

# Year 9 teaching objectives

NOTE: Objectives highlighted in a tint are related to reviewing, modifying and evaluating work as it progresses.

Finding things out	Developing ideas and making things happen	Exchanging and sharing information
<p><b>Using data and information sources</b></p> <ul style="list-style-type: none"> <li>• Select information sources and data systematically for an identified purpose by:               <ul style="list-style-type: none"> <li>– judging the reliability of the information sources;</li> <li>– identifying possible bias due to sampling methods;</li> <li>– collecting valid, accurate data efficiently;</li> <li>– recognising potential misuse of collected data.</li> </ul> </li> </ul> <p><b>Searching and selecting</b></p> <ul style="list-style-type: none"> <li>• As part of a study, analyse high-volume quantitative and qualitative data systematically by:               <ul style="list-style-type: none"> <li>– exploring the data to form and test hypotheses;</li> <li>– identifying correlations between variables;</li> <li>– drawing valid conclusions and making predictions;</li> <li>– reviewing the process of analysis and the plausibility of the predictions or conclusions.</li> </ul> </li> </ul> <p><b>Organising and investigating</b></p> <ul style="list-style-type: none"> <li>• Construct, test and document the development of a database system which shows:               <ul style="list-style-type: none"> <li>– a design specification;</li> <li>– appropriate means of data input and validation;</li> <li>– systematic testing of processes and reports;</li> <li>– evaluation of the system's performance and suggested modifications.</li> </ul> </li> </ul>	<p><b>Analysing and automating processes</b></p> <ul style="list-style-type: none"> <li>• Automate ICT processes (e.g. use software to merge mail, create macros in an application program).</li> <li>• Represent a system in a diagram, identifying all its parts, including inputs, outputs and the processes used (e.g. to validate data).</li> </ul> <p><b>Models and modelling</b></p> <ul style="list-style-type: none"> <li>• Design and create ICT-based models, testing and refining rules or procedures.</li> <li>• Test hypotheses and predictions using models, comparing their behaviour with information from other sources.</li> </ul> <p><b>Control and monitoring</b></p> <ul style="list-style-type: none"> <li>• Use ICT to build and test an efficient system to monitor and control events, including:               <ul style="list-style-type: none"> <li>– testing all elements of the system using appropriate test data;</li> <li>– evaluating the system's performance;</li> <li>– annotating work to highlight processes and justify decisions.</li> </ul> </li> <li>• Review and modify own or others' monitoring and control systems to improve efficiency (e.g. use more efficient procedures, reduce the number of instructions or procedures, add an element of feedback).</li> </ul>	<p><b>Fitness for purpose</b></p> <ul style="list-style-type: none"> <li>• Produce high quality ICT-based presentations by:               <ul style="list-style-type: none"> <li>– creating clear presentations, sensitive to audience needs;</li> <li>– justifying the choice of form, style and content.</li> </ul> </li> <li>• Use knowledge of publications and media forms to devise criteria to assess the quality and impact of multimedia communications and presentations, and apply the criteria to develop and refine own work.</li> </ul> <p><b>Refining and presenting information</b></p> <ul style="list-style-type: none"> <li>• Use a wide range of ICT independently and efficiently to combine, refine, interpret and present information by:               <ul style="list-style-type: none"> <li>– structuring, refining and synthesising information from a range of sources;</li> <li>– selecting and using software effectively, justifying the choices made.</li> </ul> </li> </ul> <p><b>Communicating</b></p> <ul style="list-style-type: none"> <li>• Apply knowledge of the technical issues involved to communicate information efficiently (e.g. choose suitable file types to speed up transfer, use mail lists to speed up communication, use website tagging and hyperlinks to speed up searching).</li> <li>• Understand the advantages, dangers and moral issues in using ICT to manipulate and present information to large unknown audiences (e.g. issues of ownership, quality control, exclusion, impact on particular communities).</li> </ul>