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| **Year Group** | **National Curriculum***Computing* | **Topics**  | **Vocabulary** | **Skills/ Procedural Knowledge** |
| Y1 | Key stage 1 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 | **Autumn****Unit 1.1 Online Safety & Exploring Purple Mash****Unit 1.2 Grouping & Sorting****Unit 1.3 Pictograms****Spring****Unit 1.4 Lego Builders****Unit 1.5 Maze Explorers****Unit 1.6 Animated Story Books****Summer****Unit 1.7 Coding****Unit 1.8 Spreadsheets****Unit 1.9 Technology outside school** | AlertAvatarButtonDeviceFile NameIcon Log in Log OutMenuNotification PasswordPrivate CriteriaGroupsSortdataComparePictogram ResultsTitle Algorithm CodeDebugProgramCommandAnimation EditFontTextBackground ExecuteCodeAction AlgorithmPropertiesObjectInstruction Plan Run CellColumnValueSpreadsheetComputertechnology | **Unit 1.1 Online Safety & Exploring Purple Mash**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.**Unit 1.2 Grouping & Sorting**Understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions.**Unit 1.3 Pictograms**Use technology purposefully to create, organise, store, manipulate and retrieve digital content**Unit 1.4 Lego Builders**Understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions.**Unit 1.5 Maze Explorers**Create and debug simple programsUse logical reasoning to predict the behaviour of simple programs.Understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions.**Unit 1.6 Animated Story Books**Use technology purposefully to create, organise, store, manipulate and retrieve digital content**Unit 1.7 Coding**Create and debug simple programsUse logical reasoning to predict the behaviour of simple programs.Understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions.**Unit 1.8 Spreadsheets** Use technology purposefully to create, organise, store, manipulate and retrieve digital content**Unit 1.9 Technology outside school**Recognise common uses of information technology beyond school. |
|  | Local Interests and Links (online museums, local places to visit etc) |
| Y2 | Key stage 1 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 | **Autumn****Unit 2.2 Online Safety****Unit 2.1 Coding****Unit 2.3 Spreadsheets****Spring** **Unit 2.4 Questioning****Unit 2.5 Effective Searching****Unit 2.6 Creating Pictures** **Summer****Unit 2.7 Making Music****Unit 2.8 Presenting Ideas** | Emaildigital footprintSearch secureAction AlgorithmBackgroundBugButtonCommandDebuggingExecuteCellcolumnrowDataBinary treepictogramdatabase BrowsernetworkinternetDomainClip artBarsBeatSound tracke-booknode | **Unit 2.2 Online Safety**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.**Unit 2.1 Coding**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 programsUse logical reasoning to predict the behaviour of simple programs.**Unit 2.3 Spreadsheets**Use technology purposefully to create, organise, store, manipulate and retrieve digital content**Unit 2.4 Questioning**Use technology purposefully to create, organise, store, manipulate and retrieve digital content**Unit 2.5 Effective Searching**Use technology purposefully to create, organise, store, manipulate and retrieve digital contentRecognise common uses of information technology beyond school**Unit 2.6 Creating Pictures (May run over to S1)**Use technology purposefully to create, organise, store, manipulate and retrieve digital content**Unit 2.7 Making Music**Use technology purposefully to create, organise, store, manipulate and retrieve digital content**Unit 2.8 Presenting Ideas**Use technology purposefully to create, organise, store, manipulate and retrieve digital content |
| Local Interests and Links (online museums, local places to visit etc) |
| Y3 | Key stage 2 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 | **Autumn** **Unit 3.2 Online Safety****Unit 3.1 Coding****Unit 3.3 Spreadsheets****Spring** **Unit 3.4 Touch-Typing****Unit 3.5 Email****Unit 3.6 Branching Databases****Summer****Unit 3.7 Simulations****Unit 3.8 Graphing** | AppropriatepasswordReliableReputable SpoofVerifyAction AlgorithmCodeDebuggingEventTimerCommandAdvance modeCell addressPie chartDataKeys PostureSpacebarTypingCCBCCEmailAttachmentLinkInboxBinary treeDataDatabaseDebugging Advantages Analysis Modelling Evaluating Simulation AxisChart column Sorting Survey | **Unit 3.2 Online Safety**Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.**Unit 3.1 Coding**Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller partsUse sequence, selection and repetition in programs; work with variables and various forms of input and outputUse logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs**Unit 3.3 Spreadsheets**Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content.**Unit 3.4 Touch-Typing**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.**Unit 3.5 Email**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.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.**Unit 3.6 Branching Databases**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.**Unit 3.7 Simulations**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.**Unit 3.8 Graphing**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. |
| Local Interests and Links (online museums, local places to visit etc) |
| Y4 | Key stage 2 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 | **Autumn****Unit 4.2 Online Safety****Unit 4.1 Coding****Unit 4.3 Spreadsheets****Spring** **Unit 4.4 Writing for Different Audiences****Unit 4.5 Logo****Summer****Unit 4.6 Animation****Unit 4.7 Effective Searching****Unit 4.8 Hardware Investigators** | Adfly Attachment Citation CookiesCopyrightMalware Phishing Plagiarism RansomwareAction AlgorithmCodeDebuggingEventTimerCommandAverage Formula AverageFormat Budget Campaign Format Font GenreOpinion ReporterDebugging GridLogoAnimation Stop motion Frame Easter eggsBalance viewReliability CPUComponentsHardwareMotherboardPeripherals RAM | **Unit 4.2 Online Safety**Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.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.**Unit 4.1 Coding**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 programsSelect, 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.**Unit 4.3 Spreadsheets**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.**Unit 4.4 Writing for Different Audiences**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.**Unit 4.5 Logo**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**Unit 4.6 Animation**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.**Unit 4.7 Effective Searching**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.**Unit 4.8 Hardware Investigators**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 |
|  | Local Interests and Links  |
| Yr5 | Key stage 2 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 | **Autumn****Unit 5.2 Online Safety****Unit 5.1 Coding****Unit 5.3 Spreadsheets****Spring****Unit 5.4 Databases****Unit 5.5 Game Creator****Summer****Unit 5.6 3D Modelling****Unit 5.7 Concept Maps** | AppropriateBibliography CopyrightEncryptCitation MalwarePhishing Reference Validity Abstraction Efficiency Function Concatenation Simulation FormulaBudget Column RowsVariable Arrange Data Collaborative Field Record Evaluation Promotion QuestScreenshot3D printing CADConceptConnection Collaborate | **Unit 5.2 Online Safety**Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.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.**Unit 5.1 Coding**Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller partsUse 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.**Unit 5.3 Spreadsheets**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.**Unit 5.4 Databases**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.**Unit 5.5 Game Creator**Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller partsSelect, 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**Unit 5.6 3D Modelling**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**Unit 5.7 Concept Maps**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 |
|  | Local Interests and Links –  |
| Yr6 | Key stage 2 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 | **Autumn** **Unit 6.2 Online Safety****Unit 6.1 Coding****Unit 6.3 Spreadsheets****Spring****Unit 6.4 Blogging****Unit 6.5 Text Adventures****Summer****Unit 6.6 Networks****Unit 6.7 Quizzing** | Data analysis Inappropriate Phishing Secure Algorithm Command Concatenation Debugging Decomposition Function Procedure Advance mode Formula Data Column Row Approval Archive Commenting ConnectionsVlog Debugging Function QR code Variables DNSIP addressEthernet Router WANLANNetwork Audience SelfieClozeClone  | **Unit 6.2 Online Safety**Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact\*.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 collaborationUse 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.**Unit 6.1 Coding**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**Unit 6.3 Spreadsheets**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.**Unit 6.4 Blogging**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.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\*.**Unit 6.5 Text Adventures**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 outputUse 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**Unit 6.6 Networks**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.**Unit 6.7 Quizzing**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. |
|  | Local Interests and Links  |