill and Demographics • Design Principles	• Produce a User Interface using software packages applying knowledge of design: • Range of Devices • Meets Audience needs including	• Learning will continue from Autumn Term until Coursework 1 is completed. • Characteristics of data and information • Representing data • Validation Methods	• Learning will continue from Autumn Term until Coursework 1 is completed. • Importing data • Producing functions and formulae • Complete sorting	• Data summaries from a data set • Appropriate presentation methods • Presentation features	• Read and interpret from a data set, totals, counts, averages, percentages, sales breakdowns, departmental/ section breakdown • Create a suitable

		• User Attention • Intuitive Design • Project Planning Tools • Methodology	accessibility, ease of use and their demographics • Meets the design principles of colour, space. • Creating a project plan • Producing storyboards • Reviewing initial designs both positively and critically.	• Verification Methods • Data collection methods • Quality of information • Sectors for data modelling • Threats to individuals • Data manipulation methods and advanced methods	• Decision making, lookup, count functions • Logical Operators • Subtotals • Filtering • Cell referencing • Macros • Linking worksheets • Cell comments • Alternative review • Conditional formatting		presentation to show data including the use of tables, pivot tables, sparklines, graphs and charts, form controls • Use appropriate presentation features: font size, merged cells, text wrap, cell borders, graphics, axis labels, titles, conditional formatting. • Reviewing data analysis both positively and critically.
	Texts to be studied	**How to Make User Interface Readable: Tips and Practices — Design4Users** **What Is a User Interface (UI)? | Definition from TechTarget**		**How spreadsheets work - Spreadsheets - KS3 ICT Revision - BBC Bitesize** **Validation - Data validation and verification - GCSE ICT Revision - WJEC - BBC Bitesize**		**How spreadsheets work - Spreadsheets - KS3 ICT Revision - BBC Bitesize** **How spreadsheets work - Spreadsheet software - GCSE ICT Revision - WJEC - BBC Bitesize**	
	Rationale	**Previous Links:** Students have explored hardware and software in all three years of KS3. Students have explored accessibility		**Previous Links:** In Year 7 students develop spreadsheet skills by producing formulas and creating graphs from		**Previous Links:** Students have experience in PowerPoint from Year 7, producing them for a purpose and using them as	

		devices and types of user interfaces in Year 9. Students will also have personal experience with user interfaces and the interactions; they have also built their own app focusing on user experience. **Future Links:** Students may go on to explore a career in app design or web design where a user interface will need to be designed. Students may also explore ICT based courses or apprenticeships at college. As part of their exam, students will continue to look at types of interfaces, factors affecting choice of interface, accessibility needs, planning tools and methodologies. **Why?** Students will produce coursework on user interface design for component 1. Students will then get to complete their coursework early in the course with a reasonable time frame if anything needs to be changed. This allows them to have less stress within Year 11 when focusing on many subjects.	given data sets. Students revisit these skills in Year 9 where they look at more advanced skills including conditional formatting and pivot tables. **Future Links:** Students may go on to have careers which make use of data analysis and use spreadsheets as a way of monitoring data. Students may also explore ICT based courses or apprenticeships at college and may be useful to support them in Maths courses where an element of statistics is used. As part of their exam, students will continue to look at threats to individuals. **Why?** Students will produce coursework on user interface design for component 1 and data analysis for component 2. Students will then get to complete their coursework early in the course with a reasonable time frame if anything needs to be changed. This allows them to have less stress within Year 11 when focusing on many subjects.	the basis for many activities which means they are more at ease to use this as a software program to complete the coursework. **Future Links:** Students may go on to have careers which make use of data analysis and use spreadsheets as a way of monitoring data. Students may also explore ICT based courses or apprenticeships at college and may be useful to support them in Maths courses where an element of statistics is used. **Why?** Students will produce data analysis for component 2. Students will then get to complete their coursework early in the course with a reasonable time frame if anything needs to be changed. This allows them to have less stress within Year 11 when focusing on many subjects.
	Assessment	• Students are being continually assessed within their coursework. Students should be given feedback of how to improve their coursework and next steps to be applied. Staff should be maintaining a centralised tracker with the elements of the coursework to support planning of lessons. • Staff should assess and check for learners understanding when delivering the key skills and knowledge the students require, this could be done via simple exit tickets or review exercises to ensure students are able to apply these skills to their coursework.		

	Homework	• Students should be provided some practical homework to complete at home using the schools licence for office 365 where they are able to practice the skills they have learnt within lessons. This will then support them when completing their coursework in lessons. ICT Homework Policy.docx

Year 11 Curriculum Map

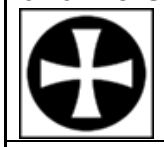
YEAR 11		AUTUMN		SPRING		SUMMER	
Year 11	**Theme**						
	Knowledge	**Substantive Knowledge**	**Disciplinary Knowledge**	**Substantive Knowledge**	**Disciplinary Knowledge**	**Substantive Knowledge**	**Disciplinary Knowledge**
		• Communication Technologies • Features of Cloud Storage • Features of Cloud Computing • Platforms and Services for Cloud Technology • Cloud and Traditional Systems • Implications for Cloud Organisations • Changes to Modern Teams • Managing modern teams • Stakeholders • Inclusivity	• Exploring the use of cloud systems within organisations: how will it affect individuals, security, payments etc. Real-world examples can be included. • Exploring the use of cloud systems to manage modern teams – e.g. working from home. • Explore mental wellbeing	• System Attacks • External Threats • Internal Threats • Security Breach • User Access Restriction • Data Level Protection • Finding Weaknesses • Policy Responsibilities • Security Parameters • Disaster Recovery Policy • Actions after an attack	• Explore real-world examples of how threats to systems can cause issues within the workplace, to data. • Real-world examples of ethical issues, and legal issues referring to the protection of data.	• Data Flow Diagrams • Flowcharts • System Diagrams • Tables • Written Communication	• Produce diagrams for a given system, data of piece of information. • Producing data flow diagrams, flowcharts, system diagrams, tables, written information. • Be able to interpret information presented in a range of notation.

		• Accessibility • Positive and Negative impacts on Organisations • Positive and Negative impacts on Individuals		• Responsible Use • Equal Access • Net Neutrality • Acceptable use policies • Blurring of social and business boundaries • Data Protection Principles • Data and the use of the internet • Intellectual Property • Criminal Use of Computer Systems			
	Texts to be studied	Concerns regarding ICT - Social and environmental impact - GCSE ICT Revision - WJEC - BBC Bitesize		Forms of attack - Network security - OCR - GCSE Computer Science Revision - OCR - BBC Bitesize		System and schematic diagrams - Communication of ideas - Edexcel - GCSE Design and Technology Revision - Edexcel - BBC Bitesize	
	Rationale	**Previous Links:** Students have explored cloud computing in their lessons when studying storage devices as an alternative. Students have also got real-world experience of cloud computing apps using SharePoint and office 365 within school. **Future Links:**		**Previous Links:** Students have explored different security risks in all three years of Key Stage 3 when looking at E-Safety. Students have also looked at both security risks but also the ethical side of security focusing on ethical hacking. **Future Links:**		**Previous Links:** Students have looked at flow charts as part of the curriculum at Year 9. **Future Links:** Students going on to college courses in ICT or computing may explore system design or software design where they will be asked to produce	

		Students will continue to use these software packages to support cloud computing in their work life and in their personal life. Students will also experience the way that these technologies are impacting the world of work and how they may interact with one another in the future. **Why?** Students will be assessed on these topics as part of their end of year exam in Year 11. Students will also be more familiar with this component due to listening to parent and staff conversations relating to work and experiencing it within KS3 themselves.	Students will explore these themes if they go on to college to complete any ICT or computing course. Students will also need to be aware of this for their future life both in the workplace and personally. **Why?** Students will be assessed on these topics as part of their end of year exam in Year 11. Students will have experience of these themes, and it is a topic that students will engage with due to the nature, therefore it is better suited towards the middle of the course.	different diagrams to represent systems. **Why?** Students will be assessed on their understanding of these diagrams both in producing and interpreting them. Students need to have these skills before sitting their end of year exam.
	Assessment	• There should be a large amount of exam question practice within the lessons, ideally each lesson after learning the content the students need, they should be shown how to link this to the exam to address the bigger picture. • At the end of each scheme of work, students will be expected to complete a formative assessment, this is formally marked by the teacher and a grade is given for this piece of work. Whole class feedback will be given to the students which links to misconceptions. All results will be centrally tracked which enables the teacher to deliver material to address any gaps the students may need. • At two points of the year, students will be expected to complete a summative assessment, for the first data drop this will be a mock exam, with the content omitted the students have not yet done. The second data drop will then consist of a full paper.		
	Homework	Students should be set exam questions fortnightly, that supports the teacher timetable to be able to set, receive, mark and track homework. The teacher may decide to mark these individually or may choose to mark these within the lessons with the students to provide feedback. These exam questions should link to the students current learning or may be used to revisit past topics. This may be adapted to suitable revision related to the individual class as time progresses. ICT Homework Policy.docx		

Catholic Social Teaching	**Preparing for Life in Modern Britain**

St Cuthbert's RC High School
Curriculum Map – ICT

In all areas of the curriculum careers are referenced. (Option for the Poor and Vulnerable) Year 10 Students look at designing of a user interface but also explore how it needs to be suitable for all users including those with accessibility needs. (Dignity of the Human Person) Year 11 Students develop understanding of Network Security Threats (Dignity of the Human Person and Rights and Responsibilities). Students complete a unit of work on Ethics, Legal, Cultural and Environmental Issues (Stewardship, Rights and Responsibilities, Solidarity and the Common Good and Dignity of the Human Person) 	Students are encouraged in all aspects of the classroom to have mutual respect for others, particularly when giving their viewpoint and answers. Teachers should be respectful to their answers and not discourage engagement. Year 10 All user interfaces designed should be discussed with clear respect for others in the room and understanding of being inclusive. Year 11 Students discuss their viewpoints in relation to legal, cultural, environmental and ethical issues. 
Careers Careers have been references for each individual unit at KS4 for reference within students learning. Several activities will also link to careers directly and areas related to the field. Whole School Events such as Careers Day/Week will also play a factor into the focus that is put into this section. All KS4 Lessons have example careers within the Teacher PowerPoint: 	**Skills for Life** KS4 Exploration of ways of working for the future. Exploration of the blurring of social and business boundaries and the effect on well being and staff work life balance. 
Cultural Capital and Enrichment Opportunities **KS4** KS4 Scenarios will always be relatable so students can see how this impacts their day-to-day life. Exploring real-world businesses that students will be familiar with to discuss how modern technologies are supporting the way of working. Examples can be tied to school for understanding and then broaden student's experiences by looking at other aspects.	

St Cuthbert's RC High School
Curriculum Map – ICT