SMITH'S WOOD ACADEMY

FAIRFAX MULTI-ACADEMY TRUST

ICT 5 Year Curriculum Plan

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ENRICHING LIVES; TRANSFORMING FUTURES

Trust Curriculum Policy Extract

The Trust curriculum ensures all students in the Trust experience a rich, broad and balanced experience , reflecting the FMAT mission of `Enriching lives, transforming futures`. **We want all our students to experience the joy and wonder of learning.**

We place a strong emphasis on nurturing the spiritual, moral, social and cultural development of students, along with a firm commitment to developing students' resilience and character **through the acquisition of life skills**. We are preparing all our students to contribute positively to modern British society **and have a suitable career and destination**. All students have the entitlement to study a rich and varied curriculum

The Trust values permeate the curriculum

Excellence: a curriculum of the highest quality to ensure excellent outcomes
Dedication: we believe there is dignity in hard work
Ambition: we want the very best for all of our students.
Integrity: moral purpose will underpin the curriculum decisions we make for our students
Tradition: British values, literacy and numeracy underpin the curriculum

A well-constructed curriculum will lead to good results because these results will reflect what students have learned. The curriculum is the progression model, enabling students to **know more, remember more and be able to do more.**

Teaching and Learning Vision

Knowledge is power. Information is liberating.
Kofi Annan

We believe all students, whatever their background, are able to become experts in the disciplines that they study. Their expertise will be achieved through quality teaching and the dissemination of deep knowledge by highly skilled and knowledgeable subject experts – in every classroom, every lesson, every day.

Our students have the right to be introduced to deep knowledge and a wealth of information from the spectrum of subjects that they study. They will be introduced to, and understand, theories and principles that have influenced, continue to influence, and will influence in the future, the world in which they live. They will be prepared to fully engage in academic discussion about their learning.

This learning will secure a successful place in society for our students. They will go further than they ever thought possible.

Teaching and Learning Vision for the ICT Department

Through a programme of exciting vocational courses we will prepare our students for the world of work in the 21st Century. To ensure students are ready for the next stage in their career, we provide them with the knowledge, understanding and skills that complement the Academy's academic Key Stage Four curriculum. Engaging and aspirational teaching is enhanced by links with local businesses which gives our students the opportunity to thrive, achieve and to become successful members of the workforce of tomorrow.

Here at Smith's Wood Academy, we aim to securely equip all of our students for life beyond school as successful, confident, responsible and respectful citizens. We believe that education provides the key to social mobility and our curriculum is designed to build strong foundations in the knowledge, understanding and skills which lead to academic and personal success. We want our students to enjoy the challenges that learning offers.

Our aims are underpinned by a culture of high aspirations. Through developing positive relationships, we work towards every individual having a strong belief in their own abilities so that they work hard, build resilience and achieve their very best.

Intent
The curriculum includes formal teaching through subject areas and extracurricular activities. We regularly review content to ensure we continue to meet our curriculum aims. The ICT, Business Studies and Computing curriculum is planned to enable all students to develop:

- Exceptional problem-solving skills
- A High level of competency in regards to computer skills
- Basic knowledge of the difference between ICT and Computing
- Business Studies knowledge to help understand the way businesses work in real-life situations
- Passion for the curriculum and interest in future careers in the relevant industries
- Throughout our programmes of study, every attempt is made to make explicit links to careers and the world of work. In addition to subject specific links, we aim to explicitly reinforce the skills and aptitudes which support employers say are important in the workplace;
    - Resilience (Aiming High, Staying Positive, Learning from Mistakes)
    - Collaboration (Teamwork Leadership Communication)
    - Creativity (Originality, Problem Solving, Independent Study)
    - The British values of democracy, the rule of law, individual liberty, and mutual respect of those with different faiths and beliefs are taught explicitly and reinforced in the way in which the school operates.

We can turn every learner into an expert in ICT, at the same time as developing a love for the subject.

At the end of Year 11 students in ICT will….

Know…
How to demonstrate knowledge and understanding of audiences at which work is targeted. • The purpose in common applications and/or applications they have used. • How to demonstrate knowledge and understanding of strengths and weaknesses in the ways information is presented. • How to demonstrate knowledge and understanding of intellectual property. • Common file types and the implications of open and proprietary standards. • Information flow starting with input of information, processing and output. • The costs associated with different applications including direct and indirect costs. • Have the confidence to deal with the unfamiliar such as the code in a computer program and work out what to do. • The principles of ordered list of instructions underpinning algorithms. • Abstraction as picking out common features of objects in order to simplify. E.g. A common structure for a template to input information into different systems. • The benefits of target setting for IT projects. • Specific characteristics of software in order to make choices of tools.
Understand…
The over-arching aim is to enable students to support their learning in all subjects using IT tools that are freely and legally available from the internet. Subordinate aims include: • developing the skills needed for employment. • gaining practical experience and competence with contemporary technologies including programming where appropriate. • increasing the capacity to transfer knowledge and skills between contexts. • developing practical skills in creativity and problem solving. • developing an understanding of the social and commercial impact of IT. • developing an understanding of the legal, social, economic, ethical and environmental issues raised by IT. • developing safe, secure and responsible practice when using IT including reducing risk. • developing the skills to work collaboratively with IT. • developing skills in critical evaluation and feedback • demonstrate a practical understanding and respect for acceptable use policies.
Be able to…
• Use tools and techniques in different digital hardware and software technologies, • Integrate digital solutions to manage and communicate data and information. • Describe what data and information are • Explain and the legal, ethical and moral considerations when using technology to gather, store and present data and information, • Mitigate the risks of cyber-attacks. • Select and use the most appropriate technology safely and effectively, • Complete a data management task,. • Follow a project life cycle of initiation, planning, execution and evaluation to complete a data management task • Use their skills, knowledge and understanding of technology to complete each of the phases of the project life cycle.

Have been exposed to the following knowledge, theories, texts and experiences that span beyond the specification

These texts show the building of the Microsoft Empire, and how it happened, along with positive mindset books, ideal to support our students in having an optimistic "can-do" attitude towards their studies.

Additional Reading around the subject

- Hard Drive: Bill Gates and the Making of the Microsoft Empire
- The 6 Most Important Decisions You'll Ever Make: A Guide for Teens Paperback, by Sean Covey
- You Don't Have to Learn Everything the Hard Way: What I Wish Someone Had Told Me Paperback by Laya Saul
- The Power of Positive Thinking Paperback by Dr. Norman Vincent Peale

Course Reading (Yr. 11)
Cambridge National Level 1/2 Certificate in Information Technologies, Brian Gillander
My Revision Notes: Cambridge National Level 1/2 in Information Technologies, Sonia Stuart

Course Reading (Yr. 10)
Cambridge National Level 1/2 Creative iMedia, Kevin Wells
My Revision Notes: OCR Cambridge Nationals in Creative iMedia L 1 / 2: Pre-production skills and Creating digital graphics Paperback, Kevin Wells

Youtube Channels (Yr. 11)
MrBrownCS
Mr D Gale

Youtube Channels (Yr. 10)
Tech Head Online Learning
RIC Film and Media

Developed their cultural and social capital through the following extra-curricular work

An aspiration for many young people is to be self-employed and start their own business. The skills required for this, such as being able to work collaboratively and creatively, solve problems and have awareness ICT, are also those requested by employers.

Cambridge Nationals are designed to allow students the freedom to explore more deeply the things that interest them. The teaching of the qualification will be through practical work, learning skills and how to do things that may be relevant to the world of work. This qualification provides a strong base for progression to further education, whether it is on to Level 3 Cambridge Technicals, A Levels, apprenticeship or work.

5 Year Curriculum Plan

Year 7 Computing at Smith's Wood Academy
The Smith's Wood Year 7 Computing curriculum prepares all students to be introduced to the world of computing and ICT in a safe and secure fashion. A high-quality computing education equips students to use computational thinking and creativity to understand and change the world. Computing has deep links with mathematics, science and design and technology, and provides insights into both natural and artificial systems. The core of computing is computer science, in which students are taught the principles of information and computation, how digital systems work and how to put this knowledge to use through programming. Building on this knowledge and understanding, students are equipped to use information technology to create programs, systems and a range of content. Computing also ensures that students become digitally literate – able to use, and express themselves and develop their ideas through, information and communication technology – at a level suitable for the future workplace and as active participants in a digital world. Our students will start their Computing education at Smith's Wood with an introduction to the network, and their user accounts, setting up passwords, emails and areas before learning how to access some of the Academy's software. We then move to E-Safety, ensuring our students have an immediate understanding of a range of ways to use technology safely, respectfully, responsibly and securely, including protecting their online identity and privacy; how to recognise inappropriate content, contact and conduct, and know how to report concerns. Once our students are safe in their use of ICT, they will develop their knowledge of the hardware and software components that make up computer systems, and how they communicate with one another and with other systems. We complete our first year in Computing with developing our students' skills in word processing. They will be taught how to use a word processing system efficiently and effectively, including the use of tables, referencing and mail-merge, in order to equip them with the skills for future years.

Year 7 Units of Study		Length of unit
Unit 1	Introduction to Smith's Wood Academy ICT Network	6
Unit 2	National Curriculum Strand 9 – E-Safety	9
Unit 3	National Curriculum Strand 5 – Hardware and Software	14
Unit 4	Word Processing Skills	9

Year 8 Computing at Smith's Wood Academy
The Smith's Wood Year 8 Computing curriculum prepares all students to be introduced to the world of computing and ICT in a safe and secure fashion. A high-quality computing education equips students to use computational thinking and creativity to understand and change the world. Computing has deep links with mathematics, science and design and technology, and provides insights into both natural and artificial systems. The core of computing is computer science, in which students are taught the principles of information and computation, how digital systems work and how to put this knowledge to use through programming. Building on this knowledge and understanding, students are equipped to use information technology to create programs, systems and a range of content. Computing also ensures that students become digitally literate – able to use, and express themselves and develop their ideas through, information and communication technology – at a level suitable for the future workplace and as active participants in a digital world. Our students will start their Computing education at Smith's Wood with an introduction to the network, and their user accounts, setting up passwords, emails and areas before learning how to access some of the Academy's software. We then move to E-Safety, ensuring our students have an immediate understanding of a range of ways to use technology safely, respectfully, responsibly and securely, including protecting their online identity and privacy; how to recognise inappropriate content, contact and conduct, and know how to report concerns. Once our students are safe in their use of ICT, they will develop their knowledge of the hardware and software components that make up computer systems, and how they communicate with one another and with other systems. We complete our first year in Computing with developing our students' skills in iMedia and Business Enterprise. These are optional subjects within the Work Related Learning Faculty at Key Stage 4, and this project will give them a base knowledge of what the later courses entail, exciting them with new skills and knowledge, to entice them to choose at least one of our subjects at the Options events in early Yr 9.

Year 8 Units of Study		Length of unit
Unit 1	Introduction to Smith's Wood Academy ICT Network	6
Unit 2	National Curriculum Strand 9 – E-Safety	9
Unit 3	National Curriculum Strand 5 – Hardware and Software	14
Unit 4	iMedia / Business Project	9

Year 9 Computing at Smith's Wood Academy
The Smith's Wood Year 9 Computing curriculum prepares all students to be introduced to the world of computing and ICT in a safe and secure fashion. A high-quality computing education equips students to use computational thinking and creativity to understand and change the world. Computing has deep links with mathematics, science and design and technology, and provides insights into both natural and artificial systems. The core of computing is computer science, in which students are taught the principles of information and computation, how digital systems work and how to put this knowledge to use through programming. Building on this knowledge and understanding, students are equipped to use information technology to create programs, systems and a range of content. Computing also ensures that students become digitally literate – able to use, and express themselves and develop their ideas through, information and communication technology – at a level suitable for the future workplace and as active participants in a digital world. Our students will start their Computing education at Smith's Wood with an introduction to the network, and their user accounts, setting up passwords, emails and areas before learning how to access some of the Academy's software. We then move to E-Safety, ensuring our students have an immediate understanding of a range of ways to use technology safely, respectfully, responsibly and securely, including protecting their online identity and privacy; how to recognise inappropriate content, contact and conduct, and know how to report concerns. Our students will then develop their computing knowledge and computational thinking, through the use of 2 programming languages, Python and Scratch, to solve a variety of computational problems; make appropriate use of data structures [for example, lists, tables or arrays]; design and develop modular programs that use procedures or functions. To complete Yr 9, our students will complete 2 units, closely linked to the work that they will be completing in Yr 10, should they opt for either iMedia or Enterprise and Marketing. The first of these 2 units will give our students the chance to create, reuse, revise and repurpose digital artefacts for a given audience, with attention to trustworthiness, design and usability We complete the Key Stage 3 curriculum with our students undertaking creative projects that involve selecting, using, and combining multiple applications, preferably across a range of devices, to achieve challenging goals, including collecting and analysing data and meeting the needs of known users

Year 9 Units of Study		Length of unit
Unit 1	Introduction to Smith's Wood Academy ICT Network	4
Unit 2	National Curriculum Strand 9 – E-Safety	9
Unit 3	National Curriculum Strand 3 – Programming	11
Unit 4	National Curriculum Strand 8 – Digital Artefacts	9
Unit 5	National Curriculum Strand 7 – Interactive Multimedia Product	9

Year 10 iMedia at Smith's Wood Academy
The Smith's Wood Year 10 ICT / iMedia curriculum will provide students with essential knowledge, transferable skills and tools to improve their learning in other subjects with the aims of enhancing their employability when they leave education, contributing to their personal development and future economic well-being. The course will encourage independence, creativity and awareness of the digital media sector. The Cambridge Nationals in Creative iMedia will equip students with a range of creative media skills and provide opportunities to develop, in context, desirable, transferable skills such as research, planning, and review, working with others and communicating creative concepts effectively. This course is ideal for our students, allowing them to focus on their creative skills in Year 11, following the building of their knowledge base in Year 10. This course has a strong practical and artistic element to it, which suits our student's knowledge and context. With 75% of the course being accredited through coursework, our students will have an exceptional chance to succeed in their studies. Many of our students will progress to working with practical, ICT skills, and the knowledge and experiences developed in this course will aid to their continued success. Using these skills, students will ultimately be creating fit-for-purpose creative media products. The Cambridge Nationals in Creative iMedia will also challenge all students, including high attaining students, by introducing them to demanding material and techniques; encouraging independence and creativity and providing tasks that engage with the most taxing aspects of the National Curriculum. Our students will study Pre-production skills, how to create digital graphics, a multi-page website and an interactive multimedia product. These units are studied in this order because we teach the theory unit first, as it develops the knowledge required in order to be able to access the coursework units later. The theory unit has 4 Learning Objective's which build upon each other, developing the ability to be able to produce and understand documentation and projects in Media, and understand basic Media concepts The theory unit is titled "Pre-production Skills" and will aid the students to understand: • How to understand the purpose and content of pre-production • Be able to plan, produce, and subsequently review a range of pre-production documents We will then deliver 3 further, coursework, units, which will entail the students completing work on creating digital graphics, creating a multi-page website and creating an interactive multimedia product. All coursework units follow a similar structure, that of starting with understanding the purpose and properties of the product in question, followed by planning, production and finishing with the reviewing of the product.

Year 10 Units of Study		Length of unit
Unit 1	R081 Pre-production Skills	2 terms
Unit 2	R082 Creating Digital Graphics	1 term

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Year 11 Information Technologies at Smith's Wood Academy

The Smith's Wood Year 11 Information Technologies will provide students with essential knowledge, transferable skills and tools to improve their learning in other subjects with the aims of enhancing their employability when they leave education, contributing to their personal development and future economic well-being. The course will encourage independence, creativity and awareness of the Information Technologies sector

The Cambridge Nationals in Information Technologies will teach our students what different technologies could be used, why they should use them and how to make best use of them, to gather, store, manipulate and present data (known as data management).

Our students will learn about tools and techniques for use in different digital hardware and software technologies, and how these can be integrated to create digital solutions to manage and communicate data and information. They will also be taught what data and information are and the legal, ethical and moral considerations when using technology to gather, store and present data and information, and how to mitigate the risks of cyber-attacks. Through this qualification they will be able to select and use the most appropriate technology safely and effectively, to complete a data management task, such as a cable TV provider monitoring customers' viewing to make recommendations for additional packages in the customer's subscription.

They will also learn to follow a project life cycle of initiation, planning, execution and evaluation to complete a data management task and use their skills, knowledge and understanding of technology to complete each of the phases of the project life cycle.

The skills, knowledge and understanding they will develop through this qualification are very relevant to both work and further study. They will support them in a range of subject areas such as A Levels in Business or Geography, or Cambridge Technicals in IT. They can also support their progression into employment through Apprenticeships in areas such as Digital Marketer or Business Administrator.

This course is ideal for our students, allowing them to focus on their IT skills in Year 11, following the building of their knowledge base in Year 10. This course has a strong practical element to it, which suits our student's knowledge and context. With 50% of the course being accredited through coursework, our students will have an exceptional chance to succeed in their studies.

Many of our students will progress to working with practical, ICT skills, and the knowledge and experiences developed in this course will aid to their continued success.

In Year 11 there is only one unit to focus upon, R013: Developing technological solutions. The practical assignment is set by OCR, taken under controlled conditions, marked by the teacher and moderated by OCR.

This assessment focuses on how effectively our students use their skills when developing a technological solution.

They will be given a project to develop a technological solution that processes data and communicates information.

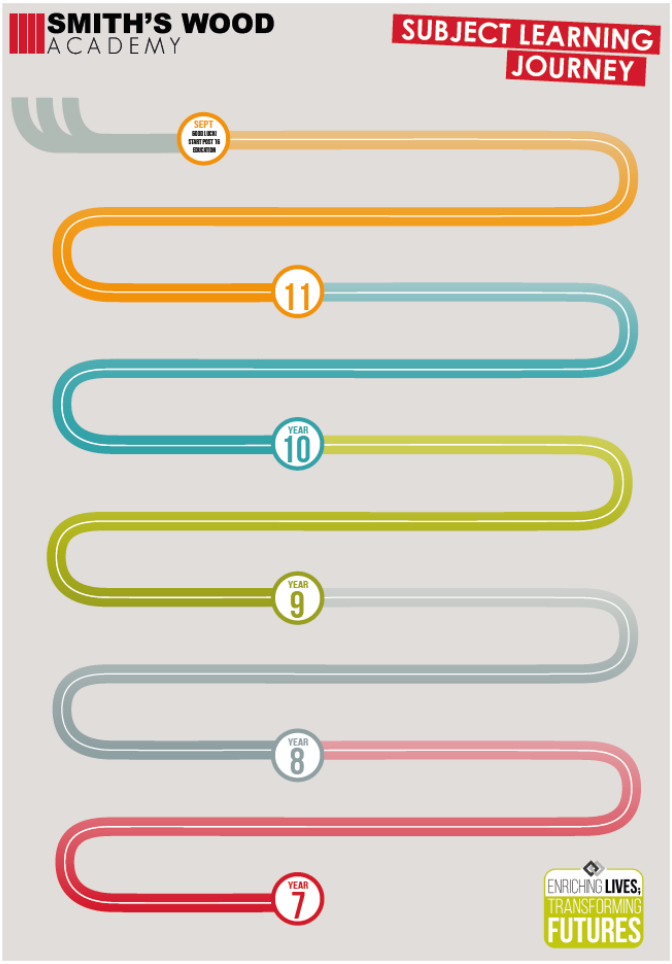
They will follow the project life cycle phases of initiation/planning, execution, communication and evaluation, demonstrating the practical skills they have acquired such as carrying out a SWOT analysis, creating GANTT charts, developing online surveys, and/or presenting data through webbased technologies; keeping their project on track through on-going, iterative reviews.

They will use different hardware and software technologies to create an integrated technological solution for data processing and communication of information.

The knowledge and understanding in this qualification will help them to make appropriate choices and decisions about the technological solution(s) they will develop. The skills in the qualification will help them to work effectively when developing a solution. Considering how their understanding can help them use their skills and how using their skills can improve their understanding, will help our students succeed in this qualification.

Year 11 Unit of Study		Length of unit
Unit 1	R013: Developing technological solutions (up to a maximum of 2 attempts)	2 terms

The *Subject* Department Learning Journey at a glance



To include – topics, purpose of study and assessment points. To show how and why the curriculum is sequenced in the way in which it is.