

Computing & ICT Year 7 Curriculum overview

The below is intended to provide a simple overview of Year 7 Computing & ICT, the scheme of learning will provide the detailed exposition including literacy, SMSC, assessment, homework, learning activities and resources

Learning Focus	Assessments
<p>Weeks 1–7: TOPIC 1 - Introduction & using computers safely and effectively</p> <p>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.</p> <p>Key Assessment objectives / skills: “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.”</p>	<p>Assessment One: Any of the learning enquiries can be used as an interim assessment opportunities. Homework sheets and tasks supplement lesson content and allow for assessment at the start of each session. Homework sheets available for each lesson.</p> <p>Final Assessment: Socratic based assessment with differentiated options.</p>
<p>Weeks 7-?: TOPIC 2 - Modelling Data - Spreadsheets</p> <p>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.</p> <p>Key Assessment objectives / skills: “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”</p>	<p>Assessment One: Any of the learning enquiries can be used as an interim assessment opportunities. Homework sheets and tasks supplement lesson content and allow for assessment at the start of each session. Homework sheet available for each lesson.</p> <p>Final Assessment: Final assessment based on summative assessment. Learners have to manipulate analyse and present data using a spreadsheet based on UK forestry data.</p>
<p>Weeks 8-?: TOPIC 3 – Introduction to coding using Scratch</p> <p>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 through decomposition. 12.) Build programs that implement algorithms to achieve given goals. 13.) Use logical reasoning to predict the behaviour of programs.</p> <p>Key Assessment objectives / skills: “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” “create, re-use, revise and re-purpose digital artefacts for a given audience, with attention to trustworthiness, design and usability”</p>	<p>Assessment One: Any of the learning enquiries can be used as an interim assessment opportunities. Homework sheets and tasks supplement lesson content and allow for assessment at the start of each session. Assessment sheets bases on decomposition of code and writing pseudo code.</p> <p>Final Assessment: Part 1 – Summative assessment, a multiple choice and justification of answers exercise. Part 2 – Summative assessment based on final project work.</p>