



# Eastbrook School

## KS3 Curriculum Summary – ICT

The information below gives an overview of the topics that your child will be studying in ICT during years 7 and 8. It also outlines how you can support your child to enrich and extend their learning outside of school.

<b>Year 7</b>		
<b>Autumn term</b>	<b>Spring term</b>	<b>Summer term</b>
<b>Topics and themes</b>	<b>Topics and themes</b>	<b>Topics and themes</b>
Using computers safely: <ul style="list-style-type: none"> <li>• File management</li> <li>• Social networking</li> <li>• Keeping data safe</li> <li>• Using email</li> </ul> Understanding computers: <ul style="list-style-type: none"> <li>• Elements of a computer</li> <li>• The CPU</li> <li>• Understanding Binary</li> <li>• Binary Addition</li> <li>• Storage devices</li> <li>• New Technologies</li> </ul>	Graphics Editing: <ul style="list-style-type: none"> <li>• Introduction to Vector graphics</li> <li>• Bitmap Graphics</li> <li>• Conveying meaning</li> <li>• Effects and enhancements</li> <li>• Adding text</li> </ul> Game creating using Scratch: <ul style="list-style-type: none"> <li>• Setting up a character</li> <li>• Movement</li> <li>• Lives and scoring (variables)</li> <li>• Randomising characters</li> <li>• Jumping and shooting</li> <li>• Adding sounds</li> <li>• Testing</li> </ul>	Python Programming: <ul style="list-style-type: none"> <li>• Script mode and interactive mode</li> <li>• Input and output</li> <li>• Variables</li> <li>• Syntax Errors</li> <li>• Basic calculation</li> <li>• Int, float, round functions</li> <li>• If, else, elif</li> <li>• Writing algorithms</li> <li>• Basics of loops</li> <li>• Searching</li> </ul>
<b>Useful websites</b>	<b>Useful websites</b>	<b>Useful websites</b>
Online safety advice for parents /carers and children: <a href="http://www.thinkuknow.co.uk">www.thinkuknow.co.uk</a>  Learn more about digital devices: <a href="https://www.bbc.com/bitesize/guides/zxb72hv/revision/1">https://www.bbc.com/bitesize/guides/zxb72hv/revision/1</a>	More information about graphics: <a href="https://www.bbc.com/bitesize/guides/zqyrq6f/revision/1">https://www.bbc.com/bitesize/guides/zqyrq6f/revision/1</a>  Online programming with Scratch (free): <a href="https://scratch.mit.edu/">https://scratch.mit.edu/</a>	Install python for free: <a href="https://www.python.org/">https://www.python.org/</a>  Excellent Python Programming book to get started:

Basic hardware information: <a href="https://www.wikihow.com/Understand-Computer-Hardware">https://www.wikihow.com/Understand-Computer-Hardware</a>		<a href="https://tinyurl.com/python-for-kids-book">https://tinyurl.com/python-for-kids-book</a>
<b>Other ways to support learning</b>	<b>Other ways to support learning</b>	<b>Other ways to support learning</b>
Discuss the safety issues related using the Internet and social media.	Practice editing pictures at home. Try taking a picture with your phone and edit it on the phone or PC.  Look at other people's programs created using scratch on the scratch website. See if you can recreate a retro game from your childhood.	Check out the hundreds of YouTube videos on Python programming. Try creating the Hangman game if you can!

<b>Year 8</b>		
<b>Autumn term</b>	<b>Spring term</b>	<b>Summer term</b>
<b>Topics and themes</b>	<b>Topics and themes</b>	<b>Topics and themes</b>
Computer crime and security: <ul style="list-style-type: none"> <li>• Email Scams</li> <li>• Hacking</li> <li>• Protecting personal data</li> <li>• Copyright</li> <li>• Health and safety</li> </ul> Algorithms and programming: <ul style="list-style-type: none"> <li>• Flowcharts</li> <li>• Variables</li> <li>• If, Else statements</li> <li>• Loops</li> </ul>	HTML and CSS coding: <ul style="list-style-type: none"> <li>• Introduction to Head and Body tags</li> <li>• Design Basics</li> <li>• Creating a basic page</li> <li>• Styles and intro to CSS</li> <li>• Design improvements and CSS</li> <li>• Independent website development</li> <li>• Creating web forms</li> </ul> Further Python programming: <ul style="list-style-type: none"> <li>• Pupils will recap and build of their Python programming skills from year 7.</li> <li>• Introduction to Pseudocode</li> </ul>	Networks: <ul style="list-style-type: none"> <li>• What is the Internet</li> <li>• Connectivity</li> <li>• Network Topologies</li> <li>• Peer to Peer networks</li> <li>• Client Server networks</li> <li>• Encryption</li> </ul>
<b>Useful websites</b>	<b>Useful websites</b>	<b>Useful websites</b>
Computer related ethics and law: <a href="https://www.bbc.com/bitesize/guides/zkhykqt/revision/1">https://www.bbc.com/bitesize/guides/zkhykqt/revision/1</a>	Introduction to HTML and Basic Tags:	Find out more about computer networks:

<p>Useful information about algorithms:  <a href="https://www.bbc.com/bitesize/guides/zpp49j6/revision/1">https://www.bbc.com/bitesize/guides/zpp49j6/revision/1</a></p>	<p><a href="http://www.teach-ict.com/programming/html/html_home.htm">http://www.teach-ict.com/programming/html/html_home.htm</a></p> <p>Excellent Python Programming book to get started:  <a href="https://tinyurl.com/python-for-kids-book">https://tinyurl.com/python-for-kids-book</a></p>	<p><a href="https://www.bbc.com/bitesize/guides/zh4whyc/revision/1">https://www.bbc.com/bitesize/guides/zh4whyc/revision/1</a></p>
<p><b>Other ways to support learning</b></p>	<p><b>Other ways to support learning</b></p>	<p><b>Other ways to support learning</b></p>
<p>Talk to your child about the latest news and events around hacking and data breaches.</p>	<p>Try creating a basic HTML web page using notepad on your home computer. Discover what the different HTML tags do by trying them out one at a time.</p>	<p>If you have more than one PC or laptop at home, you may want to try to setup a small home network (peer to peer or client-server). There are many YouTube videos to help you on your way.</p>



## KS 4 Curriculum Summary – ICT

The information below gives an overview of the topics that your child will be studying in ICT during years 9, 10 and 11. It also outlines how you can support your child to enrich and extend their learning outside of school.

### Year 9 – Creative iMedia

Unit R087

This unit will enable learners to understand the basics of interactive multimedia products for the creative and digital media sector. They will learn where and why interactive multimedia is used and what features are needed for a given purpose. It will enable them to interpret a client brief, and to use time frames, deadlines and preparation techniques as part of the planning and creation process when creating an interactive multimedia product.

Spring term	Spring term	Spring term
Topics and themes	Topics and themes	Topics and themes
Be able to create an interactive multimedia product to a client's requirements	Be able to create an interactive multimedia product to a client's requirements	Be able to create an interactive multimedia product to a client's requirements
Useful websites	Useful websites	Useful websites
<a href="https://www.ocr.org.uk">https://www.ocr.org.uk</a>	<a href="https://www.ocr.org.uk">https://www.ocr.org.uk</a>	<a href="https://www.ocr.org.uk">https://www.ocr.org.uk</a>
Other ways to support learning	Other ways to support learning	Other ways to support learning
Access to Onenote Assess to worksheets in the shared area	Access to Onenote Assess to worksheets in the shared area	Access to Onenote Assess to worksheets in the shared area

## Year 10 – Creative iMedia

### Unit R082

The aim of this unit is for learners to understand the basics of digital graphics editing for the creative and digital media sector. They will learn where and why digital graphics are used and what techniques are involved in their creation. This unit will develop learners' understanding of the client brief, time frames, deadlines and preparation techniques as part of the planning and creation process.

### Unit R088

This unit will enable learners to understand where digital sound sequences are used in the media industry such as radio, film, web applications or computer gaming. The learner will also learn how these technologies are developed to reach an identified target audience.

<b>Autumn term</b>	<b>Spring term</b>	<b>Summer term</b>
<b>Topics and themes</b>	<b>Topics and themes</b>	<b>Topics and themes</b>
Understand the purpose and properties of digital graphics and know where and how they are used.	Students to plan the creation of digital graphics, create new digital graphics using a range of editing techniques  Review a completed graphic against a specific brief.	Starting R088  Understand the purpose of digital audio products and where they are used.  Plan a digital sound sequence, create and edit a digital sound sequence and review the final sound sequence against a specific brief
<b>Useful websites</b>	<b>Useful websites</b>	<b>Useful websites</b>
<a href="https://www.ocr.org.uk">https://www.ocr.org.uk</a>	<a href="https://www.ocr.org.uk">https://www.ocr.org.uk</a>	<a href="https://www.ocr.org.uk">https://www.ocr.org.uk</a>
<b>Other ways to support learning</b>	<b>Other ways to support learning</b>	<b>Other ways to support learning</b>
Access to Onenote Assess to worksheets in the shared area	Access to Onenote Assess to worksheets in the shared area	Access to Onenote Assess to worksheets in the shared area

## Year 11- Creative iMedia

Unit R081

This unit will enable learners to understand pre-production skills used in the creative and digital media sector. It will develop their understanding of the client brief, time frames, deadlines and preparation techniques that form part of the planning and creation process.

<b>Autumn term</b>	<b>Spring term</b>	<b>Summer term</b>
<b>Topics and themes</b>	<b>Topics and themes</b>	<b>Topics and themes</b>
Students will understand the purpose and uses of a range of pre-production techniques.  They will be able to plan pre-production of a creative digital media product to a client brief	Students will understand how to review pre-production documents.	Revision
<b>Useful websites</b>	<b>Useful websites</b>	<b>Useful websites</b>
<a href="https://www.ocr.org.uk">https://www.ocr.org.uk</a>	<a href="https://www.ocr.org.uk">https://www.ocr.org.uk</a>	<a href="https://www.ocr.org.uk">https://www.ocr.org.uk</a>
<b>Other ways to support learning</b>	<b>Other ways to support learning</b>	<b>Other ways to support learning</b>
Access to Onenote Assess to worksheets in the shared area	Access to Onenote Assess to worksheets in the shared area	Access to Onenote Assess to worksheets in the shared area

## Year 10 – Computer Science

Autumn term	Spring term	Summer term
Topics and themes	Topics and themes	Topics and themes
<p>Students will be studying;</p> <ul style="list-style-type: none"> <li>* Systems Architecture</li> <li>* Algorithms, Memory</li> <li>* Storage</li> <li>* Computational Logic</li> <li>* Producing robust programs</li> <li>* Python programming techniques</li> </ul>	<p>Students will be studying;</p> <ul style="list-style-type: none"> <li>* System software</li> <li>* Wired and wireless networks</li> <li>* Data representation</li> <li>* Network topologies</li> </ul>	<p>With the changes in the requirements for the Non Exam Assessment, Year 10 students will be preparing for and completing their controlled assessment in the Summer term. Students will be studying;</p> <ul style="list-style-type: none"> <li>* Algorithms (revisited)</li> <li>* Programming concepts * Advance programming skills.</li> <li>* Abstraction * Decomposition</li> <li>* Testing programs</li> </ul>
Useful websites	Useful websites	Useful websites
<p>Youtube videos covering each topic</p> <p><a href="https://www.youtube.com/watch?v=t8H6-anK0t4&amp;list=PLCiOXwirraUAvkTPDWeeSqAKty3LAG37-">https://www.youtube.com/watch?v=t8H6-anK0t4&amp;list=PLCiOXwirraUAvkTPDWeeSqAKty3LAG37-</a></p>	<p>Youtube videos covering each topic</p> <p><a href="https://www.youtube.com/watch?v=t8H6-anK0t4&amp;list=PLCiOXwirraUAvkTPDWeeSqAKty3LAG37">https://www.youtube.com/watch?v=t8H6-anK0t4&amp;list=PLCiOXwirraUAvkTPDWeeSqAKty3LAG37</a></p>	<p>Youtube videos covering each topic</p> <p><a href="https://www.youtube.com/watch?v=t8H6-anK0t4&amp;list=PLCiOXwirraUAvkTPDWeeSqAKty3LAG37">https://www.youtube.com/watch?v=t8H6-anK0t4&amp;list=PLCiOXwirraUAvkTPDWeeSqAKty3LAG37</a></p> <p>Learning Python</p> <p><a href="https://www.youtube.com/watch?v=rfscVS0vtbw">https://www.youtube.com/watch?v=rfscVS0vtbw</a></p>
Other ways to support learning	Other ways to support learning	Other ways to support learning
<p>All resources that will help students with each topic have been provided on OneNote.</p> <p>There are flash cards, videos and quizzes.</p>		

## Year 11 – Computer Science

Autumn term	Spring term	Summer term
Topics and themes	Topics and themes	Topics and themes
<p>Students will be completing the Non Examined Assessment alongside studying topics relevant to it.</p> <p>Students will be studying;</p> <ul style="list-style-type: none"> <li>• Algorithms (revisited)</li> <li>• Programming concepts</li> <li>• Advance programming skills.</li> <li>• Abstraction</li> <li>• Decomposition</li> <li>• Testing programs</li> </ul>	<p>Students will be studying;</p> <ul style="list-style-type: none"> <li>• System security</li> <li>• SQL programming techniques</li> <li>• Ethical, environmental and Cultural issues</li> <li>• Translators and facilities languages</li> <li>• Data representation</li> </ul>	<p>Exam Skills:</p> <p>With the exam taking place in the summer term, much of the work will be based around answering extended question, planning answers, revision, creating exam resources and working through past papers.</p>
Useful websites	Useful websites	Useful websites
<p>Youtube videos covering each topic</p> <p><a href="https://www.youtube.com/watch?v=t8H6-anK0t4&amp;list=PLCiOXwirraUAvkTPDWeeSqAKty3LAG37">https://www.youtube.com/watch?v=t8H6-anK0t4&amp;list=PLCiOXwirraUAvkTPDWeeSqAKty3LAG37</a></p> <p>Learning Python</p> <p><a href="https://www.youtube.com/watch?v=rfscVS0vtbw">https://www.youtube.com/watch?v=rfscVS0vtbw</a></p>	<p>Youtube videos covering each topic</p> <p><a href="https://www.youtube.com/watch?v=t8H6-anK0t4&amp;list=PLCiOXwirraUAvkTPDWeeSqAKty3LAG37">https://www.youtube.com/watch?v=t8H6-anK0t4&amp;list=PLCiOXwirraUAvkTPDWeeSqAKty3LAG37</a></p>	<p>Youtube videos covering each topic</p> <p><a href="https://www.youtube.com/watch?v=t8H6-anK0t4&amp;list=PLCiOXwirraUAvkTPDWeeSqAKty3LAG37">https://www.youtube.com/watch?v=t8H6-anK0t4&amp;list=PLCiOXwirraUAvkTPDWeeSqAKty3LAG37</a></p>
Other ways to support learning	Other ways to support learning	Other ways to support learning
<p>All resources that will help students with each topic have been provided on OneNote.</p> <p>There are flash cards, videos and quizzes.</p>		



## KS 5 Curriculum Summary – ICT

The information below gives an overview of the topics that your child will be studying in ICT during years 12 and 13. It also outlines how you can support your child to enrich and extend their learning outside of school.

Year 12		
Autumn term	Spring term	Summer term
Topics and themes	Topics and themes	Topics and themes
<p>Pupils will be studying for their exam <b><u>Unit 1 - Fundamentals of IT</u></b>. This unit aims to provide a solid foundation in the fundamentals of hardware, networks, software, the ethical use of computers and how business uses IT.</p> <p>Pupils will cover five main topics:                      Computer hardware,                      Computer Software                      Business IT Systems                      Employability and communication skills used in an IT environment</p> <p><b><u>Unit 21 – Web Design &amp; Prototyping Project</u></b>                      In this unit pupils will research, design and produce an interactive, responsive website that is specific to a client’s needs.</p> <p>Topics covered will include:</p> <ul style="list-style-type: none"> <li>• HTML coding</li> <li>• Design Principles</li> <li>• Website Testing</li> <li>• Report Writing</li> </ul>	<p>Pupils will continue <b><u>Unit 1 - Fundamentals of IT</u></b></p> <p>Pupils will continue with their <b><u>Unit 21 – Web Design &amp; Prototyping Project</u></b></p>	<p>Pupils will begin learning the content for their second examined unit - <b><u>Unit 2 – Global Information</u></b>.</p> <p>The purpose of this unit is to demonstrate the uses of information in the public domain, globally, in the cloud and across the internet, by individuals and organisations.</p> <p>Pupils will understand:</p> <ul style="list-style-type: none"> <li>• Where information is held globally and how it is transmitted</li> <li>• Styles, classification and the management of global information</li> <li>• The Use of global information and the benefits to individuals and organisations</li> <li>• Legal and regulatory framework governing the storage and use of global information</li> </ul> <p><b><u>Revise for Summer Exam Unit 1</u></b></p>

Useful websites	Useful websites	Useful websites
OCR Website: <a href="https://www.ocr.org.uk/qualifications/vocational-education-and-skills/cambridge-technicals-it-level-3-certificate-extended-certificate-introductory-diploma-foundation-diploma-diploma-05838-05842-2016-suite/">https://www.ocr.org.uk/qualifications/vocational-education-and-skills/cambridge-technicals-it-level-3-certificate-extended-certificate-introductory-diploma-foundation-diploma-diploma-05838-05842-2016-suite/</a>		
Practice coding: <a href="https://www.w3schools.com/html/">https://www.w3schools.com/html/</a>		
Other ways to support learning	Other ways to support learning	Other ways to support learning
Classroom OneNote with practice work and exam papers.		

Year 13		
Autumn term	Spring term	Summer term
Topics and themes	Topics and themes	Topics and themes
<p>Continue studying <b>Unit 2 – Global Information unit.</b></p> <p><b>Unit 15 – Games design and prototyping</b> In this unit pupils will develop skills in designing and developing a prototype for a simple game. They will consider the logic of the programming structures required, as well as the interface design.</p> <p><b>Pupils will:</b></p> <ul style="list-style-type: none"> <li>• Research the principles of game design and prototyping</li> <li>• Develop game concepts</li> <li>• Develop game prototypes</li> <li>• Present and evaluate game concepts</li> </ul>	<p><b>Unit 6 Application Design</b> In this unit pupils will explore potential ideas for a new application and develop the fundamental design for it.</p> <p><b>Pupils will:</b></p> <ul style="list-style-type: none"> <li>• Research how applications are designed</li> <li>• Investigate potential solutions for application developments</li> <li>• Generate designs for application solutions Present application solutions to meet client and user requirements</li> </ul>	<p><b>Pupil will finish their project: Unit 6 Application Design</b></p> <p><b>Revise for Summer Exam Unit 2</b></p>
Useful websites	Useful websites	Useful websites
OCR Website: <a href="https://www.ocr.org.uk/qualifications/vocational-education-and-skills/cambridge-technicals-it-level-3-certificate-extended-certificate-introductory-">https://www.ocr.org.uk/qualifications/vocational-education-and-skills/cambridge-technicals-it-level-3-certificate-extended-certificate-introductory-</a>		

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Practice coding: <https://www.w3schools.com/html/>

**Other ways to support learning**

**Other ways to support learning**

**Other ways to support learning**

Classroom OneNote with practice work and exam papers.