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| **Pendeen COMPUTING SCOPE, CONTENT and SEQUENCING Year A UPPER KEY STAGE 2****Skills and knowledge taught every year – applied in the first year and consolidated/mastered in the second** |
| Year Group: 5 / 6 | Half term: Year AAutumn 1 | SCOPE: How does my equipment link to the world?How do I keep myself safe online? | CONTENT / INTENT: [LINK TO NC Learning OBJECTIVES](https://www.gov.uk/government/publications/national-curriculum-in-england-science-programmes-of-study/national-curriculum-in-england-science-programmes-of-study#upper-key-stage-2--years-5-and-6)- 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 technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact. |
| Prior Learning | Lesson 1 | Lesson 2 | Lesson 3 | Lesson 4 | Lesson 5 | Lesson 6 | Future Learning |
| To know what e-safety is through developing critical thinking skillsTo know how to report concerns and spot unacceptable behaviourTo be able to login, log out, shout down, save work | To understand how to keep myself safe online | To understand how my equipment connects with the world through a network  | To be able to explain how computing networks link the world together | To continue to develop my understanding and apply it.  |
| I can define phishing and why it is used by cyber criminalsI can identify technologies typically used for phishingI can identify common features and themes of phishingI can identify how to prevent being a victim of phishing | I can tell you what a network is and how it works.  | I can name devices on a computer network.I can explain the purpose of certain devices on a computer network. |
| See previous year groups vocabulary box in this document. | **Vocabulary:** Safety, concern, online, reporting, internet, social media, conscious, awareness, digital citizen, virus, bug, image editing, image distortion, filtersComputer systems, networks, interconnectivity, connection, wiring, wireless, technology, information, data, transferring, |
| **Pendeen COMPUTING SCOPE, CONTENT and SEQUENCING Year A UPPER KEY STAGE 2****Skills and knowledge taught every year – applied in the first year and consolidated/mastered in the second** |
| Year Group: 5 / 6 | Half term: Autumn 2 | SCOPE: What opportunities can ICT services offer for communication and collaboration? | CONTENT / INTENT: [LINK TO NC Learning OBJECTIVES](https://www.gov.uk/government/publications/national-curriculum-in-england-science-programmes-of-study/national-curriculum-in-england-science-programmes-of-study#upper-key-stage-2--years-5-and-6)- 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 technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact. |
| Prior Learning | Lesson 1 | Lesson 2 | Lesson 3 | Lesson 4 | Lesson 5 | Lesson 6 | Future Learning |
| Keeping myself safe onlineexplored ways that online experiences can be safe and unsafe | LO: To understand how to communicate online and share only information I want to share. | To be able to participate in a collaboration with others online | To be able to explain how I can be a digitally responsible citizen | To continue to keep myself safe online |
| To know what consent means when we agree to terms and conditions onlineTo know the rights we give to social media organisations to use our personal informationTo understand the value our personal information has to social media organisations | I can work with another person to meet an objective | I know what a digitally responsible citizen isI can tell you how I can be a digitally responsible citizen |
| See previous year groups vocabulary box in this document. | **Vocabulary:** Data, consent, sharing, terms and conditions, social media, platforms, user accounts, personal information, legacySafety, concern, online, reporting, internet, social media, conscious, awareness, digital citizen, Data, consent, sharing, terms and conditions, social media, platforms, user accounts, personal information, legacy |

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| **Pendeen COMPUTING SCOPE, CONTENT and SEQUENCING Year A UPPER KEY STAGE 2****Skills and knowledge taught every year – applied in the first year and consolidated/mastered in the second** |
| Year Group: 5 / 6 | Half term: Year ASpring 1 | SCOPE: How do computer networks work?How can I present my work?+ Internet Safety Day | CONTENT / INTENT: [LINK TO NC Learning OBJECTIVES](https://www.gov.uk/government/publications/national-curriculum-in-england-science-programmes-of-study/national-curriculum-in-england-science-programmes-of-study#upper-key-stage-2--years-5-and-6)- 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 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 |
| Prior Learning | Lesson 1 | Lesson 2 | Lesson 3 | Lesson 4 | Lesson 5 | Lesson 6 | Future Learning |
| Investigated and used simple html languageInvestigated use of installed software and created work using this. To build two, three and four step sequences | To deepen understanding of computer networks | To be able to appropriately select software to present my workTo understand how to maintain cyber security. | To deepen understanding of algorithms and coding | To keep myself and my details safe onlineTo apply understanding of algorithms and coding to appropriate situations.  |
| I can explain what the internet is.I can explain the difference between the internet and the WWW.I can explain how the internet provides access to the WWW. | Computer Science: I can write an algorithm. I can identify the need for variables. I can work with variables in my program. I can use a conditional loop in my programDigital Literacy: I can explain how to make passwords more secure | I can write a program with a sequence of instructions. |
| See previous year groups vocabulary box in this document. | **Vocabulary:** Computer systems, networks, interconnectivity, connection, wiring, wireless, technology, information, data, transferringSoftware, selection, choices, presentation, digital, sharing, security, Data, consent, sharing, terms and conditions, social media, platforms, user accounts, personal information, legacyLogic, sequence, systematic, errors, debug, reasoning, simulation, decomposition, generalization, abstraction, variable, code, condition, evaluation, input, output, selection, sequence, repetition, loop, Coding, Scratch, Sprite, Sequence, command, algorithm, program, programming, input, output, steps, animation, |

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| **Pendeen COMPUTING SCOPE, CONTENT and SEQUENCING Year A UPPER KEY STAGE 2****Skills and knowledge taught every year – applied in the first year and consolidated/mastered in the second** |
| Year Group: 5 / 6 | Half term: Year ASpring 2 | SCOPE: How do I make effective searches and know which results to trust? | CONTENT / INTENT: [LINK TO NC Learning OBJECTIVES](https://www.gov.uk/government/publications/national-curriculum-in-england-science-programmes-of-study/national-curriculum-in-england-science-programmes-of-study#upper-key-stage-2--years-5-and-6)- 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 |
| Prior Learning | Lesson 1 | Lesson 2 | Lesson 3 | Lesson 4 | Lesson 5 | Lesson 6 | Future Learning |
| To know what e-safety is through developing critical thinking skillsTo know how to report concerns and spot unacceptable behaviour | LO: To be able to make effective searches and know which results to trust | To continue to be a responsible digital citizen by using my understanding to make effective searches to help me reach my goals.  |
| I can explain how search engines select results. | I can explain how search engines rank results |
| See previous year groups vocabulary box in this document. | **Vocabulary:** Search, search engine, index, world wide web, search query, Boolean search, results, pages, keywords, algorithms, ranking, links, search engine optimisation, manipulation, reliability, trust, paid for advertising, |

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| **Pendeen COMPUTING SCOPE, CONTENT and SEQUENCING Year A UPPER KEY STAGE 2****Skills and knowledge taught every year – applied in the first year and consolidated/mastered in the second** |
| Year Group: 5 / 6 | Half term: Year ASummer 1 | SCOPE: How do I design, write and debug programs to achieve specific goals? | CONTENT / INTENT: [LINK TO NC Learning OBJECTIVES](https://www.gov.uk/government/publications/national-curriculum-in-england-science-programmes-of-study/national-curriculum-in-england-science-programmes-of-study#upper-key-stage-2--years-5-and-6)- 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 |
| Prior Learning | Lesson 1 | Lesson 2 | Lesson 3 | Lesson 4 | Lesson 5 | Lesson 6 | Future Learning |
| Can explain how sequences and repetitions achieve a goal in computing Can explain how I debugged a programDesigned, created, wrote and debugged a game | LO: To understand how to design, write and debug programs to achieve specific goals | To apply previous learning effectively to appropriate situtations. |
| I can search the internet effectively for information about a topic and understand copyrightI understand how spreadsheets can help me to solve problems, and am familiar with the spreadsheet modelling cycleI can collect and enter data values into a spreadsheet, and predict what a change to a spreadsheet will doI can follow a recipe algorithm to create a pizzaI can evaluate my own work, and the work of other pupils | I can explain what selection is. I can write a program using selection |
| See previous year groups vocabulary box in this document. | **Vocabulary:** Data, collection, analysis, evaluation, spreadsheet, solution, modelling, data values, prediction, algorithms Logic, sequence, systematic, errors, debug, reasoning, simulation, decomposition, generalization, abstraction, variable, code, condition, evaluation, input, output, selection, sequence, repetition, loop, Coding, Scratch, Sprite, Sequence, command, algorithm, program, programming, input, output, steps, animation,Selection, program, command prompt, input, output,Logic, sequence, systematic, errors, debug, reasoning, simulation, decomposition, generalization, abstraction, variable, code, condition, evaluation, input, output, selection, sequence, repetition, loop, Coding, Scratch, Sprite, Sequence, command, algorithm, program, programming, input, output, steps, animation, |

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| **Pendeen COMPUTING SCOPE, CONTENT and SEQUENCING Year A UPPER KEY STAGE 2****Skills and knowledge taught every year – applied in the first year and consolidated/mastered in the second** |
| Year Group: 5 / 6 | Half term: Year ASummer 2 | SCOPE: How I solve problems with my own coding programming? | CONTENT / INTENT: [LINK TO NC Learning OBJECTIVES](https://www.gov.uk/government/publications/national-curriculum-in-england-science-programmes-of-study/national-curriculum-in-england-science-programmes-of-study#upper-key-stage-2--years-5-and-6)- 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 |
| Prior Learning | Lesson 1 | Lesson 2 | Lesson 3 | Lesson 4 | Lesson 5 | Lesson 6 | Future Learning |
| Explored ‘logic’ and ‘reasoning’ as termsBegan to develop systematic approach to coding.To be able to identify errors in coding and use logical reasoning to correct them. | LO: To be able to solve problems with coding programming | Use knowledge of simple algorithms to develop more complicated algorithms. |
| I can explain what a variable is.I can use variables in a program. | I can use logical reasoning to explain how some simple algorithms work. | I can collaborate as part of a team, using logic and decomposition to solve code-cracking problemsI can collaborate as a team to research, create and present a presentation about Alan TuringI can create a simple algorithm, in the form of a movie storyboardI can create the props, set and scripts for a movieI can tinker and use movie-making software and equipment to create a movie about code crackingI can present finished work to an audience and evaluate my own and others’ work using specified criteria |
| See previous year groups vocabulary  | **Vocabulary:** Logic, sequence, systematic, errors, debug, reasoning, simulation, decomposition, generalization, abstraction, variable, code, condition, evaluation, input, output, selection, sequence, repetition, loop, Coding, Scratch, Sprite, Sequence, command, algorithm, program, programming, input, output, steps, animation, |