What makes a good coder and technology user at Mountfields Lodge School?

- Pupils who **persevere** to become competent in coding for a variety of practical and inventive purposes, including the application of ideas within other subjects.
- Pupils with the ability to connect with others safely and respectfully, understanding the need to act within the law and with moral and ethical integrity.
- Pupils who **explore** and understand the connected nature of devices.
- Pupils with the ability to communicate ideas well by using applications and devices **independently** throughout the curriculum.
- Pupils who have the ability to collect, organise and manipulate data and digital content effectively and to then **communicate** findings.
- Pupils who can select, use and **explore** a variety of software, working purposefully with others, asking questions and **overcoming challenges**.

Progression Map for Computing

Aspect of Subject	KS1	Y3/4	Y5/6
Computer Science	• **To understand and use algorithms to create, predict the behaviour of and debug simple programs.** ***Motion:*** Control motion by specifying the number of steps to travel, direction and turn. ***Looks:*** Add text strings, show and hide objects and change the features of an object. ***Sounds:*** Select sounds and control when they are heard, their duration and volume. ***Draw:*** Control when drawings appear and set the pen colour, size and shape. ***Events:*** Specify user inputs (such as clicks) to control events. ***Control:*** Specify the nature of events (such as a single event or a loop). ***Sensing:*** Create conditions for actions by waiting for a user input (such as responses to questions like: What is your name?).	• **To design, write and debug programs that accomplish specific goals.** ***Motion:*** Use specified screen coordinates tomovement. ***Looks:*** Set the appearance of objects and createof changes. ***Sounds:*** Create and edit sounds. Control when theyheard, their volume, duration and rests. ***Draw:*** Control the shade of pens.	• **To design, write and debug programs that accomplish specific goals including controlling or simulating physical systems; solve problems by decomposing them into smaller parts.** ***Motion:*** Set IF conditions for movements. Specify types of rotation giving the number of degrees. ***Looks:*** Change the position of objects between screen layers (send to back, bring to front). ***Sounds:*** Upload sounds from a file and edit them. Add effects such as fade in and out and control their implementation. ***Draw:*** Upload sounds from a file and edit them. Add effects such as fade in and out and control their implementation.

Aspect of Subject	KS1	Y3/4	Y5/6
Computer Science		• **Use sequence, selection and repetition in programs; work with variables and various forms of input and output.** ***Events:*** Specify conditions to trigger events. ***Control:*** Use IF THEN conditions to control events or objects ***Sensing:*** Create conditions for actions by sensing proximity or by waiting for a user input (such as proximity to a specified colour or a line or responses to questions). ***Variables and Lists:*** Use variables to store a value. Use the functions define, set, change, show and hide to control the variables. ***Operators:*** Use the Reporter operators () + () () - () () * () () / () to perform calculations.	• **Use sequence, selection and repetition in programs; work independently with variables and various forms of input and output.** ***Events:*** Set events to control other events by 'broadcasting' information as a trigger. ***Control:*** Use IF THEN ELSE conditions to control events or objects ***Sensing:*** Use a range of sensing tools (including proximity, user inputs, loudness and mouse position) to control events or actions. ***Variables and Lists:*** Use lists to create a set of variables.

Aspect of Subject	KS1	Y3/4	Y5/6
Computer Science			• **Appreciate how search results are selected and ranked.** - Use the Boolean operators () < () () = () () > () ()and() ()or() Not() to define conditions. • **Appreciate how search results are selected and ranked.** - Use the Reporter operators () + () () - () () * () () / () to perform calculations. - Pick Random () to () Join () () Letter () of () Length of () () Mod () This reports the remainder after a division calculation Round () () of ().

Aspect of Subject	KS1	Y3/4	Y5/6
Information Technology	• Use a range of applications and devices in order to communicate ideas, including text, graphics, messages and online content. • Use technology purposefully to organise, store and retrieve digital content. • Use simple databases to record information in areas across the curriculum. • Participate in class social media account, e.g. VLE projects.	• Use some of the advanced features of applications and devices in order to communicate ideas effectively, including text, graphics, animation, video, messages and online content. • Use technology purposefully to organise, manipulate, store and retrieve digital content independently. • Devise and construct databases in areas across the curriculum, including collecting, evaluating and presenting data. • Contribute to blogs that are moderated by teachers, e.g. VLE projects.	• Independently choose the most suitable applications and devices for communicating ideas. • Use many of the advanced features in order to create high quality, professional or efficient communications. • Use technology effectively to organise, manipulate, store and retrieve digital content independently, giving consideration to file size, type and location. • Select appropriate applications to devise and manipulate data, including independently collecting, analysing, evaluating and presenting data in an effective way. • Collaborate with others online on sites approved and moderated by teachers.
Digital Literacy	• Understand online risks, keeping safe using the SMART rules. • Recognise common uses of information technology beyond school.	• Give examples of the risks posed by online communications. • Understand the term 'copyright'. • Understand that comments made online that are hurtful or offensive are the same as bullying. • Understand how online services work.	• Give examples of the risks of online communities and demonstrate knowledge of how to minimise risk and report problems. • Understand and demonstrate knowledge that it is illegal to download copyrighted material, including music or games, without express written permission from the copyright holder. • Understand the effects of online comments and show responsibility and sensitivity when online. • Understand how simple networks are set up and used.

'A CURRICULUM TO INSPIRE'

Aim High Reach for the Sky!