St. John's CE Primary School
Computing Long Term Plan.

QEGSMAT

Aims:

- Can understand and apply the fundamental principles and concepts of computer science, including abstraction, logic, algorithms and data representation.
- Can analyse problems in computational terms, and have repeated practical experience of writing computer programs in order to solve such problems.
- Can evaluate and apply information technology, including new or unfamiliar technologies, analytically to solve problems
- Are responsible, competent, confident and creative users of information and communication technology.

Early Years Framework and National Curriculum	
Nursery	**Personal, Social and Emotional Development** • Remember rules without needing an adult to remind them **Physical Development** • Match their developing physical skills to tasks and activities in the setting. **Understanding the World** • Explore how things work.
Reception	**Personal, Social and Emotional Development** • Show resilience and perseverance in the face of a challenge. • Know and talk about the different factors that support their overall health and wellbeing: - sensible amounts of 'screen time'. **Physical Development** • Develop their small motor skills so that they can use a range of tools competently, safely and confidently. **Expressive Arts and Design** • Explore, use and refine a variety of artistic effects to express their ideas and feelings. **Literacy** • Engage in extended conversations about stories, learning new vocabulary. • Understand print has meaning. **Mathematics** • Continue, copy and create repeating patterns. **Communication and Language.** • Use talk to help work out problems and organise thinking and activities.
ELG- Personal, Social and Emotional Development	**Managing Self** • Be confident to try new activities and show independence, resilience and perseverance in the face of challenge. • Explain the reasons for rules, know right from wrong and try to behave accordingly. **Building Relationships** • Work and play cooperatively and take turns with others.

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ELG- Expressive Arts and Design	**Creating with Materials.**
	• Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function.
ELG-Literacy	**Comprehension**
	• Understand recently introduced vocabulary during discussions about stories, non-fiction, rhymes and poems during role play.
ELG – Physical development	**Fine Motor skills**
	• Use a range of small tools, including scissors, paint brushes and cutlery.
ELG – Understanding the World.	**The Natural World.**
	• Understand some important processes and changes in the natural world around them including seasons.

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Nursery	Match their developing physical skills to tasks and activities in the setting.				Explore how things work.	Remember rules without needing an adult to remind them.
Reception	**Busy Bodies.** Logic, pattern and abstraction. **Awesome Autumn.** Creating, pattern and logic.	**Winter Warmers – Feed the birds.** Algorithms, decomposition, creating and collaborating.	**Colour collections – Spring sorting.** Creating, pattern and persevering.	**Spring – seed sequencing.** Algorithms and decomposition.	**Boats Ahoy.** Logic, pattern and abstraction **Character Run activity.** Algorithms, perseverance and collaborating.	**Build a rocket – Journey into Year 1.** Tinkering abstraction and creating.

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	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 1	COMPUTING SYSTEMS AND NETWORKS Technology around us	CREATING MEDIA Digital Painting	CREATING MEDIA Digital writing	DATA AND INFORMATION Grouping data	PROGRAMMING A Moving a robot	PROGRAMMING B Introduction to animation
Year 2	COMPUTING SYSTEMS AND NETWORKS Information technology around us	CREATING MEDIA Digital photography	CREATING MEDIA Making music	DATA AND INFORMATION Pictograms	PROGRAMMING A Robot algorithms	PROGRAMMING B Introduction to quizzes
Year 3	COMPUTING SYSTEMS AND NETWORKS Connecting Computers	CREATING MEDIA Stop frame animation	CREATING MEDIA Desktop publishing	DATA AND INFORMATION Branching databases	PROGRAMMING A Sequence in music	PROGRAMMING B Events and actions
Year 4	COMPUTING SYSTEMS AND NETWORKS The internet	CREATING MEDIA Audio editing	CREATING MEDIA Photo editing	DATA AND INFORMATION Data logging	PROGRAMMING A Repetition in shapes	PROGRAMMING B Repetition in games
Year 5	COMPUTING SYSTEMS AND NETWORKS Sharing information	CREATING MEDIA Video editing	CREATING MEDIA Vector drawing	DATA AND INFORMATION Flat-file databases	PROGRAMMING A Selection in physical computing	PROGRAMMING B Selection in quizzes
Year 6	COMPUTING SYSTEMS AND NETWORKS Communication	CREATING MEDIA Web page creation	CREATING MEDIA 3D modelling	DATA AND INFORMATION Spreadsheets	PROGRAMMING A Variables in games	PROGRAMMING B Sensing