Eastbrook School

KS3 Curriculum Summary – ICT 2020/21

The information below gives an overview of the topics that your child will be studying in ICT during years 7, 8 and 9. It also outlines how you can support your child to enrich and extend their learning outside of school. Where classes are shared, topics might be taught simultaneously.

Year 7		
Autumn term	**Spring term**	**Summer term**
Topics and themes	**Topics and themes**	**Topics and themes**
Using computers safely: • File management • Social networking • Keeping data safe • Using email Understanding computers: • Elements of a computer • The CPU • Understanding Binary • Binary Addition • Storage devices • New Technologies	Graphics Editing: • Introduction to Vector graphics • Bitmap Graphics • Conveying meaning • Effects and enhancements • Adding text Game creating using Scratch: • Setting up a character • Movement • Lives and scoring (variables) • Randomising characters • Jumping and shooting • Adding sounds • Testing	Python Programming: • Script mode and interactive mode • Input and output • Variables • Syntax Errors • Basic calculation • Int, float, round functions • If, else, elif • Writing algorithms • Basics of loops • Searching
Useful websites	**Useful websites**	**Useful websites**
Online safety advice for parents /carers and children: www.thinkuknow.co.uk Learn more about digital devices: https://www.bbc.com/bitesize/guides/zxb72hv/revision/1 Basic hardware information: https://www.wikihow.com/Understand-Computer-Hardware	More information about graphics: https://www.bbc.com/bitesize/guides/zqyrq6f/revision/1 Online programming with Scratch (free): https://scratch.mit.edu/	Install python for free: https://www.python.org/ Excellent Python Programming book to get started: https://tinyurl.com/python-for-kids-book
Other ways to support learning	**Other ways to support learning**	**Other ways to support learning**
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!

Year 8

Autumn term	Spring term	Summer term
Topics and themes	**Topics and themes**	**Topics and themes**
Computer crime and security: • Email Scams • Hacking • Protecting personal data • Copyright • Health and safety Algorithms and programming: • Flowcharts • Variables • If, Else statements • Loops	HTML and CSS coding: • Introduction to Head and Body tags • Design Basics • Creating a basic page • Styles and intro to CSS • Design improvements and CSS • Independent website development • Creating web forms	Block coding • Variables • If, Else statements • Loops • Conditions Further Python programming: • Pupils will recap and build of their Python programming skills from year 7.
Useful websites	**Useful websites**	**Useful websites**
Computer related ethics and law: https://www.bbc.com/bitesize/guides/zkhykqt/revision/1 Useful information about algorithms: https://www.bbc.com/bitesize/guides/zpp49j6/revision/1	Introduction to HTML and Basic Tags: http://www.teach-ict.com/programming/html/html_home.htm	Find out more about computer networks: www.code.org Excellent Python Programming book to get started: https://tinyurl.com/python-for-kids-book
Other ways to support learning	**Other ways to support learning**	**Other ways to support learning**
Talk to your child about the latest news and events around hacking and data breaches.	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.	If you have more then 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.

Year 9 – Computer Science

Autumn term	Spring term	Summer term
Topics and themes	**Topics and themes**	**Topics and themes**
Students will be studying; • Trends in technology • Hardware and Software • Computational thinking, algorithms and programming	Students will be studying; • System architecture • Algorithms • Python programming techniques	Students will be studying; • Flow charts • Abstractions • Data types • Python programming techniques
Useful websites	**Useful websites**	**Useful websites**
Youtube videos covering each topic	Youtube videos covering each topic	Youtube videos covering each topic

https://www.youtube.com/watch?v=t8H6-anK0t4&list=PLCiOXwirraUAvkTPDWeeSqAKty3LAG37-	https://www.youtube.com/watch?v=t8H6-anK0t4&list=PLCiOXwirraUAvkTPDWeeSqAKty3LAG37	https://www.youtube.com/watch?v=t8H6-anK0t4&list=PLCiOXwirraUAvkTPDWeeSqAKty3LAG37 Learning Python https://www.youtube.com/watch?v=rfscVS0vtbw
Other ways to support learning	**Other ways to support learning**	**Other ways to support learning**
All resources that will help students with each topic have been provided on Google Classroom. There are flash cards, videos and quizzes.		

Eastbrook School

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

KS4 Curriculum Summary – ICT

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 R085
This unit will enable learners to understand the key features of a website, the importance of consistency in design, planning a website based on a set of requirements, ensuring that it is aimed at a target audience for a given purpose.
Students will learn some basic and advanced website design skills, enabling them to produce a complete website that will be professional in both its design and functionality.

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.

Unit R087
This unit will enable learners to understand the workings of interactive multimedia products for the creative and digital media sector. They will learn where and why interactive multimedia products are 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.

Autumn term	Spring term	Summer term
Topics and themes	**Topics and themes**	**Topics and themes**
R082 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.	R085 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. R081 Understand the purpose and content of pre-production. Be able to plan pre-production	R081 Understand the purpose and content of pre-production. Be able to plan pre-production Unit R087 This unit will enable learners to understand the workings of interactive multimedia products for the creative and digital media sector. They will learn where and why interactive multimedia products are 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.
Useful websites	**Useful websites**	**Useful websites**
https://www.ocr.org.uk	https://www.ocr.org.uk	https://www.ocr.org.uk
Other ways to support learning	**Other ways to support learning**	**Other ways to support learning**
Access to Google Classroom Assess to worksheets in the shared area	Access to Google Classroom Assess to worksheets in the shared area	Access to Google Classroom 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.

Autumn term	Spring term	Summer term
Topics and themes	**Topics and themes**	**Topics and themes**

R081 - Exam Understand the key features used in web design and how they influence the functionality of a website. Plan and design a website. Review the final product against a specific brief. Students will understand how to review pre-production documents.	R082 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. Work will be improved based on the feedback from staff. R081 Be able to plan pre-production Be able to produce pre-production documents Be able to review pre-production documents	R081 - Exam Understand the key features used in web design and how they influence the functionality of a website. Plan and design a website. Review the final product against a specific brief. Students will understand how to review pre-production documents. Be able to plan pre-production Be able to produce pre-production documents
Useful websites	**Useful websites**	**Useful websites**
https://www.ocr.org.uk	https://www.ocr.org.uk	https://www.ocr.org.uk
Other ways to support learning	**Other ways to support learning**	**Other ways to support learning**
Access to Google Classroom Assess to worksheets in the shared area	Access to Google Classroom Assess to worksheets in the shared area	Access to Google Classroom 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**
Students will be studying; - Systems Architecture - Memory - Storage - Computational Logic - Producing robust programs - Python programming techniques	Students will be studying; - System software - Algorithms - Wired and wireless networks - Data representation - Python programming techniques - Network topologies	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; - Network topologies - Algorithms (revisited) - Python programming techniques - Programming concepts * Advance programming skills. -
Useful websites	**Useful websites**	**Useful websites**
Youtube videos covering each topic https://www.youtube.com/watch?v=t8H6-	Youtube videos covering each topic https://www.youtube.com/watch?v=t8H6-	Youtube videos covering each topic https://www.youtube.com/watch?v=t8H6-

anK0t4&list=PLCiOXwirraUAvkTPDWeeSqAKty3LAG37-

anK0t4&list=PLCiOXwirraUAvkTPDWeeSqAKty3LAG37

anK0t4&list=PLCiOXwirraUAvkTPDWeeSqAKty3LAG37

Learning Python
https://www.youtube.com/watch?v=rfscVS0vtbw

Other ways to support learning	Other ways to support learning	Other ways to support learning
All resources that will help students with each topic have been provided on Google Classroom. There are flash cards, videos and quizzes.		

Year 11 – Computer Science		
Autumn term	**Spring term**	**Summer term**
Topics and themes	**Topics and themes**	**Topics and themes**
Students will be completing the Non Examined Assessment alongside studying topics relevant to it. Students will be studying; • Algorithms (revisited) • Programming concepts • Advance programming skills. • Abstraction • Decomposition • Testing programs	Students will be studying; • System security • SQL programming techniques • Ethical, environmental and Cultural issues • Translators and facilities languages • Data representation	Exam Skills: 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.
Useful websites	**Useful websites**	**Useful websites**
Youtube videos covering each topic https://www.youtube.com/watch?v=t8H6-anK0t4&list=PLCiOXwirraUAvkTPDWeeSqAKty3LAG37 Learning Python https://www.youtube.com/watch?v=rfscVS0vtbw	Youtube videos covering each topic https://www.youtube.com/watch?v=t8H6-anK0t4&list=PLCiOXwirraUAvkTPDWeeSqAKty3LAG37	Youtube videos covering each topic https://www.youtube.com/watch?v=t8H6-anK0t4&list=PLCiOXwirraUAvkTPDWeeSqAKty3LAG37
Other ways to support learning	**Other ways to support learning**	**Other ways to support learning**
All resources that will help students with each topic have been provided on Google Classroom. There are flash cards, videos and quizzes.		

Eastbrook School

KS5 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**
Pupils will be studying for their exam **Unit 1 - Fundamentals of IT**. 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. Pupils will cover five main topics: Computer hardware, Computer Software Business IT Systems Employability and communication skills used in an IT environment **Unit 21 – Web Design & Prototyping Project** In this unit pupils will research, design and produce an interactive, responsive website that is specific to a client's needs. Topics covered will include: - HMTL coding - Design Principles - Website Testing - Report Writing	Pupils will continue **Unit 1 - Fundamentals of IT** Pupils will continue with their **Unit 21 – Web Design & Prototyping Project**	Pupils will begin learning the content for their second examined unit - **Unit 2 – Global Information.** 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. Pupils will understand: - Where information is held globally and how it is transmitted - Styles, classification and the management of global information - The Use of global information and the benefits to individuals and organisations - Legal and regulatory framework governing the storage and use of global information **Revise for Summer Exam Unit 1**
Useful websites	**Useful websites**	**Useful websites**
OCR Website: 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/ Practice coding: https://www.w3schools.com/html/		
Other ways to support learning	**Other ways to support learning**	**Other ways to support learning**
Classroom Google Classroom with practice work and exam papers.		

Year 13		
Autumn term	**Spring term**	**Summer term**

Topics and themes	Topics and themes	Topics and themes
Continue studying **Unit 2 – Global Information unit**. **Unit 15 – Games design and prototyping** 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. **Pupils will:** • Research the principles of game design and prototyping • Develop game concepts • Develop game prototypes • Present and evaluate game concepts	**Unit 6 Application Design** In this unit pupils will explore potential ideas for a new application and develop the fundamental design for it. **Pupils will:** • Research how applications are designed • Investigate potential solutions for application developments • Generate designs for application solutions Present application solutions to meet client and user requirements	**Pupil will finish their project: Unit 6 Application Design** **Revise for Summer Exam Unit 2**
Useful websites	Useful websites	Useful websites
OCR Website: 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/ Practice coding: https://www.w3schools.com/html/		
Other ways to support learning	Other ways to support learning	Other ways to support learning
Classroom Google Classroom with practice work and exam papers.		