

COMPUTING PROGRESSION MAP

Overview:

Through our computing curriculum we aim to give our pupils the life-skills that will enable them to embrace and utilise new technology in a socially responsible and safe way. We want our pupils to be able to leave school with a good understanding of the benefits and risks of using technology and to equip them with transferable skills that can be applied to rapidly changing digital world. We want children to become autonomous, independent users of computing technologies; gaining confidence and enjoyment from their activities. The use of technology will support learning across the curriculum and ensure the children develop creativity, resilience, problem-solving skills and critical thinking skills.

Lilliput Infant School follows the purple mash scheme of work for computing. For [additional Digital Literacy](#) (online safety) we will use *ThinkUknow* website and videos and hold an annual *Safer Internet Day*.

Numbers in brackets link to the relevant Purple Mash unit.

Pupils will be learning to:

Themes within subject	Nursery	Year R	Year 1	Year 2	Year 3
Digital literacy		Know and talk about the importance of sensible amounts of screen time. Know they should speak to an adult if anything they see on a screen feels wrong. Describe what they are using technology for.	I can say what technology is. (1.9) I can say what examples of technology are in school. (1.9) I can say what examples of technology are at home. (1.9) I know the difference between objects that use modern technology and those that do not e.g. smartphone vs chair. (1.9)	I can find information I need using a search engine. (2.5) I know the consequences of not searching online safely. (2.2, 2.5) I can share work and communicate electronically – for example using 2Email or the display boards. (2.2 and others) I can report unkind behaviour and things that upset me online, to a trusted adult. (2.2)	Use email safely. Know more than one way to report unacceptable content and contact Know specific times when identity can be changed online e.g. gaming; using an avatar; social media Explain the difference between bullying and cyber-bullying. Know why spending too much time using technology can have a negative impact.

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			I can keep my login information safe. (1.1 and most units) I can save my work in a safe place such as 'My Work' folder. (1.1 and most units) Recognise that there may be people online who could make them feel sad, embarrassed or upset. Explain why it is important to be considerate and kind to people online. Describe what information they should not put online.	I can see where technology is used at school such as in the office or canteen. (2.2) I understand that my creations such as programs in 2Code, need similar skills to the adult world. e.g. The program used for collecting money for school trips. (2.1) Know the implications of inappropriate searches. Know how to report inappropriate content. Recognise that information can stay online and could be copied.	Only share information with people they can trust. Know how to use the right mouse click to access and use contextual menus.
Computer science	Give and follow simple instructions. Program a beebot with a single instruction.	With support, take photos on an I-pad, camera or other media. Program a beebot with several instructions.	I can explain that an algorithm is a set of instructions. (1.4, 1.5) I know that an algorithm written for a computer is called a program. (1.4, 1.7) I can work out what is wrong when the steps are	I can explain an algorithm is a set of instructions to complete a task. (2.1) I know I need to carefully plan my algorithm so it will work when I make it into code. (2.1) I can design a simple program using 2Code that achieves a purpose. (2.1)	Use logical reasoning to explain what will happen next. Solve problems by decomposing them into smaller parts. Use and edit a program to achieve a specific outcome.

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			out of order in instructions. (1.4, 1.5) I can say that if something does not work how it should it is because my code is incorrect. (1.7) I can try and fix my code if it isn't working properly. (1.7) I can make good guesses of what is going to happen in a program. For example, where the turtle might go. (1.5, 1.7)	I can find and correct some errors in my program. (2.1) I can say what will happen in a program. (2.1) I can spot something in a program that has an action or effect (does something). (2.1)	Predict how a change in a sequence may impact on the outcome of a program. Explain what a variable is in programming. 'Read' other's code and predict what will happen in a program. List a range of ways that the internet can be used to provide different methods of communication. Recognise the main component parts of hardware which allow computers to join and form a basic network.
Information Technology		Use a keyboard to type letters. Type capital letters. Know where the space bar and enter keys are. Use a touchpad or mouse.	I can sort sound, pictures and text. (1.2) I can add sound, pictures and text to a program such as 2Create a Story. (1.6) I can change content on a file such as text, sound and images. (1.3, 1.6, 1.7, 1.8)	I can organise data – for example, using a database such as 2Investigate. (2.3, 2.4) I can find data using specific searches – for example, using 2Investigate. (2.4, 2.5) I can use several programs to organise information – for example, using binary	Collect, analyse, evaluate and present data and information using software. Carry out simple searches to retrieve digital content. Know which software is most appropriate for a given task.

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			I can name my work. (1.2, 1.3, 1.6, 1.7, 1.8) I can save my work. (1.2, 1.3, 1.6, 1.7, 1.8) I can find my work. (1.2, 1.3, 1.6, 1.7, 1.8)	trees such as 2Question or spreadsheets such as 2Calculate. (2.4, 2.8) I can edit digital data such as data in music composition software like 2Sequence. (2.7 and most units) I can name, save and find my work. (2.3, 2.4, 2.6, 2.7, 2.8 & most units) I can include photos, text and sound in my creations. (2.8, 2.6)	Create purposeful content to attach to emails. Read and respond to e-mails. Send an e-mail using an address book. Add an attachment to an e-mail. Sort objects using just 'yes' or 'no'. Complete a branching database.
Vocabulary			log in, username, password, log out, save, technology, coding, command, debug, input	online safety, search, internet, sharing, digital footprint, Email, algorithm	Touch typing- Posture, Top/ Home/Bottom row keys, Space bar Coding- Action, Algorithm, Bug, Code Block, Code design, Command, Control, Debug/Debugging, Event, If, Input, Output, Object, Properties, Repeat, Selection, Timer, Variable Emails- Communication, Email, Send, Attachment, Address Book, Password

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					Branching Databases- Branching Database, Data, Database Hardware detectives- Motherboard, CPU, RAM, Graphics card, Network Card, Monitor, Speakers, Keyboard, Mouse
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National Curriculum Reference

Key stage 1 Pupils should be taught to:

1. understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions (strand: computer science)
2. create and debug simple programs (strand: computer science)
3. use logical reasoning to predict the behaviour of simple programs (strand: computer science)
4. use technology purposefully to create, organise, store, manipulate and retrieve digital content (strand: information technology)
5. recognise common uses of information technology beyond school (strand: digital literacy)
6. 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 (strand: digital literacy)

Key stage 2 Pupils should be taught to:

1. design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts
2. use sequence, selection, and repetition in programs; work with variables and various forms of input and output
3. use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs
4. 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
5. use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content
6. 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
7. use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.