Lower Meadow Progression of skills in Computing.

Lower Meadow Computing curriculum has been organised into a 2-year cycle, which ensures the children will experience all Attainment targets in the National curriculum.

Progression across key stages

All learning objectives have been mapped to the National Centre for Computing Education's taxonomy of ten strands, which ensures that units build on each other from **one key stage to the next. Progression is made throughout each Key Stage.**

Progression across year groups

Within the Teach Computing Curriculum, every year group learns through units **within the same four themes**, which combine the ten strands of the National Centre for Computing Education's taxonomy. This approach allows us to use the spiral curriculum approach to progress skills and concepts from one-year group to the next.

National Curriculum Attainment Targets – Computing.

EYFS – Understanding the World Around Us.

Within the recent updates of the EYFS curriculum, the computing part has been taken out. However, LM staff are working on developing computer activities we feel our EYFS children will need in order to help/accelerate their progression and understanding in Key stage 1.

KS1 Computing

Pupils should be taught to:

- understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions
- create and debug simple programs
- use logical reasoning to predict the behaviour of simple programs
- use technology purposefully to create, organise, store, manipulate and retrieve digital content
- recognise common uses of information technology beyond school
- use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies.

KS2 – Computing

Pupils should be taught to:

- design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts
- use sequence, selection, and repetition in programs; work with variables and various forms of input and output
- use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs
- understand computer networks including the internet; how they can provide multiple services, such as the world wide web; and the opportunities they offer for communication and collaboration
- use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content
- select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information
- use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.

Computing Coverage Whole School Overview.

Year 1/2 (cycle 1)						
	Autumn 1	**Autumn 2**	**Spring 1**	**Spring 2**	**Summer 1**	**Summer 2**
Year 1 /2	Technology around us. Recognising technology in school and using it responsibly (1.1)*	Digital painting (1.2) Choosing appropriate tools in a program to create art, and making comparisons with working non-digitally.	Moving a robot Writing short algorithms and programs for floor robots, and predicting program outcomes. (1.3)	Grouping data Exploring object labels, then using them to sort and group objects by properties. (1.4)	Digital writing Using a computer to create and format text, before comparing to writing non-digitally (1.5)	Programming animations Designing and programming the movement of a character on screen to tell stories (1.6)
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Useful links.						

Year 3/4 (Cycle 1)						
	Autumn 1	**Autumn 2**	**Spring 1**	**Spring 2**	**Summer 1**	**Summer 2**
Year 3 /4	Connecting computers. Identifying that digital devices have inputs, processes, and outputs, and how devices can be connected to make networks (3.1)	Stop-frame animation. Capturing and editing digital still images to produce a stop-frame animation that tells a story. (3.2)	Sequencing sounds. Creating sequences in a block-based programming language to make music. (3.3)	Branching databases. Building and using branching databases to group objects using yes/no questions. (3.4)	Desktop publishing Creating documents by modifying text, images, and page layouts for a specified purpose (3.5)	Events and actions in programs Writing algorithms and programs that use a range of events to trigger sequences of actions. (3.6)
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Year 5/6 (Cycle 1)						
	Autumn 1	**Autumn 2**	**Spring 1**	**Spring 2**	**Summer 1**	**Summer 2**
Year 5/6	Systems and Sharing. Recognising IT systems in the world and how some can enable searching on the internet (5.1)	Video production. Planning, capturing, and editing video to produce a short film. (5.2)	Vector drawing. Creating images in a drawing program by using layers and groups of objects. (5.5)	Flat-file databases. Using a database to order data and create charts to answer questions. (5.4)	Selection in physical computing. Exploring conditions and selection using a programmable microcontroller. (5.3)	Selection in quizzes. Exploring selection in programming to design and code an interactive quiz. (5.6)
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Computing Coverage Whole School Overview (Cycle 2)

Year 1/2 (Cycle 2)						
	Autumn 1	**Autumn 2**	**Spring 1**	**Spring 2**	**Summer 1**	**Summer 2**
Year 1 /2	Information technology around us Identifying IT and how its responsible use improves our world in school and beyond (2.1)	Digital photography. Capturing and changing digital photographs for different purposes. (2.2)	Robot algorithms. Creating and debugging programs, and using logical reasoning to make predictions. (2.3)	Pictograms. Collecting data in tally charts and using attributes to organise and present data on a computer. (2.4)	Digital music. Using a computer as a tool to explore rhythms and melodies, before creating a musical composition. (2.5)	Programming quizzes. Designing algorithms and programs that use events to trigger sequences of code to make an interactive quiz (2.6)
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Useful links.						

Year 3/4 (Cycle 2)						
	Autumn 1	**Autumn 2**	**Spring 1**	**Spring 2**	**Summer 1**	**Summer 2**
Year 3 /4	The internet Recognising the internet as a network of networks including the WWW, and why we should evaluate online content. (4.1)	Audio production Capturing and editing audio to produce a podcast, ensuring that copyright is considered (4.2)	Repetition in shapes. Using a text-based programming language to explore count-controlled loops when drawing shapes. (4.3)	Data logging. Recognising how and why data is collected over time, before using data loggers to carry out an investigation. (4.4)	Photo editing. Manipulating digital images, and reflecting on the impact of changes and whether the required purpose is fulfilled. (4.5)	Repetition in games Using a block-based programming language to explore count-controlled and infinite loops when creating a game. (4.6)
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Year 5/6 (cycle 2)						
	Autumn 1	**Autumn 2**	**Spring 1**	**Spring 2**	**Summer 1**	**Summer 2**
Year 5/6	Communication and Collaboration. Exploring how data is transferred by working collaboratively online. (6.1)	Webpage creation. Designing and creating webpages, giving consideration to copyright, aesthetics, and navigation. (6.2)	Variables in games. Exploring variables when designing and coding a game. (6.3)	Introduction to spreadsheets. Answering questions by using spreadsheets to organise and calculate data (6.4)	3D modelling. Planning, developing, and evaluating 3D computer models of physical objects (6.5)	Sensing Movement. Designing and coding a project that captures inputs from a physical device (6.6)
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Useful links.						