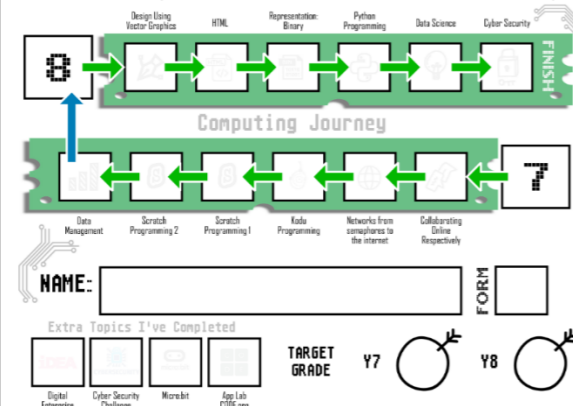
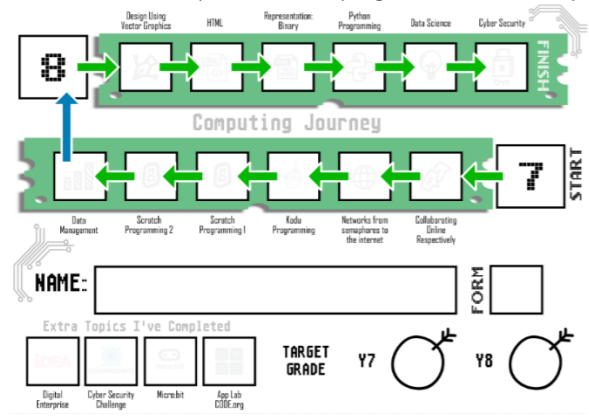


Computing & IT Curriculum

St Thomas More High School

	Autumn Term	Spring Term	Summer Term
Year 7 Topics	<p>7.1 Impact of technology: collaborating online respectfully</p> <ul style="list-style-type: none"> Identifying how to use online collaboration tools respectfully. An introduction to Computing Rooms and STM <p>7.2 Networks: from semaphores to the internet</p> <ul style="list-style-type: none"> Recognising networking hardware and explaining how networking components are used for communication. <p>7.3 Kodu: Programming</p> <ul style="list-style-type: none"> Applying the programming constructs of sequence, selection, and iteration in building skills towards Scratch. 	<p>7.4a Programming essentials in Scratch: part I</p> <ul style="list-style-type: none"> Applying the programming constructs of sequence, selection, and iteration in Scratch. <p>7.4b Programming essentials in Scratch: part II</p> <ul style="list-style-type: none"> Using subroutines to decompose a problem that incorporates lists in Scratch <p>7.8 Using media: Affinity Designer/PowerPoint/Video</p> <ul style="list-style-type: none"> Creating a digital product for a real-world cause. 	<p>7.5 Modelling data:</p> <ul style="list-style-type: none"> Spreadsheets Sorting and filtering data and using formulas and functions in spreadsheet software. <p>7.7 3D Modelling</p> <ul style="list-style-type: none"> Planning, developing, and evaluating 3D computer models of physical objects. <p>7.6 Physical Computing Micro:bits Unplugged</p> <ul style="list-style-type: none"> Sensing and controlling with the micro:bit.
NCC Codes	3.1 , 3.2 , 3.3 , 3.4 , 3.5 , 3.9 See national curriculum codes here	3.1 , 3.2 , 3.3, 3.4 See national curriculum codes here	3.1 , 3.2 , 3.3, 3.4, 3.7 , 3.8 See national curriculum codes here
Assessment	<p>Online assessments for the following topics: Please see Pupils Learning Journey in Planner. Collaborating Online, Kodu, Scratch, Modelling Data, Networking</p>  <p>NAME: <input type="text"/> FORM <input type="text"/></p> <p>Extra Topics I've Completed: <input type="checkbox"/> Digital Enterprise <input type="checkbox"/> Cyber Security Challenge <input type="checkbox"/> Microbit <input type="checkbox"/> App Lab / ITC.org</p> <p>TARGET GRADE: Y7 <input type="radio"/> Y8 <input type="radio"/></p>		
E/L	<ul style="list-style-type: none"> www.idea.org.uk – Digital Enterprise Supportive Worksheets for each topic KS3 Super Curriculum Interactive PDF – Please See Teams for Interactive worksheet 		

	Autumn Term	Spring Term	Summer Term
Year 8 Topics	<p>8.1 Media: Vector Graphics</p> <ul style="list-style-type: none"> Creating vector graphics through objects, layering, and path manipulation. Networks: from semaphores to the internet <p>8.8 Computer Systems</p> <ul style="list-style-type: none"> Exploring the fundamental elements that make up a computer system. <p>8.7 Cybersecurity</p> <ul style="list-style-type: none"> Identifying how users and organisations can protect themselves from cyberattacks. 	<p>8.2 Developing For The Web</p> <ul style="list-style-type: none"> Using HTML and CSS to create webpages. <p>8.3a Representations: Data Representation</p> <ul style="list-style-type: none"> Representing numbers and text using binary digits. <p>8.3b Representations: Going Audio/Visual</p> <ul style="list-style-type: none"> Representing images and sound using binary digits. 	<p>8.4 Mobile app development</p> <ul style="list-style-type: none"> Using event-driven programming to create an online gaming app. <p>8.5 Introduction to Python programming</p> <ul style="list-style-type: none"> Applying the programming constructs of sequence, selection, and iteration in Python. <p>8.6 Data Science</p> <ul style="list-style-type: none"> Using data to investigate problems and make real-world changes.
NCC Codes	3.5 , 3.6 , 3.7 , 3.9 See national curriculum codes here	3.2 , 3.3 , 3.5 , 3.6 , 3.8 See national curriculum codes here	3.1 , 3.2 , 3.3 , 3.4 , 3.8 See national curriculum codes here
Assessment	<p>Online assessments for the following topics: Please see Pupils Learning Journey in Planner. Media Vector Graphics, Developing for web, Data Rep, Python Skills</p>  <p>NAME: <input type="text"/> FORM <input type="text"/></p> <p>Extra Topics I've Completed</p> <p>Digital Enterprise Cyber Security Challenge Microsoft App Lab CSDE.org</p> <p>TARGET GRADE Y7 <input type="radio"/> Y8 <input type="radio"/></p>		
E/L	<ul style="list-style-type: none"> www.idea.org.uk – Digital Enterprise Supportive Worksheets for each topic KS3 Super Curriculum Interactive PDF – Please See Teams for Interactive worksheet 		

<p>Y7</p>	<p><u>Collaborating Online Respectfully</u></p> <ul style="list-style-type: none"> • Microsoft Office/Teams • www.youtube.com/watch?time_continue=20&v=opRMrEfAlil&feature=emb_logo • www.ncsc.gov.uk/cyberaware/home • www.security.org/how-secure-is-my-password • www.youtube.com/watch?v=OBg2YYV3Bts&feature=emb_logo • www.thinkuknow.co.uk/11_13/help/CEOP • www.childline.org.uk • www.thinkuknow.co.uk/11_13/help/Contact-social-sites • www.anti-bullyingalliance.org.uk • www.bullying.co.uk/cyberbullying • www.ditchthelabel.org <p><u>Networking/Internet</u></p> <ul style="list-style-type: none"> • Microsoft Office/Teams • www.bbc.co.uk/bitesize/guides/z36nb9q/revision/2 • www.nibusinessinfo.co.uk/content/benefits-computer-networks • www.speedtest.net • www.youtube.com/watch?v=Dxcc6ycZ73M • www.submarinecablemap.com • www.youtube.com/watch?v=ewrBaT_eBM • www.lifehacks.io/facts-about-the-internet • www.youtube.com/watch?v=ZTM9GA-4nBA • www.seotribunal.com/blog/google-stats-and-facts • www.bbc.co.uk • www.lifewire.com/most-common-tlds-internet-domain-extensions-817511 • www.yougetsignal.com/tools/network-location/ <p><u>Programming</u></p> <ul style="list-style-type: none"> • Scratch 3 • Kodu • Microsoft Teams • scratch.mit.edu • en.wikipedia.org/wiki/Five_Little_Ducks • en.wikipedia.org/wiki/Software_bug <p><u>Data Modelling</u></p> <ul style="list-style-type: none"> • Microsoft Excel • Microsoft Teams • en.wikipedia.org/wiki/2016_Summer_Olympics_medal_table • en.wikipedia.org/wiki/2018%E2%80%9319_Premier_League • socialblade.com/youtube
<p>Year 8</p>	<p><u>Developing For web</u></p> <ul style="list-style-type: none"> • Microsoft Office/Teams

- Notepad
- www.w3schools.com/html
- www.w3schools.com/css
- www.w3schools.com/cssref

Computer Systems

- Microsoft Office/Teams
- www.computerhistory.org
- teachinglondoncomputing.org/resources/inspiring-unplugged-classroom-activities/the-intelligent-piece-of-paper-activity
- thecrashcourse.com/courses/computerscience
- [projects/raspberrypi.org](http://projects.raspberrypi.org)

Vector Graphics

- Inkscape
- Affinity Designer
- Affinity Photo

Python Programming Introduction Using Primm

- Python
- repl.it
- blog.teachcomputing.org/tag/pedagogy
- pythontutor.com/visualize.html
- trinket.io
- projects.raspberrypi.org
- docs.python.org/3

Data Science

- Microsoft Office/Teams
- www.datawrapper.de
- www.youtube.com/watch?v=f_6IEKqS2l0
- www.gapminder.org
- berkeleyearth.lbl.gov/country-list
- codap.concord.org
- datashine.org.uk
- naei.beis.gov.uk/emissionsapp
- www.gaugemap.co.uk

Cyber Security

- threatmap.checkpoint.com
- scratch.mit.edu
- forbusiness.snapchat.com/advertising#targeting
- www.snap.com/en-GB/privacy/privacy-policy
- [help.instagram.com/519522125107875/?helpref=hc_fnav&bc\[0\]=Instagram%20Help&bc\[1\]=Privacy%20and%20Safety%20Center](https://help.instagram.com/519522125107875/?helpref=hc_fnav&bc[0]=Instagram%20Help&bc[1]=Privacy%20and%20Safety%20Center)
- policies.google.com/privacy#infocollect
- en-gb.facebook.com/policy.php
- www.ncsc.gov.uk
- www.cps.gov.uk/legal-guidance/computer-misuse
- us.norton.com/internetsecurity-malware-what-is-a-computer-virus.html
- us.norton.com/internetsecurity-malware-what-is-a-computer-worm.html
- antivirus.comodo.com/blog/computer-safety/computer-worm-definition

	<ul style="list-style-type: none"> • www.malwarebytes.com/ransomware • uk.norton.com/internetsecurity-malware-ransomware-5-dos-and-donts.html <p>Physical Computing</p> <ul style="list-style-type: none"> • microbit.org • python.microbit.org • microbit-micropython.readthedocs.io/en/v1.0.1 • www.arm.com/resources/education/schools/content • blog.teachcomputing.org/tag/pedagogy • youtu.be/oNlf6aFYVoU
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BTEC ICT - Year 9

	Autumn Term	Spring Term	Summer Term
Topics	<p>Theory for Component 1: Exploring User Interface Design Principles and Project Planning Techniques</p> <ul style="list-style-type: none"> A. Understand interface design for individuals and organisations. B. Be able to use project planning techniques to plan, design and develop a user interface C. Be able to review a user interface. 	<p>Theory for Component 2: Collecting, Presenting and Interpreting Data</p> <ul style="list-style-type: none"> A. Understand how data is collected and used by organisations and its impact on individuals B. Be able to create a dashboard using data manipulation tools C. Be able draw conclusions and review data presentation methods 	<p>Theory for Component 3: Effective Digital Working Practices</p> <ul style="list-style-type: none"> A. Modern Technologies B. Cyber security C. The Wider Implications of Digital Systems D. Planning and Comms for Digital Systems
Exam Spec w/link	<p>COM1 – Learning Aim A, B, C Specification - Pearson BTEC Level 1/Level 2 Tech Award in Digital Information Technology 2022 Issue 1 Pages 9-14</p>	<p>COM2 – Learning Aim A, B, C Specification - Pearson BTEC Level 1/Level 2 Tech Award in Digital Information Technology 2022 Issue 1 Pages 23-27</p>	<p>COM3 – Learning Aim A, B, C, D Specification - Pearson BTEC Level 1/Level 2 Tech Award in Digital Information Technology 2022 Issue 1 Pages 35-44</p>
Assessment	<p>End of Term tests on each Component</p> <ul style="list-style-type: none"> • Mock Assessment builds on knowledge, understanding and skills acquired and developed across the qualification. • Questions will require learners to apply knowledge and understanding to the given scenarios or context. • An exam worth 60 marks will be completed under supervised conditions. • The supervised assessment period is a maximum of 1 hour and 30 minutes and should be arranged in the period timetabled by Pearson. • The assessment availability is January/February and May/June. First assessment is January/February 2024 		
E/L	<p>Extended Learning Sheets for each topic will be set on teams with the class work</p>		

	Autumn Term	Spring Term	Summer Term
Topics	<p>Assignment: Component 1: Exploring User Interface Design Principles and Project Planning Techniques</p> <ul style="list-style-type: none"> A. Understand interface design for individuals and organisations. B. Be able to use project planning techniques to plan, design and develop a user interface C. Be able to review a user interface. 	<p>Assignment: Component 1: Exploring User Interface Design Principles and Project Planning Techniques</p> <ul style="list-style-type: none"> A. Understand interface design for individuals and organisations. B. Be able to use project planning techniques to plan, design and develop a user interface C. Be able to review a user interface. 	<p>Exam Theory Component 3: Effective Digital Working Practices</p> <ul style="list-style-type: none"> A. Modern Technologies B. Cyber security C. The Wider Implications of Digital Systems <p>Planning and Comms for Digital Systems</p>
Exam Spec w/link	<p>COM1 – Learning Aim A, B, C Specification - Pearson BTEC Level 1/Level 2 Tech Award in Digital Information Technology 2022 Issue 1 Pages 9-14</p>	<p>COM1 – Learning Aim A, B, C Specification - Pearson BTEC Level 1/Level 2 Tech Award in Digital Information Technology 2022 Issue 1 Pages 9-14</p>	<p>COM3 – Learning Aim A, B, C, D Specification - Pearson BTEC Level 1/Level 2 Tech Award in Digital Information Technology 2022 Issue 1 Pages 35-44</p>
Assessment	<p>Pearson sets the assignments for the assessment of this component. The assignment for this component consists of four tasks.</p> <ul style="list-style-type: none"> • In response to Task 1, learners will complete a project proposal template using a project proposal brief, taking into consideration the purpose and audience, project requirements, user accessibility needs and any constraints. They will use software to create a project plan using project planning and design methodologies and taking into consideration the project proposal brief and overall timescales for the project. • In response to Task 2, learners will design an initial user interface for four screens of a user interface that meets user requirements and user accessibility needs and other specific hardware and software needs and design considerations. • In response to Task 3, learners will use their initial design to develop a working prototype of the four screens of the user interface that meets user requirements and user accessibility need. • In response to Task 4, learners will review their user interface and project planning techniques. Their review will be against the following criteria – user requirements, ease of use, design principles and accessibility features. In addition, learners will suggest improvements to better meet audience needs. • The assignment will take approximately 6 supervised hours to complete. • The assignments will be marked by centres and moderated by Pearson. Assignments for this component will be made available in October and then February of each year through the secure area of the website. Learners must use the Pearson-set Assignment to provide the required evidence to achieve this component. • Mock Assessment builds on knowledge, understanding and skills acquired and developed across the qualification. • Questions will require learners to apply knowledge and understanding to the given scenarios or context. • An exam worth 60 marks will be completed under supervised conditions. 		
E/L	<p>Extended Learning Sheets for each topic will be set on teams with the class work</p>		

	Autumn Term	Spring Term	Summer Term
Topics	<p>Assignment: Component 2: Collecting, Presenting and Interpreting Data</p> <ul style="list-style-type: none"> A. Understand how data is collected and used by organisations and its impact on individuals B. Be able to create a dashboard using data manipulation tools C. Be able draw conclusions and review data presentation methods 	<p>Assignment: Component 2: Collecting, Presenting and Interpreting Data</p> <ul style="list-style-type: none"> A. Understand how data is collected and used by organisations and its impact on individuals B. Be able to create a dashboard using data manipulation tools C. Be able draw conclusions and review data presentation methods 	<p>External Exam: Component 3: Effective Digital Working Practices</p> <ul style="list-style-type: none"> A. Modern Technologies B. Cyber security C. The Wider Implications of Digital Systems D. Planning and Comms for Digital Systems
Exam Spec w/link	<p>COM2 – Learning Aim A, B, C Specification - Pearson BTEC Level 1/Level 2 Tech Award in Digital Information Technology 2022 Issue 1 Pages 23-27</p>	<p>COM2 – Learning Aim A, B, C Specification - Pearson BTEC Level 1/Level 2 Tech Award in Digital Information Technology 2022 Issue 1 Pages 23-27</p>	<p>COM3 – Learning Aim A, B, C, D Specification - Pearson BTEC Level 1/Level 2 Tech Award in Digital Information Technology 2022 Issue 1 Pages 35-44</p>
Assessment	<p>Pearson sets the assignments for the assessment of this component. The assignment for this component consists of three tasks.</p> <ul style="list-style-type: none"> • In response to Task 1, learners will explore the suitability of two given data collection methods used by an organisation for a given dataset. • In response to Task 2, learners will carry out different manipulation and processing methods in order to create a dashboard, providing data summaries using appropriate presentation methods and features. • In response to Task 3, learners will analyse a dataset, present their findings and draw conclusions based on these findings. They will explore how presentation affects understanding in the dataset and how they could be improved. • The assignment will take approximately 6 supervised hours to complete. • The assignments will be marked by centres and moderated by Pearson. • Assignments for this component will be made available in October and then February of each year through the secure area of the website. Learners must use the Pearson-set Assignment to provide the required evidence to achieve this component. • External Assessment builds on knowledge, understanding and skills acquired and developed across the qualification. • Questions will require learners to apply knowledge and understanding to the given scenarios or context. • An exam worth 60 marks will be completed under supervised conditions. • The supervised assessment period is a maximum of 1 hour and 30 minutes and should be arranged in the period timetabled by Pearson. • The assessment availability is January/February and May/June. First assessment is January/February 2024 		
E/L	<p>Extended Learning Sheets for each topic will be set on teams with the class work</p>		

	Autumn Term	Spring Term	Summer Term
Topics	<p>Unit 2: Creating Systems to Manage Information</p> <p>Learners study the design, creation, testing and evaluation of a relational database system to manage information.</p> <p>Unit 3: Using social media in Business</p> <ul style="list-style-type: none"> A. Explore the impact of social media on the ways in which businesses promote their products and services B. Develop a plan to use social media in a business to meet requirements C. Implement the use of social media in a business.. 	<p>Unit 2: Creating Systems to Manage Information</p> <p>Learners study the design, creation, testing and evaluation of a relational database system to manage information.</p> <p>Unit 3: Using social media in Business</p> <ul style="list-style-type: none"> A. Explore the impact of social media on the ways in which businesses promote their products and services B. Develop a plan to use social media in a business to meet requirements C. Implement the use of social media in a business.. 	<p>Unit 2: Creating Systems to Manage Information</p> <p>Learners study the design, creation, testing and evaluation of a relational database system to manage information.</p> <p>Unit 3: Using social media in Business</p> <ul style="list-style-type: none"> A. Explore the impact of social media on the ways in which businesses promote their products and services B. Develop a plan to use social media in a business to meet requirements C. Implement the use of social media in a business..
Exam Spec	BTEC Nationals Information Technology (2016) Pearson qualifications	BTEC Nationals Information Technology (2016) Pearson qualifications	BTEC Nationals Information Technology (2016) Pearson qualifications
Assessment	<p>Unit 2: External Exam</p> <ul style="list-style-type: none"> • This unit is externally assessed through a task set and marked by Pearson. • The set task will be completed under supervised conditions. • Part A will be carried out in three hours on the afternoon of the first day. • Part B will be carried out in two hours on the morning of the second day. • The set task will assess learners’ ability to design, create, test and evaluate a relational database system to manage information. • The number of marks for the unit is 66 <p>Unit 3: Internal Assessment</p> <ul style="list-style-type: none"> • An assignment is issued to learners as an assignment brief with a defined start date, a completion date and clear requirements for the evidence that they need to provide. • There may be specific observed practical components during the assignment period. • Assignments can be divided into tasks and may require several forms of evidence. <p>A valid assignment will enable a clear and formal assessment outcome based on the assessment criteria</p>		
E/L	Extended Learning Sheets for each topic will be set on teams with the class work		

	Autumn Term	Spring Term	Summer Term
Topics	<p>Unit 1: Creating Systems to Manage Information</p> <ul style="list-style-type: none"> A. Digital devices in IT systems B. Transmitting Data C. Operating Online D. Protecting Data & Information E. Impact of IT systems F. Issues Affecting Systems <p>Unit 6: Website Development</p> <ul style="list-style-type: none"> A. Understand the principles of website development B. Design a website to meet client requirements C. Develop a website to meet client requirements. 	<p>Unit 1: Creating Systems to Manage Information</p> <ul style="list-style-type: none"> A. Digital devices in IT systems B. Transmitting Data C. Operating Online D. Protecting Data & Information E. Impact of IT systems F. Issues Affecting Systems <p>Unit 6: Website Development</p> <ul style="list-style-type: none"> A. Understand the principles of website development B. Design a website to meet client requirements C. Develop a website to meet client requirements. 	<p>Unit 1: Creating Systems to Manage Information</p> <ul style="list-style-type: none"> A. Digital devices in IT systems B. Transmitting Data C. Operating Online D. Protecting Data & Information E. Impact of IT systems F. Issues Affecting Systems <p>Unit 6: Website Development</p> <ul style="list-style-type: none"> A. Understand the principles of website development B. Design a website to meet client requirements C. Develop a website to meet client requirements.
Exam Spec	BTEC Nationals Information Technology (2016) Pearson qualifications	BTEC Nationals Information Technology (2016) Pearson qualifications	BTEC Nationals Information Technology (2016) Pearson qualifications
Assessment	<p>Unit 1 External Exam</p> <ul style="list-style-type: none"> • This unit is externally assessed through a written examination set and marked by Pearson. • The examination is two hours in length. • Learners will be assessed on their understanding of computer systems and the implications of their use in personal and professional situations. • The number of marks for the unit is 90 <p>Unit 6: Internal Assessment</p> <ul style="list-style-type: none"> • An assignment is issued to learners as an assignment brief with a defined start date, a completion date and clear requirements for the evidence that they need to provide. • There may be specific observed practical components during the assignment period. • Assignments can be divided into tasks and may require several forms of evidence. • A valid assignment will enable a clear and formal assessment outcome based on the assessment criteria 		
E/L	Extended Learning Sheets for each topic will be set on teams with the class work		

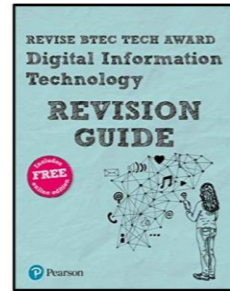
BTEC KS4 /KS5 Resources

KS4 Resources



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Component 3
Illustrated revision &
practice

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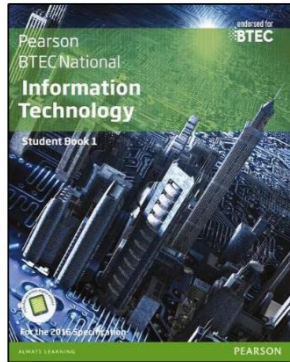
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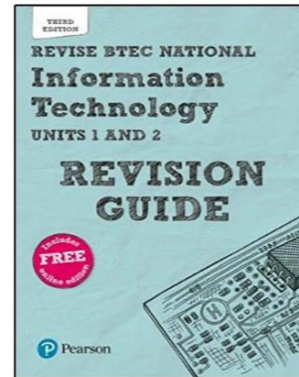


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