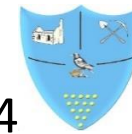# Computing Overview 2023-24

Learning: For a better future

'Computing is not about computers anymore. It is about living'

NICHOLAS NEGROPONTE

Computing Rationale:

Intent: At our school we want pupils to be MASTERS of technology and not slaves to it. Technology is everywhere and will play a pivotal part in students' lives. Therefore, we want to model and educate our pupils on how to use technology positively, responsibly and safely. We aim to prepare our learners for their future by giving them the opportunities to gain knowledge and develop skills that will equip them for an ever-changing digital world. Our computing curriculum focuses on a progression of skills in computer science, information technology, digital literacy and online safety to ensure that children become competent in safely using, as well as understanding, technology. We want to equip pupils to use computational thinking and creativity that will enable them to become active participants in the digital world. These skills are revisited repeatedly to ensure that the learning is embedded and that the skills are developed.

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Autumn 1 Computing systems and networks	PROJECT EVOLVE Online Safety: 1) Self-image 2) Health, well-being and lifestyle Technology around us:	PROJECT EVOLVE Online Safety: 1) Self-image 2) Health, well-being and lifestyle What is information technology?	gooseberry planet Online Safety (playground): Rapid Fire Quiz 1) People Online Connecting computers:	gooseberry planet Online Safety (street): Rapid Fire Quiz 1) People Online The internet:	gooseberry planet Online Safety (village): Rapid Fire Quiz 1) Digital Footprint Sharing information:	gooseberry planet Online Safety (town): Rapid Fire Quiz 1) Digital Footprint Internet communication:

	Recognising technology in school and using it responsibly. 🟢	Identifying IT and how its responsible use improves our world in school and beyond. 🟢	Identifying that digital devices have inputs, processes, and outputs, and how devices can be connected to make networks.	Recognising the internet as a network of networks including the WWW, and why we should evaluate online content.	Identifying and exploring how information is shared between digital systems.	Recognising how the WWW can be used to communicate and be searched to find information.
Autumn 2 **Creating Media**	PROJECT EVOLVE 🟢 **Online Safety:** 3) Online Reputation 4) Online Bullying **Digital painting:** Choosing appropriate tools in a program to create art and making comparisons with working non-digitally. 🔴	PROJECT EVOLVE 🟢 **Online Safety:** 3) Online Reputation 4) Online Bullying **Photography:** Capturing and changing digital photographs for different purposes. 🔴	gooseberry planet 🟢 **Online Safety (playground):** 2) Personal Information 3) Perfect Passwords **Stop-frame animation:** Capturing and editing digital still images to produce a stop-frame animation that tells a story. 🔴	gooseberry planet 🟢 **Online Safety (street):** 2) Perfect Passwords 3) Staying Private **Audio editing:** Capturing and editing audio to produce a podcast, ensuring that copyright is considered. ⚫	gooseberry planet 🟢 **Online Safety (village):** 2) Clickjacking 3) Webcam Wise **Video editing:** Planning, capturing, and editing video to produce a short film. ⚫	gooseberry planet 🟢 **Online Safety (town):** 2) Junk Email 3) Location Sharing **Webpage creation:** Designing and creating webpages, considering copyright, aesthetics and navigation. 🟡🔴
Spring 1 **Programming A**	PROJECT EVOLVE 🟢 **Online Safety:** 5) Online Relationships **Moving a robot:** Writing short algorithms and programs for floor robots and predicting program outcomes. 🔵🟣	PROJECT EVOLVE 🟢 **Online Safety:** 5) Online Relationships **Robot Algorithms:** Creating and debugging programs and using logical reasoning to make predictions. 🔵🟣	gooseberry planet 🟢 **Online Safety (playground):** 4) Fake Profiles 5) Selfie Safe **Sequencing Sounds:** Creating sequences in a block-based programming language to make music. ⚫	gooseberry planet 🟢 **Online Safety (street):** 4) Safe Sharing 5) Location Sharing **Repetition in shapes:** Using a text-based programming language to explore count-controlled loops when drawing shapes. 🔵	gooseberry planet 🟢 **Online Safety (village):** 4) Sharing Safely 5) Online Gaming **Selection in physical computing:** Exploring conditions and selection using a programmable microcontroller. 🟣	gooseberry planet 🟢 **Online Safety (town):** 4) Extreme Promises 5) Video Chat **Variables in games:** Exploring variables when designing and coding a game. 🟣

Spring 2 **Data and information**	**Online Safety:** 6) Managing Online Information **Grouping data:** Exploring object labels, then using them to sort and group objects by properties.	**Online Safety:** 6) Managing Online Information **Pictograms:** Collecting data in tally charts and using attributes to organise and present data on a computer.	**Online Safety (playground):** 6) Sharing Online (copywrite) 7) Video Chat **Branching databases:** Building and using branching databases to group objects using yes/no questions.	**Online Safety (street):** 6) Online Gaming 7) Online Bullying **Data logging:** Recognising how and why data is collected over time, before using data loggers to carry out an investigation.	**Online Safety (village):** 6) Boundaries 7) Illegal Downloads **Flat-file databases:** Using a database to order data and create charts to answer questions.	**Online Safety (town):** 6) Online Bullying 7) Online Gaming **Introducing spreadsheets:** Answering questions by using spreadsheets to organise and calculate data.
Summer 1 **Creating Media**	**Online Safety:** 7) Privacy and Security **Digital writing:** Using a computer to create and format text, before comparing to writing non-digitally.	**Online Safety:** 7) Privacy and Security **Making music:** Using a computer as a tool to explore rhythms and melodies, before creating a musical composition.	**Online Safety (playground):** 8) Online Bullying 9) Online Gaming **Desktop publishing:** Creating documents by modifying text, images, and page layouts for a specified purpose.	**Online Safety (street):** 8) chatting Online 9) Keeping Healthy **Photo editing:** Manipulating digital images and reflecting on the impact of changes and whether the required purpose is fulfilled.	**Online Safety (village):** 8) Downloading Apps 9) Images **Vector drawing:** Creating images in a drawing program by using layers and groups of objects.	**Online Safety (town):** 8) Clickjacking 9) Fake Profiles **3D modelling:** Planning, developing, and evaluating 3D computer models of physical objects.

Summer 2	PROJECT EVOLVE 🟢	PROJECT EVOLVE 🟢	gooseberry planet 🟢	gooseberry planet 🟢	gooseberry planet 🟢	gooseberry planet 🟢
	<u>Online Safety:</u> 8) Copywrite and Ownership	<u>Online Safety:</u> 8) Copywrite and Ownership	<u>Online Safety (playground):</u> 10) Searching Final Rapid-Fire Quiz	<u>Online Safety (street):</u> 10) Phishing Final Rapid-Fire Quiz	<u>Online Safety (village):</u> 10) Perfect Passwords Final Rapid-Fire Quiz	<u>Online Safety (town):</u> 10) Pop Up Messages Final Rapid-Fire Quiz
Programming B	<u>Programming animations:</u> Designing and programming the movement of a character on screen to tell stories. 🟣🟡	<u>Programming quizzes:</u> Designing algorithms and programs that use events to trigger sequences of code to make an interactive quiz. 🔵🟣	<u>Events and actions in programs:</u> Writing algorithms and programs that use a range of events to trigger sequences of actions. 🔵🟣	<u>Repetitions in games:</u> Using a block-based programming language to explore count-controlled and infinite loops when creating a game. 🔵🟣	<u>Selection in quizzes:</u> Exploring selection in programming to design and code an interactive quiz. 🔵🟣	<u>Sensing:</u> Designing and coding a project that captures inputs from a physical device. 🔵🟣

<u>**Interleaving**</u>
1. Science
2. History
3. Geography
4. RE
5. PSHE
6. Music
7. Art
8. DT
9. English
10. Maths