



Computing Learning Journey 2020-21

Year 1

Computing

AUTUMN

1

'Programming (A) -
Moving a Robot'



Key learning this half term:

- Learn about **algorithms** and what they are.
- Understand how **algorithms** are used to **generate programmes** for **digital devices**.
- Create and **debug** simple programs.

Online Safety - Smartie the Penguin

We will be taught online safety in order to participate safely in the online community including when sourcing images for our projects.



Computing

SPRING

1

'Programming (B) -
Introduction to Animation'



Key learning this half term:

- Use a range of **devices** including **laptops** and **iPads**.
- **Debug** simple **algorithms** and use logical reasoning to make **predictions**.
- Learn about the early stages of **program design** through the introduction of **algorithms**.
- Write a **program** using the **software** 'Scratch Jr' to **create animation**.

Online Safety - Smartie the Penguin

We will be taught online safety in order to participate safely in the online community including when sourcing images for our projects.



Computing

SUMMER

1

'Grouping Data'



Key learning this half term:

- Use labels to put objects into groups, and label these groups.
- Assign data (images) with different labels in order to demonstrate how computers are able to group and present data.
- Use their ability to sort objects into different groups to answer questions about data.

Online Safety - Smartie the Penguin

We will be taught online safety in order to participate safely in the online community including when sourcing



Computing

AUTUMN

2

'Computer Systems & Networks -
Technology Around Us'



Key learning this half term:

- Recognise common uses of **information technology** beyond school.
- Use **technology** purposefully to **create, organise, store, manipulate, and retrieve digital content**.
- Develop the basic skills needed to effectively use a **computer keyboard** and **mouse** and apply this knowledge to use a **computer** to complete a **mouse-based** tasks.

Online Safety - Smartie the Penguin

We will be taught online safety in order to participate safely in the online community including when sourcing images for our projects.

Computing

SPRING

2

'Creating Digital Media'



Key learning this half term:

- Use technology **purposefully** to create **digital content**.
- Develop their understanding of the various aspects of using a **computer** to **create and manipulate text**.
- Apply these skills to create a variety of **publications** including **interactive stories, instructions manuals, science reports, research journals and comic adventures**.

Online Safety - Smartie the Penguin

We will be taught online safety in order to participate safely in the online community including when sourcing images for our projects.

Computing

SUMMER

2

'Comic Life'



Key learning this half term:

- Create our very own **comic strip** using the software '**Comic Life**'.
- Apply skills to **select, use and combine** a variety of **software**, including **internet services**.
- Apply our **skills** on a range of **digital devices**.

Online Safety - Smartie the Penguin

We will be taught online safety in order to participate safely in the online community including when sourcing images for our projects.



Computing Learning Journey 2020-21

Year 2

Computing

Computer Systems & Networks -
 What is Information Technology?

AUTUMN

1

Key learning this half term:

- Develop an understanding of the uses and **features** of **information technology**.
- Investigate** how **information technology** improves our world.
- Learn how to use different forms of **information technology safely**, in a range of different environments.
- Think about the choices that are made when using **information technology**, and the responsibility associated with those choices.



Online Safety - Think You Know

We will be taught online safety in order to participate safely in the online community including when sourcing images for our projects.



Computing

'Programming (A) -
 Moving a Robot'

AUTUMN

2

Key learning this half term:

- Develop their understanding of **instructions** in **sequences** and the use of **logical reasoning** to **predict outcomes**.
- Use given **commands** in different orders to **investigate** how the order affects the **outcome**.
- Design **algorithms** and then **test** those **algorithms** as **programs** and **debug** them.



Online Safety - Think You Know

We will be taught online safety in order to participate safely in the online community including when sourcing images for our projects.

Computing

'Pictograms'

SPRING

1

Number of strawberries with each student	
Cerise	
Ed	
George	
Sally	

Each = 2 strawberries

Key learning this half term:

- Use **technology** purposefully to **create, organise, store, manipulate** and **retrieve** digital content.
- Understand what **data** means and how this can be collected in the form of a **tally chart** and **organised** by using **attributes**.
- Present **data** in the form of **pictograms** and finally **block diagrams**.

Online Safety - Think You Know

We will be taught online safety in order to participate safely in the online community including when sourcing images for our projects.



Computing

'Digital Photography'

SPRING

2

Key learning this half term:

- Using a **digital camera** capture **photography** to fit a given **theme**.
- Edit** our **photographs**, and select the **best images** to include in a **shared portfolio**.
- Learn how to **minimise risks** associated with our **personal information**, how to **protect** it and what to do if we have a **concern**.

Online Safety - Think You Know

We will be taught online safety in order to participate safely in the online community including when sourcing images for our projects.



Computing

'Programming (B) -
 Intro to Quizzes'

SUMMER

1



Key learning this half term:

- Understand how to express simple **linear** or **non-branching algorithms** symbolically.
- Understand that **algorithmic instructions** need to be communicated to the device **precisely** and **accurately** in order to avoid **errors**.
- Understand that **sequences** of **commands** have an **outcome**, and make **predictions**.
- Use and modify designs to **create** their own quiz questions in **ScratchJr**.

Online Safety - Think You Know

We will be taught online safety in order to participate safely in the online community including when sourcing images for our projects.



Computing

'Comic Life'

SUMMER

2



Key learning this half term:

- Develop **knowledge** of **technology** through the use of the app '**Comic Life**'.
- Combine **text, graphics** and **sound** to **create** and manipulate **digital content**.
- Generate projects and successfully **save, retrieve** and **edit** these **projects**.

Online Safety - Think You Know

We will be taught online safety in order to participate safely in the online community including when sourcing images for our projects.



Computing Learning Journey 2020-21

Year 3

Computing

AUTUMN

'Computer Systems & Networks - Connecting Computers' 1



Key learning this half term:

- Develop their understanding of **digital devices**, with an initial focus on **inputs, processes, and outputs** as well as comparing **digital and non-digital devices**.
- Learn about **computer networks**, including **devices** that make up a **network's infrastructure**, such as **wireless access points** and **switches**.

Online Safety - Cyberpass

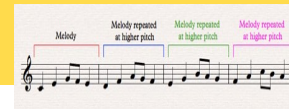
We will be taught online safety in order to participate safely in the online community including when sourcing images for their projects.



Computing

SPRING

'Programming (A) Sequence in Music' 1

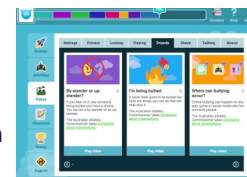


Key learning this half term:

- Create an **algorithm** for an **animated scene** in the form of a **storyboard**.
- Write a **program** using the software '**Scratch**' to create **animation**.
- **Design, write and debug programmes** that accomplish specific goals.
- Use **logical reasoning** to predict **outputs** and show an awareness of **inputs**.

Online Safety - Cyberpass

We will be taught online safety in order to participate safely in the online community including when sourcing images for our projects.



Computing

SUMMER

'Programming (B) - Events and Actions' 1



Key learning this half term:

- Explore links between **events** and **actions**, while consolidating prior learning relating to **sequencing**.
- **Predict the functions** of new **blocks** and experiment with them and design features for our own projects.
- Review an existing project against a given design and identify **bugs** within it.

Online Safety - Think You Know

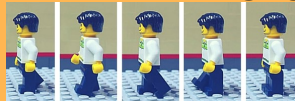
We will be taught online safety in order to participate safely in the online community including when sourcing images for our projects.



Computing

AUTUMN

'Animation' 2



Key learning this half term:

- Learn about simple **animation** techniques and **create** their own **animations**.
- Develop this **knowledge** and apply it to make a **stop frame animation** using a **digital device**.
- **Evaluate** their **animations** and try to improve them by adding other **media** and effects to create a brand-new **animation**.

Online Safety - Cyberpass

We will be taught online safety in order to participate safely in the online community including when sourcing images for their projects.



Computing

SPRING

'Desktop Publishing' 2

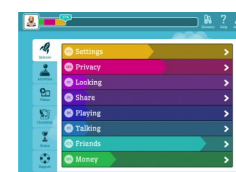


Key learning this half term:

- Recognise how **text** and **images** convey information.
- Recognise that **text** and **layout** can be **edited** to **communicate a message** effectively.
- Learn about '**templates**', '**orientation**', and '**placeholders**' within **desktop publishing software**.
- Think about how **desktop publishing** is used in the wider world and consider the benefits of using **desktop publishing applications**

Online Safety - Cyberpass

We will be taught online safety in order to participate safely in the online community including when sourcing images for our projects.



Computing

SUMMER

'Branching Databases' 2



Key learning this half term:

- Gain an understanding of what **attributes** are and how to use them to **sort** groups of objects by using **yes/no** questions.
- Identify the **object attributes** needed to collect relevant **data**.
- Learn how to use an **online database tool** to arrange objects into a **branching database** and begin to **compare** the two ways of presenting information.

Online Safety - Think You Know

We will be taught online safety in order to participate safely in the online community including when sourcing images for our projects.





Computing Learning Journey 2020-21

Year 4

Computing

AUTUMN

'Programming (A) -
Repetition in Shapes'

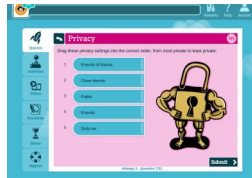
1

Key learning this half term:

- Create **programs** by **planning**, **modifying**, and **testing commands** to create shapes and patterns.
- Learn the basic **Logo commands**, and apply knowledge of this to create their own **algorithms**.
- **Debug code** by finding and fixing any errors.

Online Safety - Cyberpass

We will be taught online safety in order to participate safely in the online community including when sourcing images for our projects.



Computing

AUTUMN

'Creating Media -
Audio Editing'

2

Key learning this half term:

- Familiarise with **digital devices** capable of recording sound and/or playing audio.
- Identify the **inputs** and **outputs** required to play audio or record sound.
- Discuss the ownership of **digital audio** and the **copyright** implications of duplicating work of others.
- Use **Audacity** to produce a **podcast**.



Online Safety - Cyberpass

We will be taught online safety in order to participate safely in the online community including when sourcing images for our projects.



Computing

SPRING

'Comic Life'

1



Key learning this half term:

- **Select**, **use** and **combine** a variety of **software**.
- Successfully use **search engine** to **research**.
- Apply **software knowledge** on a range of **digital devices** - **laptops**, **ipads**, **desktop computer**.
- **Design** and **create comic strips** using **Comic Life** app.

Online Safety - Cyberpass

We will be taught online safety in order to participate safely in the online community including when sourcing images for our projects.



Computing

SPRING

'Programming (B) -
Repetition in Games'

2

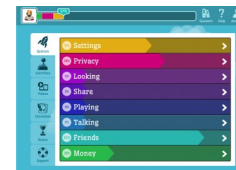


Key learning half this term:

- Develop the use of **count-controlled loops** in a different **programming** environment.
- Use their knowledge to **modify** existing **animations** and games using **repetition**.
- **Design** and **create** a game which uses **repetition**, applying stages of **programming** design throughout.

Online Safety - Cyberpass

We will be taught online safety in order to participate safely in the online community including when sourcing images for our projects.



Computing

SUMMER

'Spheros'

1



Key learning this half term:

- Learn to **design**, **write** and **debug** programs that accomplish **specific goals**.
- Develop the ability to **create controlling** or **simulating physical systems**.
- Apply knowledge to create various **input** and **output**.
- Use **logical reasoning** to **detect** and **correct errors** in **algorithms** and **programs**.

Online Safety - Think You Know

We will be taught online safety in order to participate safely in the online community including when sourcing images for our projects.



Computing

SUMMER

'HTML Weather Reports'

2



Key learning this half term:

- Write a **program** for a specific **purpose**.
- Incorporate features such as **inputs**, **repetition** and **procedures** to successfully **create** their **programme**.
- Use **'if'** and **'then'** **command** within a **series** of **instructions**.
- **Test existing software** to see how they could be improved.

Online Safety - Think You Know

We will be taught online safety in order to participate safely in the online community including when sourcing images for our projects.





Computing Learning Journey 2020-21

Year 5

Computing 'Comic Life'

AUTUMN
1

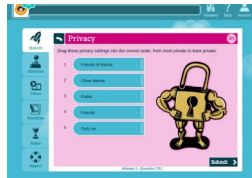


Key learning this half term:

- Create a **comic strip** using the app 'Comic Life'.
- Learn skills needed to **select, use** and **combine** a variety of **software**, including **internet** services.
- Practise skills on both **iPads** and **laptops**.

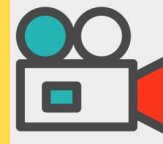
Online Safety - Cyber Pass

We will be taught online safety in order to participate safely in the online community including when sourcing images for our projects.



Computing 'Creating Media - Video Editing'

SPRING
1

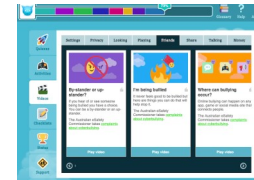


Key learning this half term:

- Recognise **video** as moving pictures, which can include **audio** and explain the benefits of adding **audio** to a video.
- Identify and name **digital devices** that can **record video** and **sound** and **locate** and identify the working **features** of a **digital device** that can record **video**.
- Store, retrieve, and export my **recording** to a **computer**.
- Explain how to improve a **video** by reshooting and **editing**.

Online Safety - Cyber Pass

We will be taught online safety in order to participate safely in the online community including when sourcing images for our projects.



Computing 'Raspberry Pi'

SUMMER
1



Key learning this half term:

- Learn that **physical systems** can be controlled by a computer and experiment with **computer control applications**.
- Solve problems using **decomposition** and use **logical reasoning** to detect errors in **algorithms**.
- Use **sequence, selection, repetition** and **variables** in order to write a **program** that accepts keyboard **input** and produces on-screen **output**.
- Learn that the **internet** is a series of **networks** and how **web pages** are **created** and **transmitted**.

Online Safety - Google Interland

We will be taught online safety in order to participate safely in the online community including when sourcing images for our projects.



Computing 'Programming (A) - Selection in Physical Computing'

AUTUMN
2



Key learning this half term:

- **Design, write** and **debug** programmes.
- Solve problems by **decomposing** them.
- Explain how simple **algorithms** work.
- Detect and correct **errors** in **algorithms**.
- Apply their understanding of **microcontrollers, output devices**, and **selection** to **design** a physical **project**.

Online Safety - Cyber Pass

We will be taught online safety in order to participate safely in the online community including when sourcing images for our projects.



Computing 'Programming (B) - Selection in Quizzes'

SPRING
2

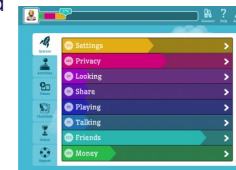


Key learning this half term:

- Learn how to write **programs** that ask **questions** and use **selection** to **control** the **outcomes** based on the answers given are selected.
- Apply this knowledge to **design** a quiz in response to a given task and implement it as a **program**
- Explain how **selection** directs the **flow** of a **program**
- Implement **algorithm** to **create** the first section of **program** and then test the **program**.
- Identify ways the **program** could be improved.

Online Safety - Cyberpass

We will be taught online safety in order to participate safely in the online community including when sourcing images for our projects.



Computing 'Kahoot'

SUMMER
2



Key learning this half term:

- Learn to use the **software 'Kahoot'** on **iPads** and **Laptops**.
- Successfully create a range of **quizzes, discussions** or **surveys**.
- Kahoot is a game-based classroom **response system** played by the **whole class** in **real time**.

Online Safety - Google Interland

We will be taught online safety in order to participate safely in the online community including when sourcing images for our projects.

