YEAR 7 COMPUTING CURRICULUM PROGRESSION OVERVIEW

Our vision is to provide an ambitious, quality, educational experience for every student attending Huntcliff School, empowering them to achieve excellence and progress to future study, employment or training.

In Computing we cover the full national curriculum.

At KS3 all students participate in projects that provide a solid and practical introduction to the three pillars of Computing: Computer Science, ICT and Digital Literacy. We offer a broad knowledge rich curriculum where students develop declarative and procedural knowledge of the three pillars of progression as they progress through the curriculum.

The core of computing is computer science, in which pupils 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, pupils are equipped to use information technology to create programs, systems and a range of content. Computing also ensures that pupils 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.

We intend for all of our students to know more, remember more and to be able to do more.

	Autumn Term 1	Autumn Term 2	Spring Term 1	Spring Term 2	Summer Term 1	Summer Term 2
Topic	**Introduction to Computing**	**E - Safety**	**Computational Thinking**	**Fundamentals of Computing**	**Digital Literacy and Numeracy** (Spreadsheet modelling)	**Kodu games lab**
Core Knowledge/ Threshold Concept	Logging into school IT systems. Understand effective passwords. School/Trust policy in use of computer systems at school. Email and Classcharts. Understanding how to communicate electronically with the school or teachers. Homework management on classcharts and submission protocols. Effective searching and storage of each subject work on the computer. Building directories and understanding the concept of a directory tree, creating the same. Introduction to Unifrog, basic task led learning.	Digital footprint - Understand the consequences of online activity. Understanding permanency – Cannot change or truly hide footprint. Long lasting effects including job prospects in later life. Online privacy – Information that should and should not be given to others on line. Privacy settings for packages such as Facebook, Instagram and tiktok Health and safety – understanding how to keep yourself healthy around computers and electricity. Identifying hazards, slips, trips and falls. Effect of overloading sockets etc. Gaming addiction – signs and symptoms. Dangers and positives.	Decomposition – breaking down a problem into smaller or constituent parts in order to make each part mire manageable to solve. Abstraction – Removal of irrelevant details which can cloud the problem and do not help to find a solution Repetition – Identify patterns in a problem in an effort to deal with an issue once only, repeating already worked solutions to appropriate areas of the problem Algorithmic thinking – Creating step-by-step solutions to a problem understanding that vague or incomplete instructions can cause significant problem	CPU GPU Memory Storage – Volatile and Non-volatile, Magnetic/Optical and Solid-state variants Peripherals – difference between I/O variants (Including some characterised as both) Operating systems	Identify areas of a spreadsheet such as rows, columns and cells. Basic and more advanced formulas including Lookup.	Creation of working game creating terrain, scoring, resizing and reshaping. Offsetting speed against agility. Understanding the event driven concept of programming

Why this learning now?	Critical unit as students are welcomed to Huntcliff School, they must understand how to keep their account secure and ensure that they are always able to access lesson materials.	Introduces students to how to stay safe on-line. Building on KS2 understanding the effects of being on-line and how useful it can be in everyday life. Understanding the dangers in order to keep students safe	Provides a foundational understand of problem solving applicable to all subjects within the school Prepares students for Python programming in year 8 and 9	An understanding of "what's in the box". What is required to make a basic computer and how each part interacts to make a functioning machine	Provides experience of software used extensively in industry. Analysis of data to effectively answer questions	Introduces games design in a basic, user friendly and accessible environment
Assessment Opportunities:	Students will be assessed in accordance to the flight path of skills and knowledge they demonstrate throughout the unit. Students will during this half term be given a base line assessment to gage their knowledge when entering KS3	Students will be assessed in accordance to the flight path of skills and knowledge they demonstrate throughout the unit. Students will be subject to an end of term assessment.	Students will be assessed in accordance to the flight path of skills and knowledge they demonstrate throughout the unit. Students will be subject to an end of term assessment.	Students will be assessed in accordance to the flight path of skills and knowledge they demonstrate throughout the unit. Students will be subject to an end of term assessment.	Students will be assessed in accordance to the flight path of skills and knowledge they demonstrate throughout the unit. Students will be subject to an end of term assessment.	Students will be assessed in accordance to the flight path of skills and knowledge they demonstrate throughout the unit.
Learning at Home	No homework	Homework	Homework	Homework	Homework	Homework
Key Vocabulary	Directory/subdirectory tree Searching	Addiction Risk Footprint/tattoo	Decomposition Abstraction Repetition Algorithmic thinking	CPU/GPU Peripheral devices Volatile/Non volatile Magnetic/Optical and SSD	Spreadsheet Formulas Data interrogation	Resize Icon Movement
Spiritual, Moral, Social and Cultural concepts covered	Students will be encouraged to develop a sense of enjoyment and fascination in learning about themselves, others and the world around them. Students will develop an understanding of the consequences of behaviour and action in respect to the impact upon others. Students will develop and utilise a range of social skills in different contexts in order to aid their learning.					
Links to careers and the world of work	ICT Technician Data Analyst Cyber Security Engineer Graphics Designer Games Designer					

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