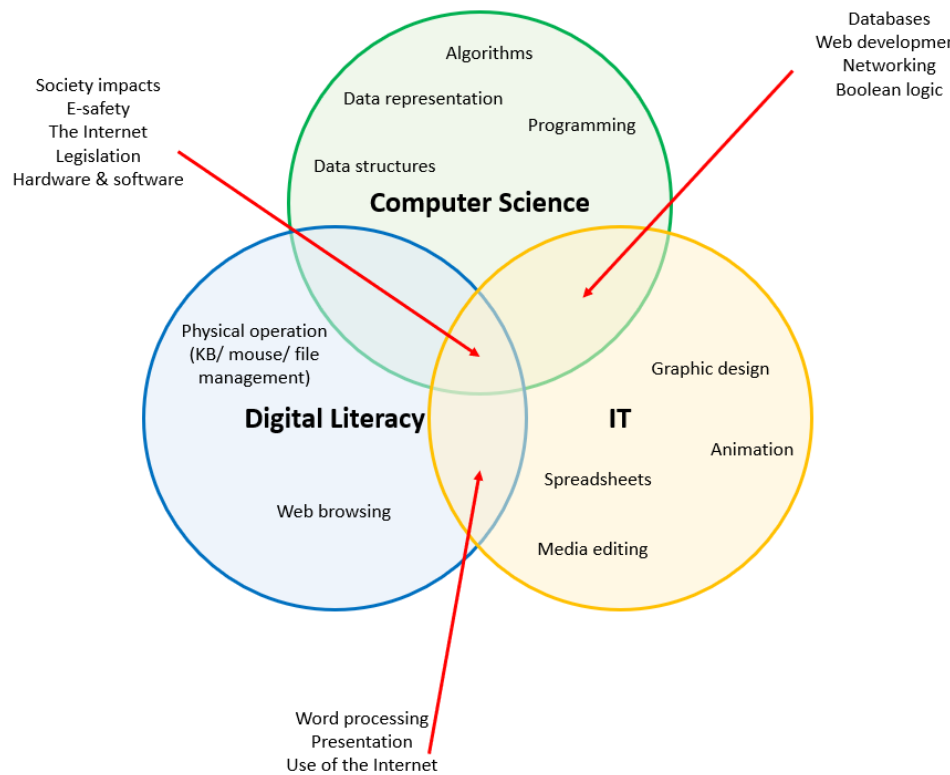


# Computing Curriculum Map

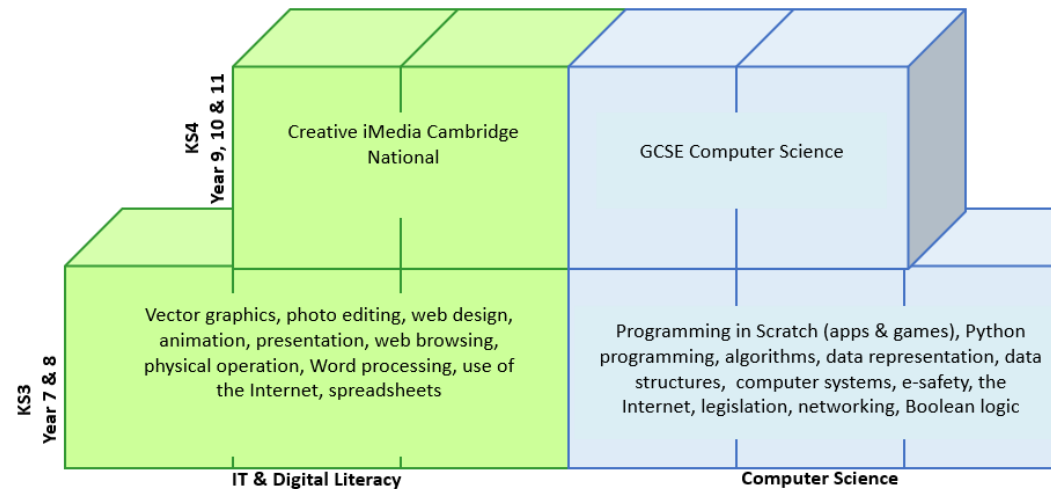
## Curriculum intent

A broad and balanced Computing curriculum has been designed to provide students with learning opportunities in Computer Science, IT and Digital Literacy.

- Distinct Computing provision is new to Stalham High School (2021).
- The aim of the Computing department is to develop young people who are digitally literate, resilient and have problem solving skills. Students will develop transferable skills to use across the curriculum and into the wider world.
- The curriculum is designed in line with the National Curriculum Program of Study for Computing and provides opportunities for progression between and throughout year groups.



## Computing pathways



Curriculum map

| TERM   | KEY STAGE 3  | YEAR 9 – Cambridge National Creative iMedia  | YEAR 9 – GCSE Computer Science  |
|--|--|--|---|
| AUTUMN 1   | <b>Unit:</b>   |  |   |
|  | Collaborating online respectfully - cyberbullying  | Digital creativity – vector graphics   | Problem solving   |
|  | <b>National Curriculum subject content:</b>  |  |   |
|  | <ul style="list-style-type: none"> <li>Using technology safely, respectfully, responsibly &amp; securely. Including recognising inappropriate content, contact &amp; conduct and know how to report concerns.</li> </ul> | <ul style="list-style-type: none"> <li>Create, re-use, revise and re-purpose digital artefacts for a given audience, with attention to trustworthiness, design and usability.</li> </ul> | <ul style="list-style-type: none"> <li>Using programming languages to solve computational problems.</li> <li>Making appropriate use of data structures (e.g. lists).</li> </ul> |
|  | <b>Skills &amp; subject knowledge:</b>   |  |   |
|  | <ul style="list-style-type: none"> <li>Selecting appropriate IT tools for designing for an audience &amp; purpose.</li> <li>Uses of presentation software &amp; the Internet to develop digital literacy.</li> </ul>     | <ul style="list-style-type: none"> <li>Introduction to Adobe Illustrator. Using vector tools to create digital graphics.</li> </ul>  | <ul style="list-style-type: none"> <li>Introduction to block programming (Scratch).</li> <li>Key programming concepts including sequence, selection &amp; iteration.</li> </ul> |
|  | <b>Personal development:</b>   |  |   |
|  | Creativity, staying safe online, sharing work with others, independence.   | Applying academic skills in a real-world context, creativity, planning & preparing.  | Problem solving, resilience, critical thinking, analytical skills.  |
|  | <b>Assessment:</b>   |  |   |
| Cyberbullying presentation (strength, improvement, target-based assessment against assessment criteria). | Strength, improvement, target-based assessment against assessment criteria of website icons, solar city logo & character illustration.   | Regular summative assessments, combining computer based & traditional questions.   |   |
| AUTUMN 2   | <b>Unit:</b>   |  |   |
|  | Problem solving – introduction to Scratch  | Digital creativity – bitmap graphics   | Computational thinking  |
|  | <b>National Curriculum subject content:</b>  |  |   |
|  | <ul style="list-style-type: none"> <li>Using programming languages to solve computational problems.</li> </ul>   | <ul style="list-style-type: none"> <li>Create, re-use, revise and re-purpose digital artefacts for a given audience, with attention to trustworthiness, design and usability.</li> </ul> | <ul style="list-style-type: none"> <li>Using text-based programming language (Python) to solve computational problems.</li> </ul>   |
| <b>Skills &amp; subject knowledge:</b>   |  |  |   |

|                    |   |   |   |
|--------------------|---|---|---|
|                    | <ul style="list-style-type: none"> <li>Introduction to block programming (Scratch).</li> <li>Key programming concepts including sequencing, iteration &amp; variables.</li> </ul>                                       | <ul style="list-style-type: none"> <li>Introduction to Adobe Photoshop. Using bitmap tools to edit, combine &amp; create digital graphics.</li> </ul> | <ul style="list-style-type: none"> <li>Introduction to writing code (Python) including first programs, arithmetic operators, assigning variables, data types, casting, concatenation, loops, conditional operators/ Boolean expressions, IF/ ELIF.</li> </ul>   |
|                    | <b>Personal development:</b>  |   |   |
|                    | Problem solving, resilience, critical thinking, analytical skills.  | Applying academic skills in a real-world context, creativity, planning & preparing.   | Problem solving, resilience, critical thinking, analytical skills.  |
|                    | <b>Assessment:</b>  |   |   |
|                    | Scratch (multiple choice onscreen assessment).  | Strength, improvement, target-based assessment against assessment criteria.   | Regular summative assessments, combining computer based & traditional questions.  |
| SPRING             | <b>Unit:</b>  |   |   |
|                    | Digital creativity – vector graphics  | Creative iMedia in the Media Industry.  | Computational thinking, algorithms & programming  |
|                    | <b>National Curriculum subject content:</b>   |   |   |
|                    | <ul style="list-style-type: none"> <li>Undertaking creative projects that involve selecting &amp; using applications.</li> <li>Create, re-use, revise and re-purpose digital artefacts for a given audience,</li> </ul> | <ul style="list-style-type: none"> <li>Develop capability, creativity and knowledge in digital media and information technology.</li> </ul>           | <ul style="list-style-type: none"> <li>Using text-based programming language (Python) to solve computational problems.</li> <li>Making appropriate use of data structures (e.g. lists, tables &amp; arrays).</li> </ul>   |
|                    | <b>Skills &amp; subject knowledge:</b>  |   |   |
|                    | <ul style="list-style-type: none"> <li>Introduction to Adobe Illustrator. Using vector tools to create digital graphics.</li> </ul>   | <ul style="list-style-type: none"> <li>Unit R093 preparation: Creative iMedia in the Media Industry.</li> </ul>                                       | <ul style="list-style-type: none"> <li>Computational thinking (abstraction, decomposition &amp; algorithmic thinking).</li> <li>Algorithms (flow charts, pseudocode, trace tables, sorting &amp; searching).</li> <li>Continuing programming fundamentals &amp; introducing lists, operations/ functions in lists.</li> </ul> |
|                    | <b>Personal development:</b>  |   |   |
|                    | Creativity, planning & preparing.   | Creativity, independence, judgement and self-reflection.  | Problem solving, resilience, critical thinking, analytical skills.  |
| <b>Assessment:</b> |   |   |   |

|        |   |   |  |
|--------|---|---|--|
|        | Character illustration (strength, improvement, target-based assessment against assessment criteria).  | Regular summative assessments, combining computer based & traditional questions.  | Regular summative assessments, combining computer based & traditional questions.   |
| SUMMER | <b>Unit:</b>  |   |  |
|        | Introduction to Python programming  | Creative iMedia in the Media Industry.  | Computer Systems   |
|        | <b>National Curriculum subject content:</b>   |   |  |
|        | <ul style="list-style-type: none"> <li>▪ Using text-based programming language (Python) to solve computational problems.</li> </ul>                                 | <ul style="list-style-type: none"> <li>▪ Develop capability, creativity and knowledge in digital media and information technology.</li> </ul> | <ul style="list-style-type: none"> <li>▪ Understand the hardware and software components that make up computer systems, and how they communicate with one another and with other systems.</li> </ul> |
|        | <b>Skills &amp; subject knowledge:</b>  |   |  |
|        | <ul style="list-style-type: none"> <li>▪ Introduction to writing code (Python) including first programs, arithmetic operators &amp; assigning variables.</li> </ul> | <ul style="list-style-type: none"> <li>▪ Unit R093 preparation: Creative iMedia in the Media Industry.</li> </ul>                             | <ul style="list-style-type: none"> <li>▪ Introduction to computer hardware, exploring architecture of the CPU (fetch-execute cycle) &amp; CPU performance.</li> </ul>                                |
|        | <b>Personal development:</b>  |   |  |
|        | Problem solving, resilience, critical thinking, analytical skills.  | Creativity, independence, judgement and self-reflection.  | Problem solving, resilience, critical thinking, analytical skills.   |
|        | <b>Assessment:</b>  |   |  |
|        | End of unit assessment (multiple choice onscreen assessment).   | Regular summative assessments, combining computer based & traditional questions.  | Regular summative assessments, combining computer based & traditional questions.   |