

## Computing at Southwold School

At Southwold Primary School developing new knowledge, skills, understanding and attitudes in Computing valued by both staff and pupils. We also use ICT to support learning in a range of cross curricular ways, to enhance children's learning experience throughout their time here as part of a broad and balanced curriculum. We are passionate about ensuring that our children leave as effective digital learners, who are equipped to contribute positively to society.

### Online Safety

The safety of our children is of vital importance; therefore online safety is taught at an appropriate level throughout the school on a regular basis. Children use SMART Rules to stay safe online and are encouraged to speak to an adult if they feel uneasy at any time while using the internet. For our older children, we provide multiple reporting routes like the CEOP reporting tool via our website.



Staff have regular updates and training and take part in Safer Internet Day activities with the children. We communicate regularly with parents and offer support in school to help support parents, carers and the wider community

### Curriculum

Our school uses the Elim Computer Scheme of Work. This scheme covers the curriculum in a way that reflects our school's "big questions" and is adapted to suit the needs of our children.

In EYFS, children have a variety of equipment when carrying out their learning challenges. They are encouraged to use ICT on a daily basis to capture snapshots of their learning, and share their work with others. The children are also able to interact with remote control toys and explore how to programme simple robots in order to make them move.

In Key Stage 1 and 2, the children are able to learn and develop the skills and techniques which allow them to present their work creatively in a variety of ways. The school uses 'Purple Mash' to create a variety of work, and provide access to the platform at school and home. Follow this link to see examples of what are children have been creating.

<https://www.purplemash.com/displayboard/59ce3d0eec511a11068b4567>

Within the computing curriculum, children are developing knowledge of digital systems and how they work which enables them to design, create and debug their own computer programs.

Pupils in KS1 are taught to:

- understand what algorithms are, how they are implemented as programs on digital devices, and that programs execute by following precise and unambiguous instructions
- create and debug simple programs
- use logical reasoning to predict the behaviour of simple programs
- use technology purposefully to create, organise, store, manipulate and retrieve digital content
- recognise common uses of information technology beyond school
- use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies

Pupils in KS2 are taught to:

- 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
- 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
- use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content
- 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 technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact

## **Social Media**

At Southwold School, we believe in the power of social media and have set up our own school Facebook and Twitter pages to keep parents and the local community informed of what is happening in school.

## **Aims**

The national curriculum for computing aims to ensure that all pupils

- can understand and apply the fundamental principles and concepts of computer science, including abstraction, logic, algorithms and data representation
- can analyse problems in computational terms, and have repeated practical experience of writing computer programs in order to solve such problems
- can evaluate and apply information technology, including new or unfamiliar technologies, analytically to solve problems
- are responsible, competent, confident and creative users of information and communication technology

## What we teach, 2018 - 19

Foundation Stage	Term 1: Where did we come from? Where are we going? What's inside your imagination? How we celebrate?	Term 2: Can we investigate...? What's between the pages?	Term 3: Where in the world are we? What's through the window?
	(CS) e-Safety Careful handling technology devices Limit time on devices	(CS) e-Safety rules Tell an adult Keep password private	(CS) e-Safety Pop-ups and in-App purchases Kind to my friends
	(DL) Programming Mouse, touchpad or touch to control objects on a screen Exploring with floor robots	(DL) Programming Scratch Jr Turns on equipment Floor robot retelling a story	(DL) Programming Scratch Jr Control ladybird moving to flowers on screen (2Go) Open-ended activity online to practise mouse and touch skills
	(DL) Handling Data / (DL) Multimedia Investigating things under a microscope Making a portrait with a paint program or app Voice recorder to capture local visit	(DL) Technology in our lives Taking and printing photographs Operating simple equipment (Class blog to share learning)	(DL) Multimedia / TinLives Taking photos / video Using talking tins Presenting story characters using paint program Online resource to watch African dance
	(DL) Handling Data / (DL) Multimedia Sorting objects and developing mouse skills Finding out information from Infant Encyclopaedia	(DL) Handling Data Sorting objects and developing mouse skills Finding out information from Infant Encyclopaedia	(DL) Handling Data / TinLives Photos of plants Photos sorted 2Count pictogram to show favourite plant or tree (Class blog)
	(DL) Multimedia Create a plant or tree using a paint program Create electronic book		
	<b>Learning links</b> <b>PD MH 40-60+:</b> "Handles tools, objects, safely and with increasing control." <b>L R 40-60+:</b> "Links sounds to letters, naming and sounding the letters of the alphabet." "Knows that information can be retrieved from books and computers." <b>UW W ELG:</b> "Children know about similarities and differences in relation to places, objects, materials and living things." <b>UW W ELG:</b> "They talk about the features of their own immediate environment and how environments might vary from one another." <b>EAD BI 30-50+:</b> "Captures experiences and responses with range of media, such as music, dance and paint and other materials or words." <b>EAD ELG:</b> "Children use what they have learnt about media and materials in original ways, thinking about uses and purposes." "Represent town ideas, thoughts and feelings through design and technology, art, music, dance, role play and stories."	<b>Learning links</b> <b>M SSM 40-60:</b> ESPRESSO – Fruit sorting activity. <b>L R 30-50 or 40-60:</b> Flashcards for Key words: Teacher Directed: Introduce the key words as you wish (pairs game etc) Children initiated: input the key words into 'Food words' app. (Personalize the flashcards including using your own photos). <b>UW- W 30-50+:</b> Research CBBC Documentaries Watch videos and look at photos at Kids National Geographic.	<b>Learning links</b> <b>L W 40-60:</b> make photographs into non-fiction book to include labelling and sentences. Write a book, 'how to look after a plant'. Find information about plant names and lifecycles of a plant. Make seed packets and write growing instructions <b>UW W 40-60+:</b> complete experiment with plants. Discuss what might happen and record the progress with photographs to add to book.. <b>PSE MR 30-50+:</b> work as a team to plan and maintain a plant pot or part of a vegetable garden. <b>PD 30-50+:</b> choose and use tools for maintaining garden, grow healthy foods, make healthy recipes. <b>M SSM &amp; N: 30-50+</b> measure height of plants, sort in height order. Count seeds and make seed patterns. Map and measure space in the vegetable garden. Sort different types of bulbs and seeds. <b>EAD EuMM 40-60+:</b> use art software to draw each stage of plant's growth. Label the parts of the plant. Paint or draw pictures of plants and flowers. Arrange flora and fauna to make different parts of a plant

Year 1	<b>Term 1: Where did we come from? Where are we going? What's inside your imagination? How we celebrate?</b>		<b>Term 2: Can we investigate...? What's between the pages?</b>		<b>Term 3: Where in the world are we? What's through the window?</b>	
	<b>(CS) e-Safety</b> Agree sensible e-Safety rules for the classroom Tell an adult		<b>(CS) e-Safety</b> Keep passwords private. Tell you what personal information is.		<b>(CS) e-Safety</b> Keep passwords private. Agree sensible e-Safety rules. Tell an adult	
	<b>(DL) Programming</b> Floor robots discovering toys Car moving around track (2Go)		<b>(DL) Programming</b> Moving a car around a town on a screen (2Go) Floor robots move around a village floor mat		<b>(DL) Programming</b> Pivot stick animation with free software	
	<b>(DL) Multimedia</b> Online activity to add text to describe toys Camera recording an image, uploaded and labels added	<b>(DL) Technology in our lives</b> Offline and online jigsaw Infant Encyclopaedia to find out about toys Devices to play games	<b>(DL) Multimedia</b> Green screening on homes in the past Draw and label a house Postcards/Poster of a town/village walk	<b>(DL) Handling Data</b> Pictograph of materials used for houses and homes (2Count) Venn diagram to sort objects	<b>(DL) Technology in our lives</b> Class blog, cameras and printing Following links to find information	<b>(DL) Handling Data</b> Collecting weather data
Year 2	<b>Term 1: Where did we come from? Where are we going? What's inside your imagination? How we celebrate?</b>		<b>Term 2: Can we investigate...? What's between the pages?</b>		<b>Term 3: Where in the world are we? What's through the window?</b>	
	<b>(CS) e-Safety</b> Keep password and private information safe Know who sees work online Know what to do - report		<b>(CS) e-Safety</b> Kind and polite in real life and on internet Tell somebody if feel upset		<b>(CS) e-Safety</b> Recognise sensible amounts of time to spend online Use technology safely Know where to go for help and support	
	<b>(DL) Programming</b> Lego Fix the Factory (free online and as an app) used to decide on algorithm, program robot and debug as needed		<b>(DL) Programming</b> Floor robot to collect information about animals Treasure hunt Drawing a letter		<b>(DL) Programming</b> Floor robots to create 2d shapes Online activity and 2Go or Daisy the Dinosaur app to draw shapes	
	<b>(DL) Multimedia</b> Photos linked to topic Software / app o import pictures and add text to present topic research	<b>(DL) Technology in our lives</b> Search for information Class blog or website to share information What is Internet?	<b>(DL) Multimedia</b> News report video or an animation about an animal	<b>(DL) Handling Data</b> Branching data base to sort animals 2Investigate to add information about animals	<b>(DL) Technology in our lives</b> Save and retrieve data Contribute to class blog Validity of information online	<b>(DL) Handling Data</b> Branching database to sort shapes 2Graph to present information

Year 3	<b>Term 1: Where did we come from? Where are we going? What's inside your imagination? How we celebrate?</b>		<b>Term 2: Can we investigate...? What's between the pages?</b>		<b>Term 3: Where in the world are we? What's through the window?</b>	
	<b>(CS) e-Safety</b> Protect personal information Use safety features of websites, know how to report		<b>(CS) e-Safety</b> Downloading files and games Good choices about time online Post positive comments online		<b>(CS) e-Safety</b> Secure password Protect personal information	
	<b>(DL) Programming</b> Introduction to Scratch Programming an animated scene		<b>(DL) Programming</b> Kodu used to create a world and interact with objects		<b>(DL) Programming</b> Build and program robots using Lego WeDo or Scratch	
	<b>(DL) Multimedia</b> Paint program to alter an image Creating e-book	<b>(DL) Technology in our lives</b> www as part of Internet Different search engines Using filters for search results Image copyright	<b>(DL) Multimedia</b> Creating art in the style of a famous artist Create a piece of music Green screening travelling to different worlds	<b>(DL) Handling Data</b> Generate questions Inputting data and presenting in different ways Using datalogger to collect data	<b>(DL) Technology in our lives</b> Use search tools Save and retrieve work online and local device <b>(DL) Multimedia</b> opt Photostory to present	<b>(DL) Handling Data</b> Branching database to investigate and share information 2Investigate to create a simple database
Year 4	<b>Term 1: Where did we come from? Where are we going? What's inside your imagination? How we celebrate?</b>		<b>Term 2: Can we investigate...? What's between the pages?</b>		<b>Term 3: Where in the world are we? What's through the window?</b>	
	<b>(CS) e-Safety</b> Protecting myself and my friends Know what can be seen online and who by		<b>(CS) e-Safety</b> Information safe online, know how to report Comment positively and respectfully online		<b>(CS) e-Safety</b> Secure password Comment positively and respectfully online	
	<b>(DL) Programming</b> App or online resource to create a game, considering algorithm and continually testing and debugging		<b>(DL) Programming</b> Tell a joke / Program different keys to create an Etch a Sketch in Scratch Create Car Racing Game		<b>(DL) Programming</b> Kodu used to create a game to support learning of times tables	
	<b>(DL) Multimedia</b> Create a class comic	<b>(DL) Technology in our lives</b> Websites showing false information Key words for searching Plagiarism	<b>(DL) Technology in our lives</b> Understand school network drive Create hyperlinks Search for information	<b>(DL) Handling Data</b> Collecting data including use of datalogger Make a line graph that uses continuous data	<b>(DL) Multimedia</b> Create an advert for Kodu game, including use of green screening	<b>(DL) Handling Data</b> Collect data, record in a spreadsheet to graph Create branching database

<b>Year 5</b>	<b>Term 1: Where did we come from? Where are we going? What's inside your imagination? How we celebrate?</b>		<b>Term 2: Can we investigate...? What's between the pages?</b>		<b>Term 3: Where in the world are we? What's through the window?</b>	
	<b>(CS) e-Safety</b> Know resources which can be downloaded and used		<b>(CS) e-Safety</b> What is posted online can be seen and affect others Important to communicate kindly and respectfully Explain importance of reporting to an adult		<b>(CS) e-Safety</b> Protect personal information Report concerns and protecting friends Spending too much time online	
	<b>(DL) Programming</b> Use variables to count in Scratch Count in Roman Numerals		<b>(DL) Programming</b> Algorithms and programs to create shapes and patterns using repeat procedures Floor robots to achieve goals efficiently		<b>(DL) Programming</b> Pong game in Scratch using variables Adapt to create own game	
	<b>(DL) Technology in our lives</b> Search for sound effects How is information sorted and stored? Search for information Class blog or website to share information	<b>(DL) Handling Data</b> Dataloggers used to investigate sound levels <b>(DL) Multimedia</b> Creating a story using sound effects	<b>(DL) Multimedia</b> Greenscreen to produce a weather report	<b>(DL) Handling Data</b> Recording weather on a spreadsheet	<b>(DL) Technology in our lives</b> www and Internet Using search engines and evaluating information	<b>(DL) Multimedia</b> Presentation or quiz based on topic
<b>Year 6</b>	<b>Term 1: Where did we come from? Where are we going? What's inside your imagination? How we celebrate?</b>		<b>Term 2: Can we investigate...? What's between the pages?</b>		<b>Term 3: Where in the world are we? What's through the window?</b>	
	<b>(CS) e-Safety</b> Explain consequences of spending too much time online or on a game.		<b>(CS) e-Safety</b> Support friends to protect themselves and make good choices online Explain consequences to myself and others of not communicating kindly and respectfully		<b>(CS) e-Safety</b> Protect personal data Age appropriate and reliable website Cyberbullying	
	<b>(DL) Programming</b> Create a times tables game and then use this to plan and create a quiz game		<b>(DL) Programming</b> Create a simulation of a system of the body using chosen (DL) Programming software		<b>(DL) Programming</b> Logo program using if statements to create patterns Create mathematical function machines in Logo	
	<b>(DL) Multimedia</b> Create and collect sound and images files for game	<b>(DL) Technology in our lives</b> Labelled diagram of web resources used Scratch community sharing game	<b>(DL) Multimedia</b> Green greening combined with other (DL) Multimedia to present system of the body	<b>(DL) Handling Data</b> Data loggers to measure most effective eye protection for sunlight or heart rate after exercise	<b>(DL) Technology in our lives</b> How Internet works and data sent Origin of websites	<b>(DL) Handling Data</b> Plan an investigation Collect data about websites Present findings to others