

Alfriston School Computing Curriculum Cycle

Pearl Class – EYFS

In EYFS, units are flexibly taught in an order to best suit the children's interests and developmental needs

Computational Thinking

| Awesome Autumn | Super Space | People Who Help Us | Springtime | Boats Ahoy | Summer Fun | Busy Bodies |
|--|---|---|--|---|---|--|
| <p>Autumn themed activities which see the children explore patterns in Garlands Galore, create a leaf labyrinth and make Pumpkin Soup using computational thinking skills.</p> | <p>Space themed activities to develop pupils computational thinking and problem-solving skills. Include creating algorithms to direct a rocket through space and spotting patterns in pictures of aliens.</p> | <p>Activities based on our everyday superheroes, which have been designed to help pupils develop their computational thinking skills. Create patterns on a police car, guide a delivery person to their destination and design a uniform for a firefighter!</p> | <p>Spring themed activities see the children make a Rabbit run, create Junk scarecrows and explore sequencing whilst planting seeds.</p> | <p>Takes children on a journey of discovery as they investigate boats. Four activities make up this set of resources. Includes different uses of boats, floating and sinking predictions, creating a good boat through exploring designs and role play.</p> | <p>Children explore their surroundings and get creative, take a journey and make a map, and discover seaside tangrams, in these three fun activities.</p> | <p>Activities that help children discover how bodies move and grow. Using the resources provided they explore and learn about parts of the body, growth and movement.</p> <p>Simple algorithms are created and adapted to form a routine of movements.</p> |

Alfriston School Computing Curriculum Cycle

Ruby Class (Year 1 & 2) – Cycle A

| Term 1 | Term 2 | Term 3 | Term 4 | Term 5 | Term 6 |
|---|--|--|--|--|--|
| <p style="text-align: center;">Computing systems and networks</p> <p style="text-align: center;">Technology Around Us</p> <p>Recognising technology in school and using it responsibly.</p> | <p style="text-align: center;">Computing systems and networks</p> <p style="text-align: center;">Information Technology Around Us</p> <p>Identifying IT and how it is responsible use improves our world in school and beyond.</p> | <p style="text-align: center;">Creating media</p> <p style="text-align: center;">Digital Painting</p> <p>Choosing appropriate tools in a programme to create art, and making comparisons with working non-digitally.</p> | <p style="text-align: center;">Creating media</p> <p style="text-align: center;">Digital Photography</p> <p>Capturing and changing digital photographs for different purposes.</p> | <p style="text-align: center;">Programming</p> <p style="text-align: center;">Moving a Robot</p> <p>Writing short algorithms and programs for floor robots, and predicting program outcomes.</p> | <p style="text-align: center;">Programming</p> <p style="text-align: center;">Robot Algorithms</p> <p>Creating and de-bugging programs, and using logical reasoning to make predictions.</p> |

Ruby Class (Year 1 & 2) – Cycle B

| Term 1 | Term 2 | Term 3 | Term 4 | Term 5 | Term 6 |
|---|---|--|--|--|--|
| <p style="text-align: center;">Data and information</p> <p style="text-align: center;">Grouping Data</p> <p>Exploring object labels, then using them to sort and group objects by properties.</p> | <p style="text-align: center;">Data and information</p> <p style="text-align: center;">Pictograms</p> <p>Collecting data in tally charts and using attributes to organise and present data on a computer.</p> | <p style="text-align: center;">Creating media</p> <p style="text-align: center;">Digital Writing</p> <p>Using a computer to create and format text, before comparing to writing non-digitally.</p> | <p style="text-align: center;">Creating media</p> <p style="text-align: center;">Digital Music</p> <p>Using a computer as a tool to explore rhythms and melodies, before creating a musical composition.</p> | <p style="text-align: center;">Programming</p> <p style="text-align: center;">Programming Animations</p> <p>Designing and programming the movement of a character on screen to tell stories.</p> | <p style="text-align: center;">Programming</p> <p style="text-align: center;">Programming Quizzes</p> <p>Designing algorithms and programs that use events to trigger sequences of code to make an interactive quiz.</p> |

Alfriston School Computing Curriculum Cycle

Sapphire Class (Year 3 & 4) – Cycle A

| Term 1 | Term 2 | Term 3 | Term 4 | Term 5 | Term 6 |
|---|---|---|---|--|--|
| <p style="text-align: center;">Computing systems and networks Connecting Computers</p> <p>Identifying that digital devices have inputs, processes, and outputs, and how devices can be connected to make networks.</p> | <p style="text-align: center;">Computing systems and networks The Internet</p> <p>Recognising the internet as a network of networks including the World Wide Web, and why we should evaluate online content.</p> | <p style="text-align: center;">Creating media Stop-frame Animation</p> <p>Capturing and editing digital still images to produce a stop-frame animation that tells a story.</p> | <p style="text-align: center;">Creating media Audio Production</p> <p>Capturing and editing audio to produce a podcast, ensuring that copyright is considered.</p> | <p style="text-align: center;">Programming Sequencing Sounds</p> <p>Creating sequences in a block-based programming language to make music.</p> | <p style="text-align: center;">Programming Repetition in Shapes</p> <p>Using a text-based programming language to explore-controlled loops when drawing shapes.</p> |

Sapphire Class (Year 3 & 4) – Cycle B

| Term 1 | Term 2 | Term 3 | Term 4 | Term 5 | Term 6 |
|---|--|---|---|---|--|
| <p style="text-align: center;">Data and information Branching Databases</p> <p>Building and using branching databases to group objects using yes/no questions.</p> | <p style="text-align: center;">Data and information Data Logging</p> <p>Recognising how and why data is collected over time, before using data loggers to carry out an investigation.</p> | <p style="text-align: center;">Creating media Desktop Publishing</p> <p>Creating documents by modifying texts, images, and page layouts for a specified purpose.</p> | <p style="text-align: center;">Creating media Photo Editing</p> <p>Manipulating digital images, and reflecting on the impact of changes and whether the required purpose is fulfilled.</p> | <p style="text-align: center;">Programming Events and Actions in Programs</p> <p>Writing algorithms and programs that use a range of events to trigger sequences of actions.</p> | <p style="text-align: center;">Programming Repetition in Games</p> <p>Using block-based programming language to explore count-controlled and infinite loops when creating a game.</p> |

Alfriston School Computing Curriculum Cycle

| Emerald Class (Year 5 & 6) – Cycle A | | | | | |
|--|---|--|--|--|--|
| Term 1 | Term 2 | Term 3 | Term 4 | Term 5 | Term 6 |
| <p style="color: green; text-align: center;">Computing systems and networks</p> <p style="text-align: center;">Systems and Searching</p> <p>Recognising IT systems in the world and how some can enable searching on the internet.</p> | <p style="color: green; text-align: center;">Computing systems and networks</p> <p style="text-align: center;">Communication and Collaboration</p> <p>Exploring how data is transferred by working collaboratively online</p> | <p style="color: blue; text-align: center;">Creating media</p> <p style="text-align: center;">Video Production</p> <p>Planning, capturing and editing video to produce a short film.</p> | <p style="color: blue; text-align: center;">Creating media</p> <p style="text-align: center;">Webpage Creation</p> <p>Designing and creating webpages, giving consideration to copyright, aesthetics and navigation.</p> | <p style="color: orange; text-align: center;">Programming</p> <p style="text-align: center;">Selection in Quizzes</p> <p>Exploring selection in programming to design and code an interactive quiz.</p> | <p style="color: orange; text-align: center;">Programming</p> <p style="text-align: center;">Variables in Games</p> <p>Exploring variables when designing and coding a game.</p> |
| Emerald Class (Year 5 & 6) – Cycle B | | | | | |
| Term 1 | Term 2 | Term 3 | Term 4 | Term 5 | Term 6 |
| <p style="color: red; text-align: center;">Data and information</p> <p style="text-align: center;">Flat-File Databases</p> <p>Using a database to order data and create charts to answer questions.</p> | <p style="color: red; text-align: center;">Data and information</p> <p style="text-align: center;">Introduction to Spreadsheets</p> <p>Answering questions by using spreadsheets to organise and calculate data.</p> | <p style="color: blue; text-align: center;">Creating media</p> <p style="text-align: center;">Introduction to Vector Graphics</p> <p>Creating images in a drawing program by using layers and groups of objects.</p> | <p style="color: blue; text-align: center;">Creating media</p> <p style="text-align: center;">3D Modelling</p> <p>Planning, developing and evaluating 3D computer models of physical objects.</p> | <p style="color: orange; text-align: center;">Programming</p> <p style="text-align: center;">Selection in Physical Computing</p> <p>Exploring conditions and selection using a programmable microcontroller.</p> | <p style="color: orange; text-align: center;">Programming</p> <p style="text-align: center;">Sensing Movement</p> <p>Designing and coding a project that captures inputs from a physical device.</p> |