# Year 4 Computing Coverage

Pye Green Academy

As coders we identify how we can make things happen and solve problems when they arise

As digital creators we learn how to use and make content to share our ideas safely

As online users we learn how to stay safe and act appropriately when using technology.

| | Autumn Term 1 Computing lessons – Code.org – Course D Lesson 1, 5-16, 18 | Autumn Term 2 Computing lessons – Scratch recap plus sensing and broadcasting - taught (Code.org Course C Lesson 14-16 as an intro) | Spring Term 1 Computing lessons – We are software developers – simple educational game Scratch, sensing and broadcasting apply | Spring Term 2 Computing lessons – We are musicians – digital music – 2 Simple Music suite | Summer Term 1 Computing lessons – We are co-authors – create a class/group wiki. Planning, research and presentation | Summer Term 2 Computing lessons – We are opinion pollsters data handling (Y3 book) |
|---|---|---|---|---|---|---|
| National Curriculum | 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 | design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts

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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

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| Subject Focus | In this unit children will be guided through a series of small steps to recap debugging. They will change appearance and speed of objects; create loops (including nested loops) and explore conditional statements (if/else/until). They will also be introduced the idea or binary language.

- Passwords and personal information | In this unit children will explore the game from code.org and then create a similar game in scratch. In the game they animate one sprite to constantly move while another races to get past it. They will select different inputs to move the character in a number of directions and add broadcasting/sounds if the player is 'caught' | In this unit pupils start by playing and analysing educational computer games, identifying the features that make the game successful. They then plan and design a game with a clear target audience in mind. Create a working prototype and then develop it further to add functionality and improve the user interface. Test their game and make any necessary changes.

-consider copyright of images
-searching games created by others. Discussion of comments | In this unit children will explore different software to create music. They will produce music suitable for any purpose that they choose.

- music copyright | In this unit children will collaborate to create a 'mini Wikipedia' about an aspect from the Summer Term's Learning about the Titanic.

- safe search
- copyright of text and images | In this unit the children create their own opinion poll, seek responses and then analyse the results.

- what information is appropriate to give
- what is not appropriate
- what is personal information
- discuss what a 'digital footprint' is |
| Top Ten / Fab Five | 1 Create a nested loop to minimise repetition of code
2 Draw shapes using mathematical knowledge and loops
3 Use if, else, until conditionals
4 Begin to understand binary language | 1 Find ways of making a sprite move in one particular way
2 Add different inputs to move a sprite
3 Create additional levels to enhance gameplay | 1 Analyse what makes a game playable
2 Identify and create a prototype of a game for an intended audience | 1 Compose their own music
2 Create a sample
3 Experiment with electronic sounds
4 Add effects to music
5 Use music licensed under creative commons and know the difference between this and other music. | 1 Know what a wiki is
2 Be able to question the reliability of a wiki
3 Add to a shared wiki
4 Collaborate with others
5 Edit work online at the same time as others
6 Be responsible for the work I create | 1 Create a mind map to show what they could find out about
2 Consider the type of questions that are useful when creating a survey
3 Begin to identify the limitations of a survey
4 Create an online survey
5 Collect data
6 Analyse and evaluate data
7 Present their findings |

| Unit specific Vocabulary | | | Analyse, playability, aim, prototype, user interface, debug | | | Data, multiple choice, check box, drop down, chart, cell, legend (key) |
|---|---|---|---|---|---|---|
| Software Knowledge | | | Scratch | 2Simple Audacity, Garageband | Microsoft 365 Sharepoint | Freemind Google forms Excel Powerpoint |

| | Autumn Term Class Lessons - Application | Spring Term Class Lessons - Application | Summer Term Class Lessons - Application |
|---|---|---|---|
| National Curriculum | use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content<br><br>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 search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content<br><br>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 search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content<br><br>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 |
| | - Internet research and use Book Creator to create a book about the Romans. | - Internet research about where inventions come from. This often brings up questions of validity as some inventions appear to have been invented in different places according to different sources. | - Search large databases when looking at Encyclopaedia Titanica to find out about passengers and crew |

Green highlighting indicates areas linked to online safety.