nishkamprimaryschool
birmingham

Faith-Inspired
Virtues-led
Aspiring for Excellence

Computing progression of skills

Reception Computing Knowledge & Skills	
Understanding the World	NST EYFS Curriculum: • Begin to use technology to support learning. Early Learning Goal: • Know some similarities and differences between things in the past and now, drawing on their experiences and what has been read in class.

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Digital Literacy	**isafe Y1 unit** *Personal information and being safe online* 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. recognise common uses of information technology beyond school - to be taught through iSafe / Safer Internet Day	**isafe Y2 unit** *eSafety* - 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. recognise common uses of information technology beyond school - to be taught through iSafe / Safer Internet Day	**isafe Y3 unit** *Staying safe online* - use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact. use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content	**isafe Y4 unit** *Being safe, responsible digital citizens* - use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact. use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content	**isafe Y5 unit** *Becoming safe and responsible digital citizens* - use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact. use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content	**isafe Y6 unit** *Staying safe in a digital world* - use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact. use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content
Digital Literacy Vocabulary	isafe unit: **Personal information** **Trusted adult** **Permission** **Cyberbullying**	isafe unit: Personal information Trusted adult Permission Cyberbullying **Trustworthy** **Untrustworthy** **Internet** **Online**	isafe unit: (revisit KS1 vocabulary) **like/dislike** **safe/unsafe** **public** **private** **share** **block** **privacy** **privacy settings** **online sharing** **consent** **strong password** **manipulation** **pressure** **advertising**	isafe unit: (revisit previous vocabulary) privacy privacy settings **keywords** **copyright** strong password **spam** **virus** cyberbullying	isafe unit: (revisit previous vocabulary) communication safe **technology** **risk** **benefit** **personal** private **SMART** trust bullying cyberbullying	isafe unit: (revisit previous vocabulary) privacy privacy settings **security** **two-factor (or step) verification** **encryption** **hack** strong password personal information bullying cyberbullying **conflict** **bystander** **upstander** **harassment** **report** **block** **abuse**

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	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Information Technology	**iWrite Y1 unit** *Creating, manipulating and storing digital text* use technology purposefully to create, organise, store, manipulate and retrieve digital content [also links to digital literacy]	**iPub Y2 unit** *Creating interactive ebook* - use technology purposefully to create, organise, store, manipulate and retrieve digital content [also links to digital literacy] **iData Y1 Unit** *Yr1 unit – Introduction to data representation* - use technology purposefully to create, organise, store, manipulate and retrieve digital content	**iData Y3 unit** *Introducing databases* - use technology purposefully to create, organise, store, manipulate and retrieve 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	**iData Y4 unit** *Introduction to data representation* - use technology purposefully to create, organise, store, manipulate and retrieve 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	**iWeb Y5 unit** *Remixing and creating web content using HMTL* - 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 -	**iNetwork Y6 unit** *Network, data and creating web content* - 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
Information Technology Vocabulary	<u>iWrite Unit:</u> **text** **word** **processor** **key** **keyboard** **save** **print** **backspace** **return/enter**	<u>iPub Unit:</u> **World Wide Web** **network** **internet** **device** **eBook** <u>iData Unit:</u> **information** **data** **tally** **pictogram** **survey** **graph** **sort**	<u>iData Unit:</u> [revisit KS1 vocabulary] **field** **record** **database** data **search** sort	<u>iData Unit:</u> [revisit previous vocabulary] record database data **file** field search sort **chart**	<u>iWeb Unit:</u> [revisit relevant previous vocabulary] World Wide Web **HTML** **CSS** **element** **tags**	<u>iNetwork Unit:</u> [revisit relevant previous vocabulary] **Network** **router** internet World Wide Web **IP address** **URL** data **packet** **search engine** **rank** HMTL

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	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Computer Science	**iAlgorithm Y1 Unit** *Understanding Algorithms* - understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions [also links to digital literacy] **iProgram Y1 Unit** *Programming physical and virtual toys* - create and debug simple programs - use logical reasoning to predict the behaviour of simple programs [also links to digital literacy]	**iProgram Y2 Unit** *Creating simple animations* - 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 [also links to digital literacy]	**iProgram Y3 Unit 1** *Games and animation development* - 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 [also links to digital literacy] **iProgram Y3 Unit 2** *Robotics with LEGO WeDO* - 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 [also links to digital literacy]	**iProgram Y4 Unit 1** *Making shapes and navigating mazes* - 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 **iProgram Y4 Unit 4** *Programming with Scratch* - 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	**iProgram Y5 unit1** *Designing and developing computer games* - 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 - 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 [also links to digital literacy] **iApp Y6 unit1** *Yr6 unit – Designing and developing apps* - 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 - 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 [also links to digital literacy]	**iProgram Y6 unit 1** *Designing and developing computer games* - 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 - 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 [also links to digital literacy]
Computer Science Vocabulary	<u>iAlgorithm & iProgram Unit:</u> **algorithm** **instruction** **sequence** **program** **debug** **repeat** **true** **false** **output** [iProgram Unit only]	<u>iProgram Unit:</u> algorithm instruction sequence program debug repeat **test**	<u>iProgram Unit:</u> [revisit KS1 vocabulary] program sequence selection debug repeat test **coordinates** **x-y axis** **import**	<u>iProgram Unit:</u> [revisit previous vocabulary] program sequence **condition** repeat test selection debug instruction **code** **command** **variable** **execute**	<u>iProgram Unit:</u> [revisit previous vocabulary] sequence selection condition repeat **boolean** <u>iApp Unit:</u> **input** **output** **events** **properties** **pseudo-code** **syntax** **assets** **parameters** **argument** **function** **procedure** **event handler** variable test debug	<u>iProgram Unit:</u> [reinforce Y5 iProgram Unit] program sequence condition repeat boolean variable procedure execute test debug