

New Invention Junior School Computing Skills progression map

Computer science

Computational thinking

Computational Thinking			
Year 3	Year 4	Year 5	Year 6
<p>I know how to create algorithms for my programming projects</p> <p>I know how to decompose projects into steps to create an algorithm</p> <p>I understand abstraction is focusing on important information.</p> <p>I know how to identify patterns in an algorithm</p>	<p>I know how to use abstraction to focus on what's important in my design</p> <p>I know how to write more precise algorithms when programming</p> <p>I know how to use simple selection and repetition in algorithms</p> <p>I know how to use logical reasoning to detect and correct errors in programs</p>	<p>I know how to solve problems by decomposing them into smaller parts</p> <p>I know how to use selection in algorithms</p> <p>I know how to use logical reasoning to explain how a variety of algorithms work</p> <p>I know how to evaluate the effectiveness of algorithms</p>	<p>I know how to decompose a design or code to focus on specific parts</p> <p>I know how to use abstraction to hide complexity in my design or code</p> <p>I know how to recognise and make use of patterns in my design and code</p> <p>I know how to critically evaluate my work and suggest improvements.</p>

Coding and programming

Coding and programming			
Year 3	Year 4	Year 5	Year 6
<p>I know how to design a program</p> <p>I know how to create a program using a design</p> <p>I know how to create a sequence of code</p> <p>I know how to work with a variety of inputs and outputs</p> <p>I know how to evaluate my program</p>	<p>I know how to use repetition in programs</p> <p>I know how to use simple selection in programs</p> <p>I know how to work with a variety of inputs and outputs</p> <p>I know how to evaluate my program</p>	<p>I know how to create programs by decomposing them into smaller parts</p> <p>I know how to use a variety of selection commands in programs</p> <p>I know how to use conditions in repetition commands</p> <p>I know how to work with variables</p> <p>I know how to create programs that control or simulate physical systems</p> <p>I know how to evaluate my work and identify errors</p>	<p>I know how to use a range of sequence, selection and repetition commands to implement my design</p> <p>I know how to identify the need for, and work with variables</p> <p>I know how to create procedures to hide complexity in programs</p> <p>I know how to critically evaluate my work and suggest improvements.</p>

Computer networks

Computer Networks			
Year 3	Year 4	Year 5	Year 6
I understand that the computers in a school are connected together in a network I understand why computers are networked	I understand the servers on the internet are located across the planet I understand the difference between the internet and the WWW I understand how web pages are viewed across the internet	I know how to use search technologies I understand that web spiders index the web for search engines I appreciate how pages are ranked in a search engine	I understand what HTML is and recognize HTML tags I know a range of HTML tags and can remix a web page I know how to create a webpage using HTML

Information Technology

Information Technology			
Year 3	Year 4	Year 5	Year 6
I can open and save word documents I can type and delete text to complete a task I can highlight and modify text (size, font, colour) I can copy and paste text into a document.	I can insert tables into my presentation I can format text to suit a purpose (bullet points, headings, paragraphs) I can insert shapes and WordArt I can summarise information to suit the purpose of a presentation	I can edit WordArt to include images and textures suited to a theme I can rearrange the layout of a document taking how 'user-friendly' it is into account I can evaluate the suitability and effectiveness of a document based on self-generated criteria.	I can utilise and calculate with data using Spreadsheet formulae I can present data in an appropriate and user-friendly way (tables, charts) I can select an appropriate program to produce a range of work based on their suitability to the task and desired outcome.

Multimedia

Photography			
Year 3	Year 4	Year 5	Year 6
I can confidently take and manipulate photos I can create a digital image using a range of tools, brushes and effects	I know how to enhance digital images and photographs using crop, brightness colour and size	I know how to link and can explain how to modify images for a purpose and how this can be used in media	I know how to evaluate and discuss images explaining effects and filters that have been used to enhance media.
Video Creation			
Year 3	Year 4	Year 5	Year 6
I know how to sequence clips of mixed media on a timeline and record a voiceover I know how to trim and cut film clips and add titles and transitions	I know how to add music and effects to my films I know how to add animated titles and transitions	I know how to evaluate and improve media using video tools to best explain my understanding of a concept I know how to confidently use Green screen using a range of backgrounds.	I know how to further improve green screen clips using crop and resize and can explore creative ways to use the tool (wearing green clothes, video/animated backgrounds)