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| **Pendeen COMPUTING SCOPE, CONTENT and SEQUENCING Year A LOWER KEY STAGE 2****Skills and knowledge taught every year – applied in the first year and consolidated/mastered in the second** |
| Year Group: 3 / 4 | Half term: Autumn 1 | SCOPE: How do I use my equipment?How do I keep myself safe online? | CONTENT / INTENT: To be able to log in and out, save, retrieve and share work independentlyTo understand cyber-crime and develop an advertisement to demonstrate their understanding.By selecting, using and combining 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. |
| Prior Learning | Lesson 1 | Lesson 2 | Lesson 3 | Lesson 4 | Lesson 5 | Lesson 6 | Future Learning |
| Year 3’s will have developed the following skills:able to independently switch on, log in to, log out of and shut down their laptop.can click on the icons on my desktop. Started to use the home row keys. Say what to do if I’m not sure. Have started to use the home row keys. To record a Class Dojo video saying how they keep themselves safe (teacher / TA led)Year 4’s will be embedding this programme of learning. | LO: To recall login, log out, shut down proceduresTo recap saving workTo share a piece of work with family at home | LO: To recall login, log out, shut down proceduresTo recap saving workTo share a piece of work with family at home | To be able to explore ways that online experiences can be safe or unsafe. | To be able to explore ways that online experiences can be safe or unsafe. | To be able to keep yourself safe online | To be able to keep yourself safe online | Year 3’s will repeat this year, this is positive to enable children to develop their skills further. Children need opportunity to practice their skills, being introduced to these areas of learning mean they can really embed and develop their knowledge and skills.Year 4’s will progress onto the year 5 programme of learning after completing the remaining year of learning. |
| This is the activity to work on over this period of time. You’re the Jury – Activity on Staff ShareThis lesson sees the classroom turned into a courtroom as pupils hear several cyber-crime court cases. Pupils take on the roles of judge, barristers and members of the jury as they determine whether the defendant has broken the law, the sentence they could receive and the impact on victims of their crimes.There are a further two extension lessons where pupils use what they have learnt to plan and go on to film TV adverts to discourage the misuse of computers. |
| Do pupils understand some of what it is illegal to do with a computer? Can pupils identify illegal activities which use computers? Can pupils explain which part of the law has been broken? Can pupils identify the victims of cyber-crimes? Do pupils know the typical sentences associated with some cyber-crimes? | Can pupils identify the key information to include in their advert?Can pupils decompose their advert to create their storyboard algorithm?Do pupils’ storyboards include the key information?Do pupils’ advert plans meet the features of the success criteria? | Can pupils work in groups to create an advert?Can pupils use the hardware and software to film and edit their adverts?Do pupils’ adverts match their storyboards?Can pupils evaluate their adverts against the success criteria? | To understand cyber-crime and develop an advertisement to demonstrate their understanding. |
| Success Criteria: To be able to log in and out, save, retrieve and share work independently | Success Criteria: To be able to log in and out, save, retrieve and share work independently | Success Criteria: To understand cyber-crime. | Success Criteria: To understand cyber-crime. | Success CriteriaTo understand cyber-crime and develop an advertisement to demonstrate their understanding. | Success CriteriaTo understand cyber-crime and develop an advertisement to demonstrate their understanding. |
| See previous year groups vocabulary box in this document. | **Vocabulary:** Program, use, purpose, media, digital, create, content, icon, browser, device, file, print, interface |
| **Pendeen COMPUTING SCOPE, CONTENT and SEQUENCING Year A LOWER KEY STAGE 2****Skills and knowledge taught every year – applied in the first year and consolidated/mastered in the second** |
| Year Group: 3 / 4 | Half term: Autumn 2 | SCOPE: How do I choose the right software to achieve my goals? | CONTENT / INTENT: **Computational Thinking Concepts & Approaches:** Patterns, Logic, Decomposition, Collaborating, Algorithms, Abstraction |
| Prior Learning | Lesson 1 | Lesson 2 | Lesson 3 | Lesson 4 | Lesson 5 | Lesson 6 | Future Learning |
| Logging on and out, using the equipment safely and securely.Understanding of keeping safe online. | **LO:**To investigate the use of installed softwareTo create work using appropriate software | **LO:**To investigate the use of installed softwareTo create work using appropriate software | **LO:**To investigate the use of installed softwareTo create work using appropriate software | **LO:**To explore computational thinking and a range of software | **LO:**To explore computational thinking and a range of software | **LO:**To explore computational thinking and a range of software | Continue to promote the use of these skills in activities during the school day to allow confidence to develop. Particularly where new programmes have been introduced – e.g. publisher or excel.Progress onto Spring 1 area of learning |
| Typing & image insert on WordSimple calculations completed in Excel, expressed in formula code =SUM(B1+B2) / =SUM(A:A) for column / =SUM(A5:A12)Create a 2 slide PowerPoint with images and animationCreate a poster using PublisherChildren can explain the purpose of each and begin to select appropriate software for the tasks they are completing. | Exploration of software and purposes. To develop computational thinking strategies. |
| See previous vocabulary box in this document. | **Vocabulary:**Browser, desktop, icons, menu, data, output, pattern, software, selection, lists, tables, arrays, margins, background, foreground, work space, information, sharing, presentation, configuration, control, file, save, open, insert, wrap text, format, font, design, layout, copy, cut, paste, format painter, styles, colour, transition, animation, formula,  |

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| **Pendeen COMPUTING SCOPE, CONTENT and SEQUENCING Year A LOWER KEY STAGE 2****Skills and knowledge taught every year – applied in the first year and consolidated/mastered in the second** |
| Year Group: 3 / 4 | Half term: Spring 1 | SCOPE: I can write a program with a sequence of instructions. | CONTENT / INTENT: * 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
* 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
 |
| Prior Learning | Lesson 1 | Lesson 2 | Lesson 3 | Lesson 4 | Lesson 5 | Lesson 6 | Future Learning |
| Continue to build on learning from Autumn 2 | **LO:**To be able to build two, three and four step sequences | **LO:**To be able to build two, three and four step sequences | **LO:**To investigate and use simple html language | **LO:**To investigate and use simple html language | **LO:**To be able to explain how sequences and repetitions achieve a goal in computing | **LO:**To be able to explain how sequences and repetitions achieve a goal in computing | Children will progress onto Summer 2’s learning |
| **Success Criteria** I can build a sequence of events using Scratch.I understand how sequences work. | **Success Criteria** I can build a sequence of events using Scratch.I understand how sequences work. | **Success Criteria** I can explain why systems need to follow a sequence – I can produce a ‘how to video’ for next year’s class. | **Success Criteria** I can explain why systems need to follow a sequence – I can produce a ‘how to video’ for next year’s class. | **Success Criteria** I can explain why systems need to follow a sequence – I can produce a ‘how to video’ for next year’s class. | **Success Criteria** I can explain why systems need to follow a sequence – I can produce a ‘how to video’ for next year’s class. |
| See previous term vocabulary box in this document. | **Vocabulary:**html, code, coding, web browser, website, URL, www, https, Coding, Scratch, Sprite, Sequence, command, algorithm, program, programming, input, output, steps, animation  |

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| **Pendeen COMPUTING SCOPE, CONTENT and SEQUENCING Year A LOWER KEY STAGE 2****Skills and knowledge taught every year – applied in the first year and consolidated/mastered in the second** |
| Year Group: Year 3 / 4 | Half term: Spring 2 | SCOPE: I can use a systematic approach and begin to identify/correct errors in code.I can use logical reasoning to debug a program.I can explain how I debugged a program.CONTENT / INTENT: * design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts
 |
| Prior Learning | Lesson 1 | Lesson 2 | Lesson 3 | Lesson 4 | Lesson 5 | Lesson 6 | Future Learning |
| Continue to build on learning from Spring 1 | **LO:**To explore ‘logic’ and ‘reasoning’ as termsTo begin to develop systematic approach to coding.To be able to identify errors in coding and use logical reasoning to correct them. | **LO:**To explore ‘logic’ and ‘reasoning’ as termsTo begin to develop systematic approach to coding.To be able to identify errors in coding and use logical reasoning to correct them. | **LO:**To explore ‘logic’ and ‘reasoning’ as termsTo begin to develop systematic approach to coding.To be able to identify errors in coding and use logical reasoning to correct them. | **LO:**I can use logical reasoning to debug a program.I can explain how I debugged a program. | **LO:**I can use logical reasoning to debug a program.I can explain how I debugged a program. | **LO:**I can use logical reasoning to debug a program.I can explain how I debugged a program. | Children will progress onto Summer 1’s learning |
| **Success Criteria** I can use a systematic approach and begin to identify/correct errors in code. | **Success Criteria** I can use a systematic approach and begin to identify/correct errors in code. | **Success Criteria** I can use a systematic approach and begin to identify/correct errors in code. | **Success Criteria** Using logical reasoning to debug a program.Create a video to explain how the program was debugged | **Success Criteria** Using logical reasoning to debug a program.Create a video to explain how the program was debugged | **Success Criteria** Using logical reasoning to debug a program.Create a video to explain how the program was debugged |
| See previous terms vocabulary box in this document. | **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,  |

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| **Pendeen COMPUTING SCOPE, CONTENT and SEQUENCING Year A LOWER KEY STAGE 2****Skills and knowledge taught every year – applied in the first year and consolidated/mastered in the second** |
| Year Group: Year 3 / 4  | Half term: Summer 1 | SCOPE: A game to share with peers. | CONTENT / INTENT: 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.
 |
| Prior Learning | Lesson 1 | Lesson 2 | Lesson 3 | Lesson 4 | Lesson 5 | Lesson 6 | Future Learning |
| Learning in Spring 2 – see this document.Continuing to develop skills. | LO: I can design, write and debug programs to achieve specific goals.Term Wide Project.Make a Game:In this short project, pupils create a simple game. A rainforest theme has been used as the context here, but the theme can be adapted to any topic. In the first lesson pupils design their game and create artwork for their background and main character. In the following coding lessons, they write and debug their code. In the final lesson they present and evaluate their games.A generic approach is provided in this project; this is so that the activities can be adapted to a classes level of experience, the teacher confidence, the number of lessons needed for coding as well as the topic. Similarly, the software used can be adapted, in the examples provided here Scratch has been used, but this could be replaced with alternatives such as Kodu, Hopscotch etc. | Children will progress onto Summer 2’s learning. |
| **Success** **Criteria**:PUPIL OBJECTIVES:I can decompose a game into its parts, I can design a game, I can create the artwork for a game, I can write and debug a game, I can present a game, I can evaluate a game. |
| See previous terms vocabulary box in this document. | **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,  |

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| **Pendeen COMPUTING SCOPE, CONTENT and SEQUENCING Year A LOWER KEY STAGE 2****Skills and knowledge taught every year – applied in the first year and consolidated/mastered in the second** |
| Year Group: Year 3 / 4 | Half term: Summer 2 | SCOPE: I understand how to keep myself and others safe onlineI know how to report concerns and spot unacceptable behaviour. | CONTENT / INTENT: All children to demonstrate responsibility when using the internet and can identify key actions to keep themselves and other safe. They understand what is appropriate and what is not appropriate and why there are protections in place to ensure they are kept away from adult content. They begin to understand how their digital presence can affect their real lives. |
| Prior Learning | Lesson 1 | Lesson 2 | Lesson 3 | Lesson 4 | Lesson 5 | Lesson 6 | Future Learning |
| Learning in Summer 2 – see this document.Continuing to develop skills. | LO:I understand how to keep myself and others safe online | LO:I understand how to keep myself and others safe online | LO:I understand how to keep myself and others safe online | LO:I know how to report concerns and spot unacceptable behaviour | LO:I know how to report concerns and spot unacceptable behaviour | LO:I know how to report concerns and spot unacceptable behaviour | Year 3’s will have further opportunity to embed these skills next year. Year 4’s will progress onto the year 5 curriculum. They will continue to have opportunity to revisit the skills they have developed so far. |
| **Success Criteria** | **Success Criteria** | **Success Criteria** | **Success Criteria** | **Success Criteria** | **Success Criteria** |
| See previous terms vocabulary box in this document. | **Vocabulary:**Safety, concern, online, reporting, internet, social media, conscious, awareness, digital citizen, virus, bug, image editing, image distortion, filters |