Computing and ICT Year 7 Curriculum overview

The below is intended to provide parents and pupils with a simple overview of Year 7 Computing and ICT. Should you have any additional questions please do not hesitate to contact Mr Rubery. We strongly encourage parents to talk to their children about their studies as well as encouraging them to use the school email system and Classcharts to access work from home.

Learning Focus	Assessments
Unit 1: Introduction & using computers safely and effectively	
Learning enquiries: 1.) Obtain content from the world wide web using a web browser 2.) Know what to do when concerned about content or being contacted online. 3.) Navigate the web and can carry out simple web searches to collect digital content. 4.) Explain the difference between a web browser and a search engine. 5.) Understand the importance of communicating safely and respectfully online, and the need for keeping personal information private. 6.) Effectively use search engines. 7.) Show an awareness of, and use a range of internet services e.g. VOIP. Key Skills and National Curriculum links: "Understand a range of ways to use technology safely, respectfully, responsibly and securely, including protecting their online identity and privacy; recognise inappropriate content, contact and conduct and how to report concerns."	**Interim Assessment:** Pupils will be assessed on an ongoing basis during this topic, they will have low stakes tests and recap questions and be provided with feedback about any misconceptions. **Final Assessment:** This will test the pupil's knowledge and understanding of key concepts related to using computers, the internet and how to use these in appropriate ways. They will also demonstrate an understanding of how to report any concerns they have when online.
Unit 2: Modelling Data - Spreadsheets	
Learning enquiries: 1). Recognise that digital content can be represented in many forms. 2.) Understand the difference between data and information. 3.) Recognise that data can be structured in tables to make it useful. 4.) Classify different types of data (text, number) and understands how these are used in different situations 5.) Demonstrate how filters or single criteria searches can find information. 6.) Illustrate how digital computers use binary to represent all data. 7.) Summarise the relationship between data representation and data quality. 8.) Analyse data 9.) Use the functions AVERAGE, COUNTIF, and IF in a spreadsheet 10.) Use conditional formatting in a spreadsheet. Key Skills and National Curriculum links: "Design, use and evaluate computational abstractions that model the state and behaviour of real-world problems and physical systems" "Undertake 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"	**Interim Assessment:** Pupils will be assessed on an ongoing basis during this topic, they will have low stakes tests and recap questions and be provided with feedback about any misconceptions. They will have chance to embed and practise skills before the final assessment. **Final Assessment:** This assessment will test for understanding of how to analyse, interpret and present data based on real world forestry data using a range of spreadsheet skills.
Unit 3: Introduction to coding using Scratch	
Learning enquiries: 1.) Define what an algorithm is. 2.) Reproduce/follow algorithms step-by-step. 3.) Observe that programs execute by following precise instructions. 4.) Execute, check and change programs. 5.) Understand that computers need precise instructions. 6.) Demonstrate care and precision to avoid errors. 7.) Know that users can develop their own programs, and can demonstrate this by creating a simple program in an environment that does not rely on text. 8.) Detect and correct simple semantic errors i.e. debugging, in programs. 9.) Demonstrate how arithmetic operators, if statements, and loops, are used within programs. 10.) Declare and assign variables. 11) Solve problems	**Interim Assessment:** Pupils will be assessed on an ongoing basis during this topic, they will have low stakes tests and recap questions and be provided with feedback about any misconceptions. They will have chance to embed and practise coding skills before the final assessment.

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through decomposition. 12.) Build programs that implement algorithms to achieve given goals. 13.) Use logical reasoning to predict the behaviour of programs. Key Skills and National Curriculum links: "Undertake 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", "Use 2 or more programming languages", "create, re-use, revise and re-purpose digital artefacts for a given audience, with attention to trustworthiness, design and usability"	**Final Assessment:** Part 1: Pupils will be tested on their understanding of key computing terms: Sequencing, Variables, Selection, conditions, operators and iteration. Part 2: Pupils will be assessed on their ability to write short programs to solve problems. They will be set a challenge of writing a programme to translate ten common worlds between different languages.