

Computing

“Whether you want to uncover the secrets of the universe, or you want to pursue a career in the 21st century, basic computing programming is an essential skill to learn.”

Stephen Hawking.

<p style="text-align: center;">Year 2 -Autumn 1 Safety in Technology CEOPs (3 Weeks) IT all around (3-4 Weeks)</p>	<p style="text-align: center;">Year 2 -Autumn 2 Digital Literacy Digital Photos (6 Weeks)</p>	<p style="text-align: center;">Year 2 -Spring 1 Algorithms Moving a robot (6 Weeks)</p>
<p>Prior Learning CEOPs</p> <ul style="list-style-type: none"> • I know to tell a Grown up if a video makes me feel worried, scared or sad • I understand what personal information is and why it is important to keep it private • I can explain how to play online games safely <p>IT all Around</p> <ul style="list-style-type: none"> • To identify technology. • To identify a computer and its main parts • To use a mouse in different ways • To use a keyboard to type on a computer 	<p>Prior Learning (Digital painting)</p> <ul style="list-style-type: none"> • <i>To describe what different freehand tools do</i> • <i>To use the shape tool and the line tools</i> • <i>To make careful choices when painting a digital picture</i> • <i>To explain why I chose the tools I used</i> • <i>To use a computer on my own to paint a picture</i> • <i>To compare painting a picture on a computer and on paper</i> 	<p>Prior Learning</p> <ul style="list-style-type: none"> • To explain what a given command will do • To act out a given word • To combine 'forwards' and 'backwards' commands to make a sequence • To combine four direction commands to make sequences • To plan a simple program • To find more than one solution to a problem
<p style="text-align: center;"><u>Curriculum objectives derived from National Curriculum</u></p> <p>CEOPs</p> <ul style="list-style-type: none"> • To understand what to do if I see something worrying or something I am unsure of online • To understand the importance of online consent • To understand how to keep safe when chatting and playing online <p>IT all Around</p> <ul style="list-style-type: none"> • To recognise the uses and features of information technology • To identify the uses of information technology in the school • To identify information technology beyond school • To explain how information technology helps us 	<p style="text-align: center;"><u>Curriculum objectives derived from National Curriculum</u></p> <ul style="list-style-type: none"> • To use a digital device to take a photograph • To make choices when taking a photograph • To describe what makes a good photograph • To decide how photographs can be improved • To use tools to change an image • To recognise that photos can be changed 	<p style="text-align: center;"><u>Curriculum objectives derived from National Curriculum</u></p> <ul style="list-style-type: none"> • To describe a series of instructions as a sequence • To explain what happens when we change the order of instructions • To use logical reasoning to predict the outcome of a program • To explain that programming projects can have code and artwork • To design an algorithm • To create and debug a program that I have written

Key assessment questions

CEOPs

1. What does TAG stand for and why is it important?
2. Can you discuss the dangers of sharing an image online?
3. How do you know if a game is suitable for children?

IT all around

1. Describe the uses of a computer.
2. Can you sort IT equipment by what it is used for?
3. Why do we use IT?
4. Can you talk about different rules for using IT?

Key assessment questions

1. Recognise what devices can be used to take photographs.
2. Can you explain why a photo looks better in portrait or landscape format?
3. Improve a photograph by retaking it.
4. Can you explain why a picture may be unclear?
5. Can you use the 'Adjust' tool to change the colour effect?
6. Can you identify which photos are real and which have been changed?

<p style="text-align: center;">Year 2 - Spring 2 Algorithms Scratch Jr programming quizzes (6 Weeks)</p>	<p style="text-align: center;">Year 2 - Summer 1 Digital Literacy Making Music (6 Weeks)</p>	<p style="text-align: center;">Year 2 -Summer 2 Project Pictograms – Geog link? (6 Weeks)</p>
<p>Prior Learning</p> <ul style="list-style-type: none"> • To choose a command for a given purpose • To show that a series of commands can be joined together • To identify the effect of changing a value • To explain that each sprite has its own instruction • To design the parts of a project • To use my algorithm to create a program 	<p>Prior Learning</p>	<p>Prior Learning (<i>Grouping Data</i>)</p> <ul style="list-style-type: none"> • To label objects • To identify that objects can be counted • To describe objects in different ways • To count objects with the same properties • To compare groups of objects • To answer questions about groups of objects
<p><u>Curriculum objectives derived from National Curriculum</u></p> <ul style="list-style-type: none"> • To explain that a sequence of commands has a start • To explain that a sequence of commands has an outcome • To create a program using a given design • To change a given design • To create a program using my own design • To decide how my project can be improved 	<p><u>Curriculum objectives derived from National Curriculum</u></p> <ul style="list-style-type: none"> • To say how music can make us feel • To identify that there are patterns in music • To experiment with sound using a computer • To use a computer to create a musical pattern • To create music for a purpose • To review and refine our computer work 	<p><u>Curriculum objectives derived from National Curriculum</u></p> <ul style="list-style-type: none"> • To recognise that we can count and compare objects using tally charts • To recognise that objects can be represented as pictures • To create a pictogram • To select objects by attribute and make comparisons • To recognise that people can be describe by attributes • To explain that we can present information using a computer
<p><u>Key assessment questions</u></p> <ol style="list-style-type: none"> 1. Can you identify the start of a sequence? 2. Can you change the outcome of a sequence of commands? 3. Can you build a sequences of blocks? 4. Can you choose appropriate characters and backgrounds? 5. Can you create an algorithm? 6. Can you debug a programme? 	<p><u>Key assessment questions</u></p> <ol style="list-style-type: none"> 1. Identify simple differences in pieces of music. 2. Can you play an instrument following a rhythm pattern? 3. Can you experiment with pitch? 4. Can you refine your musical pattern on a computer? 5. Can you add a sequence of notes to a rhythm? 6. Listen to music and describe how it makes you feel. 	<p><u>Key assessment questions</u></p> <ol style="list-style-type: none"> 1. Can you record data in a tally chart? 2. Can you use pictograms to answer simple questions about objects? 3. Can you explain what a pictogram shows? 4. Answer 'more than'/'less than' and 'most/least' questions about an attribute. 5. Can you collect data? 6. Give simple examples of why information should not be shared.

<p style="text-align: center;">Year 3 – Autumn 1 Desktop publishing</p>	<p style="text-align: center;">Year 3 -Autumn 2 Scratch – into, com, animation</p>	<p style="text-align: center;">Year 3 -Spring 1 Scratch maze – event actions, selections</p>
<p>Prior Learning</p> <p style="text-align: center;">Digital writing</p> <ol style="list-style-type: none"> 1. To use a computer to write 2. To add and remove text on a computer 3. To identify that the look of text can be changed on a computer 4. To make careful choices when changing text 	<p>Prior Learning</p> <p>Algorithms Moving a robot (6 Weeks)</p> <ul style="list-style-type: none"> • To choose a command for a given purpose • To show that a series of commands can be joined together • To identify the effect of changing a value • To explain that each sprite has its own instruction • To design the parts of a project • 6. To use my algorithm to create a program 	<p>Prior Learning</p> <p style="text-align: center;">Scratch Jr quizzes</p> <ul style="list-style-type: none"> • To explain that a sequence of commands has a start • To explain that a sequence of commands has an outcome • To create a program using a given design • To change a given design • To create a program using my own design • 6. To decide how my project can be improved
<p style="text-align: center;"><u>Curriculum objectives derived from National Curriculum</u></p> <ul style="list-style-type: none"> • To recognise how text and images convey information • To recognise that text and layout can be edited • To choose appropriate page settings • To add content to a desktop publishing publication • To consider how different layouts can suit different purposes • To consider the benefits of desktop publishing 	<p style="text-align: center;"><u>Curriculum objectives derived from National Curriculum</u></p> <ul style="list-style-type: none"> • To explore a new programming environment • To identify that commands, have an outcome • To explain that a program has a start • To recognise that a sequence of commands can have an order • To change the appearance of my project • To create a project from a task description 	<p style="text-align: center;"><u>Curriculum objectives derived from National Curriculum</u></p> <ul style="list-style-type: none"> • To explain how a sprite moves in an existing project • To create a program to move a sprite in four directions • To adapt a program to a new context • To develop my program by adding features • To identify and fix bugs in a program • To design and create a maze-based challenge
<p style="text-align: center;"><u>Key assessment questions</u></p> <ol style="list-style-type: none"> 1. What are the advantages and disadvantages of using text and images? 2. Why might you change font style, size, and colours? 3. What does 'page orientation' mean? 4. How can you change content after adding it? 5. How do you know a layout is suitable for a given purpose? 6. What are the uses of desktop publishing in the real world 	<p style="text-align: center;"><u>Key assessment questions</u></p> <ol style="list-style-type: none"> 1. How is Scratch to other programmes you have used? 2. How do you create movement for more than one sprite? 3. What are the different ways you can start a program? 4. What is a sequence? 5. How do you change the appearance of a sprite? 6. Why is it important to identify and name the objects you need for a project? 	<p style="text-align: center;"><u>Key assessment questions</u></p> <ol style="list-style-type: none"> 1. How did you choose which keys to use for actions? 2. How could you prove that your sprite has successfully navigated a maze? 3. Why did you have to consider the real world when making design choices? 4. Could you predict the functions of new blocks? 5. Why is debugging important? 6. Why did you make X design choices?

<p style="text-align: center;">Year 3 -Spring 2/Summer 1 Decomposition, structuring data</p>	<p style="text-align: center;">Year 3 -Summer1/Summer 2 Animation – Anglo Saxon history</p>
<p>Prior Learning (Grouping Data)</p> <ul style="list-style-type: none"> • To label objects • To identify that objects can be counted • To describe objects in different ways • To count objects with the same properties • To compare groups of objects • 6. To answer questions about groups of objects 	<p>Prior Learning Scratch Jr. Animations</p> <ul style="list-style-type: none"> • 1.To choose a command for a given purpose • 2. To show that a series of commands can be joined together • 3. To identify the effect of changing a value • 4. To explain that each sprite has its own instruction • 5. To design the parts of a project <ul style="list-style-type: none"> • 6. To use my algorithm to create a program
<p style="text-align: center;"><u>Curriculum objectives derived from National Curriculum</u></p> <ul style="list-style-type: none"> • To create questions with yes/no answers • To identify the attributes needed to collect data about an object • To create a branching database • To explain why it is helpful for a database to be well structured • To plan the structure of a branching database • To independently create an identification tool 	<p style="text-align: center;"><u>Curriculum objectives derived from National Curriculum</u></p> <ul style="list-style-type: none"> • To explain that animation is a sequence of drawings or photographs • To relate animated movement with a sequence of images • To plan an animation • To identify the need to work consistently and carefully • To review and improve an animation <ul style="list-style-type: none"> • To evaluate the impact of adding other media to an animation
<p style="text-align: center;"><u>Key assessment questions</u></p> <ol style="list-style-type: none"> 1. What attribute did you choose to separate the objects? 2. How did you arrange objects into a tree structure? 3. Why was testing you branching database important? 4. Why do your questions need to be ordered carefully? 5. How did you pick the attributes of objects to write questions with yes/no answers? 6. Can you suggest real-world uses for branching databases? 	<p style="text-align: center;"><u>Key assessment questions</u></p> <ol style="list-style-type: none"> 1. How does an animation/flip book work? 2. Why are little changes are needed for each frame? 3. Why is it important to break a story into settings, characters and events? 4. Why is onion skinning important? 5. How can you make your animation better? 6. How can you add other media to your animation?