LLPS Computing Long Term Plan 2021-22

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
	Programming	Online Technologies	Data Handling	Digital Literacies	Multimedia	Word Processing
	Internet Safety is taught throughout the year through weekly online safety assemblies and through our computing and PSHE lessons. (see table below)					
EYFS (throughout the year in group times and continuous provision)	Select and use activities and resources, with help when needed. This helps them to achieve a goal they have chosen, or one which is suggested to them. Explore how things work. Show resilience and perseverance in the face of challenge.	Explore how things work.	Select and use activities and resources, with help when needed. This helps them to achieve a goal they have chosen, or one which is suggested to them.	Interested in finding out how things work.	Create pictures using paint and other media. Develop their own ideas and then decide which materials to use to express them. Create collaboratively, sharing ideas, resources and skills. Share their creations, explaining the process they have used	Develop their own ideas and then decide which materials to use to express them.
KS1	KS1 Pupils should be taught to understand what algorithms are; how they are implemented as programs on digital devices. Create and debug simple programs.	KS1 Pupils should be taught to recognise common uses of information technology beyond school.	KS1 Pupils should be taught to use technology purposefully to create, organise, store, manipulate and retrieve digital content.	KS1 Pupils should be taught to use technology safely and respectfully, keeping personal information private.	KS1 Pupils should be taught to use technology purposefully to create, organise, store, manipulate and retrieve digital content.	KS1 Pupils should be taught to use technology purposefully to create, organise, store, manipulate and retrieve digital content.
Year 1	Give simple instructions to everyday devices to make things happen. Make choices to control simple models or simulations. Solve a problem using ICT	Show an awareness of information in different formats.	Put data into a simple program (e.g. pictogram programme). Sort objects and pictures in lists or simple tables.	Complete simple tasks on a computer by following instructions. Make decisions about whether or not statements or images found online are likely to be true	Show an awareness of information in different formats.	Show an awareness of information in different formats. Complete simple tasks on a computer by following instructions.
Year 2	Recognise what algorithms are, how they are implemented as programs on digital devices, and that programs execute by following a sequence of instructions. Write and test simple programs (identify &remove any errors) Use logical reasoning to predict the behaviour of simple programs.	Recognise common usesof ICT beyond school.	Put data into a simple program (e.g. pictogramprogramme). Sort objects and pictures in lists, simple tables branching diagrams.	Organise work into digital folders	Organise, store, manipulate and retrieve data in a range of digital formats (lists, charts, pictograms).	Organise, store, manipulate and retrieve data in a range of digital formats (lists, charts, pictograms).

KS2	KS2 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.	KS2 Pupils should be taught to use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content.	KS2 Pupils should be taught to select, use and combine a variety of software... that accomplish given goals, including collecting, analysing, evaluating and presenting data and information.	KS2 Pupils should be taught to use technology safely, respectfully and responsibly, recognise acceptable/ unacceptable behaviour, identify a range of ways to report concerns about content and contact.	KS2 Pupils should be taught to select, use and combine a variety of software...to design, create and present information.	KS2 Pupils should be taught to KS2 Pupils should be taught to select, use and combine a variety of software...to present information.
Year 3	Use logical reasoning to explain how a simple algorithm works.

Use sequence, selection and repetition in programs.

Analyse and tackle problems by decomposing into smaller parts. | Use software or search engines effectively

Become discerning (having/showing good judgement) in evaluating digital content. | Identify how to select information to put into a data table.

Recognise which information is suitable for their topic.

Design a questionnaire tocollect information. | Identify and select appropriate informationusing straight forward lines of enquiry.

Use different approaches tosearch and retrieve digital information, including the browser address bar and shortcuts | Use sequence, selection and repetition in programs. | Use software or search engines effectively |
| Year 4 | Detect and correct errors in algorithms and programs (debug).

Test programs using models and simulations.

Design and write programs that accomplishspecific goals, working with variables for input and output.

Use logical reasoning to detect problems, make changes and find out what happens as a result. | Use and combine a variety of software and internet services on a range of digital devices to accomplish given goals, including collecting, analysing, evaluating and presenting data and information. | Describe how to sort and organise information to use in a database.

Create a branching database from information which they have collected and sorted. | Create programs to control physical systems (robotics/motors/sensors).

Discuss opportunities for online communication and collaboration. | Use and combine a variety of software and internet services on a range of digital devices to accomplish given goals, including collecting, analysing, evaluating and presenting data and information. | Use and combine a variety of software and internet services on a range of digital devices to accomplish given goals, including collecting, analysing, evaluating and presenting data and information. |
| Year 5 | With support, begin to produce algorithms by using logical and appropriate structures to organise data, and create precise and accurate sequences of instructions.

Use flowcharts and other diagrams to follow how a process or model works.

Use logical reasoning to solve problems and model situations and processes. Predict what will happen when variables and rules within a model are changed. | Recognise the need for accuracy when searching for and selecting information.

Use different sources to double check information found. | Describe how to check for and spot inaccurate data.

Know which formulas to use to change a spreadsheet model.

Create data collection forms and enter data from these accurately.

Make graphs from the calculations on their ownspreadsheet. | Select, use and combine a variety of software, including internet services on a range of digital devices, explaining how email and online discussion areas are used for communication and collaboration. | Prepare and present information in a range of forms, using ICT safely and responsibly. | Prepare and present information in a range of forms, using ICT safely and responsibly.

Select, use and combine a variety of software, including internet services on a range of digital devices, explaining how email and online discussion areas are used for communication and collaboration. |

| Year 6 | Produce algorithms independently using logical and appropriate structures to organise and record data.

Create flowcharts and other diagrams to explainhow a process or model works.

Independently problem solve and model situations and processes,by understanding and explaining the impact of changing variables and rules within a model. | Take account of accuracyand potential bias when searching for and selecting information. | Explain that changing thenumerical data affects a calculation.

Create data collection forms and enter data from these accurately. Make graphs from the calculations on their spreadsheet.

Sort and filter information. | Design and create/use arange of programs to accomplish given goals. | Evaluate and improve presentations in the light of discussion, marking and audience response. | Design and create/use a range of programs to accomplish given goals.

Evaluate and improve presentations in the light of discussion, marking and audience response. |
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INTERNET SAFETY – taught weekly through online safety assemblies and throughout the year in computing and PSHE lessons.

Physical Health and Mental Wellbeing Statutory Guidance (updated September 2021) – Internet Safety and Harms:

Pupils should know:

- that for most people the internet is an integral part of life and has many benefits

- about the benefits of rationing time spent online, the risks of excessive time spent on electronic devices and the impact of positive and negative content online on their own and others' mental and physical wellbeing

- how to consider the effect of their online actions on others and know how to recognise and display respectful behaviour online and the importance of keeping personal information private

- why social media, some computer games and online gaming, for example, are age restricted

- that the internet can also be a negative place where online abuse, trolling, bullying and harassment can take place, which can have a negative impact on mental health

- how to be a discerning consumer of information online including understanding that information, including that from search engines, is ranked, selected and targeted

- where and how to report concerns and get support with issues online

| EYFS | Respond to what they have heard, expressing their thoughts and feelings.

Express their feelings and consider the feelings of others. |
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| Year 1 | Identify different devices that can go online and separate those that do not. |
| Year 2 | Identify obviously false information in a variety of contexts.

Identify personal information that should be kept private.

Communicate safely, respecting and considering other people's feelings online. |
| Year 3 | Recognise social networking sites and social networking features built into other things, such as online games and handheld games consoles. Identify ways to keep safe when using ICT. Think before sending and suggest consequences of sending/posting.

Recognise online behaviours that would be unfair. Show respect for individuals and intellectual property (e.g.copyright). |

Year 4	Recognise social networking sites and social networking features built into other things, such as online games and handheld games consoles. Identify ways to keep safe when using ICT. Think before sending and suggest consequences of sending/posting. Identify potential risks when presented with scenarios, including social networking profiles. Use ICT responsibly, securely and safely.
Year 5	Judge what sort of privacy settings might be relevantfor reducing different risks. Judge when to answer a question online and when not to. Be a good online citizen and friend. Articulate what constitutes good behaviour online. Find and cite the web address for any information or resource found online
Year 6	Find, report and flag buttons in commonly used sites and name sources of help (e.g. Childline and Cybermentors). Find a Click-CEOP button and explain to parents what it is for. State the source of information found online. Act as a role model for younger children.