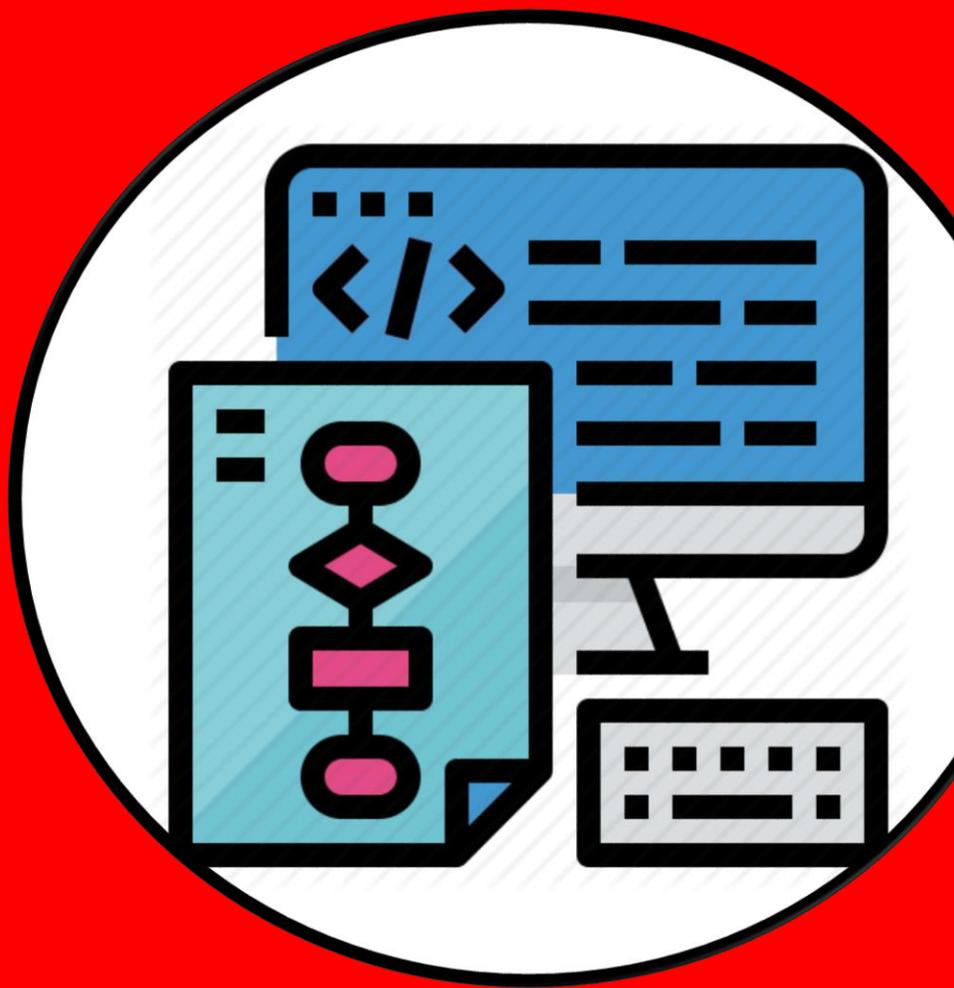
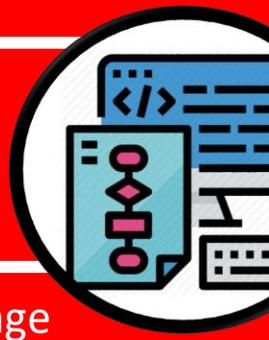

COMPUTING



PORTSWOOD PRIMARY SCHOOL

KEY INFORMATION

COMPUTING INTENT



In Computing at Portswood Primary School we encourage children to become **confident** and **creative** users of information and communication technology, **understanding** its **importance** in their lives and in the ever-changing world around them.

We ensure that pupils **understand** how to act as **responsible** online citizens, staying **safe** online to protect their own **wellbeing** and that of those around them.

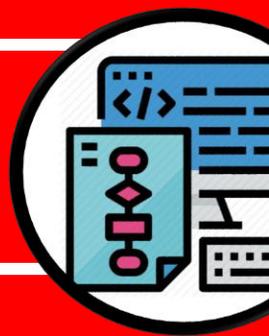
Our **aims** for computing reflect the aims of the National Curriculum.

It is our intention to enable children to **find, explore, analyse, exchange and present** information. Our curriculum enables pupils to **explore and develop** a range of skills, **solving problems** and **presenting information** using different equipment and software.

We **equip** pupils with the **key digital literacy skills** they need to **express** themselves and **develop their ideas** through information technology and computer science. Pupils use **computational thinking** and **creativity** to solve problems, and to **understand** and **change the world**. They should leave school **computer literate**.

Pupils at Portswood Primary School should be able to **use a range of technologies** to **enrich** their learning across the curriculum. Their **knowledge and skills** should be at a level suitable for the next stage in their computing education.

COMPUTING IMPLEMENTATION



The computing curriculum at Portswood Primary School reflects the aims set out in the National Curriculum Programme of Study.



Units of learning are either planning termly or half-termly, based on the content and the software used.



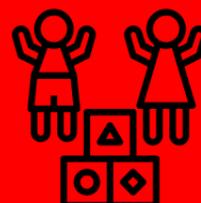
These may be taught as discrete lessons each week or delivered in blocked units of time to allow larger projects to be completed.



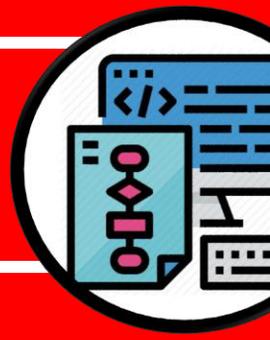
Teaching is mostly whole-class based, supported by appropriate differentiation. At times, small group work is also used for children to practise or apply their computing skills in other subject areas across the curriculum.



When whole-class teaching takes place, children often work in pairs or groups. This allows skills of communication and co-operation to be promoted.



COMPUTING IMPLEMENTATION



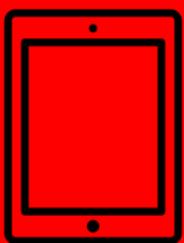
Early Years Stage

In Early Years, computing is used to support and enhance learning across all areas of learning. Technology is used to form part of a language rich environment.

In Nursery, children use the Smart board to select games, songs and dances they would like to join in with; keeping them engaged whilst supporting their physical development. iPads and walkie talkies are used as part of Discovery Time to provide children with opportunities to express themselves and communicate with one another.

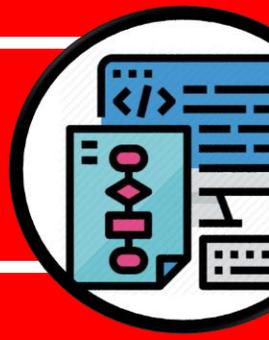


Throughout the Early Years phase, computing learning is also child initiated. This can be seen during Discovery Time, where pupils have access to iPads and the Interactive Whiteboard. Apps are used across the phase to support early maths and phonics skills, as well as provide additional opportunities for children to understand the world by researching and using maps and images as part of discussions.



Pupils also enjoy experimenting with cameras and BeeBots. They are taught how to stay safe with technology by telling an adult if they have any problems.

COMPUTING IMPLEMENTATION



Long term curriculum planning for computing is created so that each Programme of Study (POS) strand is taught on balance and revisited throughout the course of the academic year.



The strands of computing are:



Computer
Science
(CS)



Information
Technology
(IT)



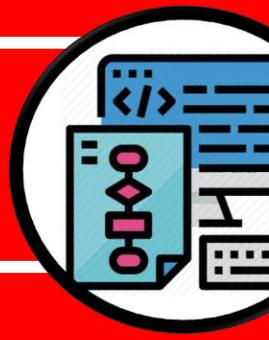
Digital
Literacy
(DL)

Our computing curriculum is organised so that pupils have the opportunity to develop skills using a wide range of software. This is set out in our Long Term Planning (LTP), and in greater detail in the school's Medium Term Planning (MTP).



COMPUTING

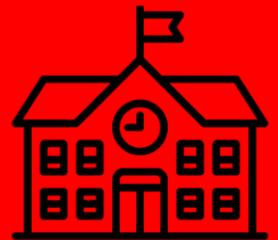
E-Safety - IMPLEMENTATION



A secure understanding of E-safety underpins all of our teaching. Specific E-safety units are taught; at the start of the year in most year groups, and then revisited throughout each half term.

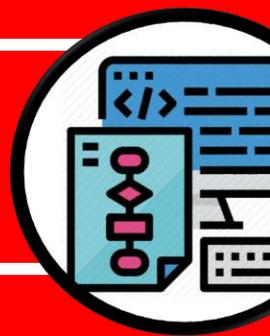


Specific key days, such as Safer Internet Day, are used as opportunities to further emphasise key messages of E-safety across the school community.



COMPUTING

E-Safety - IMPLEMENTATION



Our 'E-safety across the school' document maps out where this knowledge is directly taught.

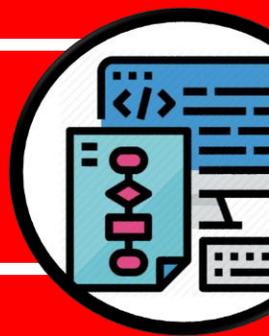
This interlinks with the PSHE curriculum and is supplemented by the Cyber Ambassador scheme and the emphasis of specific key days, as explained previously.

Internet Safety across the school		
	PSHE	Computing
	THREADED THROUGH UNITS	
Year 1	Year 1 Autumn 1 – New beginnings - Privacy and security	E- safety lessons – Autumn 1 I can recognise the way we use technology in our world.(S1) I can tell an adult when I see something unexpected or worrying online. (E-Safety S2) I can agree and follow sensible e-safety rules.(E-safety S2)
	Year 1 Autumn 2 – Being a good friend - Self-image and identity	
	Year 1 spring 1 – Keeping healthy and safe - Health, wellbeing and lifestyle strand	
	Year 1 summer 1 – Staying safe - Health, wellbeing and lifestyle strand	
Year 2	Year 2 – Autumn 1 - Privacy and security	E- safety lessons – Autumn 1 I can explain why I need to keep my personal information private. (E-safety S1 & S2) I can describe the things that happen online that I must tell an adult about. (E-safety S1 & S2)
	Year 2 – Autumn 2 – looking after myself - On line bullying	

Continued on following page.

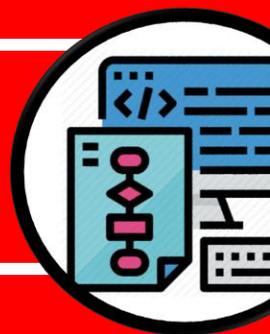
COMPUTING

E-Safety - IMPLEMENTATION



Year 3	Year 3 – Autumn 1 – New beginnings - Online relationships	<p>E- safety lessons – Autumn 1</p> <p>I can explain why I need to keep my password and personal information private (S1)</p> <p>I can talk about what makes a secure password and why they are important.(S1)</p> <p>I can protect my personal information when I am online (S1)</p> <p>I can report my concerns to adults (S1) (S4) I can post positive comments on line (S1)</p> <p>I can tell you ways to communicate with others online (S2)</p> <p>I understand how to stay safe when communicating on line(S2)</p> <p>I can use email safely(S2)</p> <p>I can report my concerns to adults(S2)</p> <p>I can describe the World Wide Web as part of the internet that contains websites.(s3)(s5)</p> <p>I can talk about parts of a computer (S3) I can make good choices when on line (S4)(s5) I understand the need for rules to keep me safe when on line (S4)(s5)</p> <p>I can use the internet to find information(s5)</p>
	Year 3 – Spring 2 – bullying, rules, medicines and keeping safe - Online bullying	
	Year 3 summer 1- Friends - Online relationships	
Year 4	Year 4 Autumn 1 Looking forward - Online relationships	<p>E- safety lessons – Autumn 1</p> <p>I can protect myself and my friends from harm online (S1) S2)</p> <p>I understand the need to keep personal information private (S1) S2)</p> <p>I know that anything I post online can be seen by others(S1) S2)</p> <p>I can report concerns to adults(S2)</p>
	Year 4 Spring 1 – assertiveness - Online relationships	
	Year 4 Spring 2 – Friendships - Online bullying	
	Year 4 Summer 2 – Peer pressure - Online relationships	
	SPECIFIC DEDICATED UNITS	
Year 5	Year 5 Spring 2 - Online wellbeing – NEW UNIT - Health, well - being and lifestyle	<p>E- safety lessons – Autumn 1</p> <p>I can explain why I need to protect myself and my friends and the best way to do this, including reporting concerns to adults (s1 , 2)</p> <p>I know that anything I post online can be seen, used and may affect myself and others (s1, 2)(s3)</p> <p>I recognise the risks of using the internet, understanding why people may publish content that is not accurate (s3)</p>
Year 6	Year 6 Spring 1- New Unit – Keeping safe online - Online reputation - Online relationships - Self-image and identity	<p>E- safety lessons – optional if appropriate</p> <p>I recognise the risks of using social media, understanding why people may publish content that is not accurate (S1)</p> <p>I know that anything I post online can be seen, used and may affect myself and others (S1)</p> <p>E- safety lessons</p> <p>Spring 2 – Recap SMART poster, internet safety before researching on line for PPP</p>

COMPUTING IMPLEMENTATION



Whole School provision for computing

Year	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 1	Digital Literacy E – Safety Computer Science Bee Bots	Computer Science Bee Bots	IT My Word	IT Multimedia - Picture This! iPad and photo story	IT Multimedia - Matisse Dazzle	IT Looking back, Moving forward – 2Create
Year 2	Digital Literacy E – safety IT Publishing - Word	IT Publishing - Word	IT Multimedia - Kandinsky Word and Paint 3D	IT Multimedia - Comic Life	IT Data - pictograms and bar graphs	Computer Science Programming - Bee Bots and Scratch
Year 3	Digital Literacy E- safety IT Email and the Internet	Computer Science Go with the Flow – Understanding algorithms and Bee Bots	Computer Science Scratch – Crab Amazing	Computer Science Scratch – Crab Amazing	IT Databases – Branching and 2Investigate	IT Multimedia – Presenting - PPP
Year 4	Digital Literacy - E- safety IT Word	IT Word	Computer Science Primary Logo	Computer Science Scratch - Patterns	IT Excel	IT Multimedia - Collage SEESAW
Year 5	Digital Literacy - E- safety IT Word	IT Multimedia - PPP - Egyptians	Computer Science Scratch – Maths Quiz	Computer Science Scratch and Lego	IT Excel - Spreadsheets	<i>Link to creative project/production in the summer term</i>
Year 6	Computer Science – Scratch and Lego	IT Data- Excel	Digital Literacy - E- safety IT Multimedia - Stop Animation	IT Multimedia - PPT	Computer Science HTML	Computer Science HTML

Vocabulary

There should be an emphasis on the teaching and modelling of key terminology for computer science, digital literacy and information technology in order for children to be able to understand and articulate their knowledge and understanding.



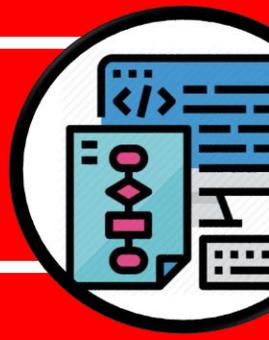
Portswood Cyber Ambassadors

The Cyber Ambassador scheme is supported by the Hampshire Police and Crime Commissioner. Our Cyber Ambassadors are a selected group of UKS2 students who work to promote and support E-safety across the school, sharing key messages and enacting positive change.



COMPUTING

Key Skills - IMPLEMENTATION



Skills progression: **Computer Science**

Year 1

- Give and follow instructions.
- Predict what will happen for a short series of instructions.
- Describe the action needed to make something happen and begin to use the word 'algorithm.'
- Press buttons in the correct order to achieve a result.
- Begin to use software/apps to create movement and patterns on a screen.
- Use the word 'debug' when correcting mistakes in programming.

Year 2

- Discuss the order of instructions needed to make something happen and talk about this as an 'algorithm'.
- Programme a robot or software to perform a particular task.
- Watch a program execute and debug if necessary.

Year 3

- Break an open-ended problem into smaller parts.
- Put programming commands into a sequence to achieve a specific outcome.
- Test a program and recognise when it needs debugging.
- Describe the algorithm needed for a simple task.
- Use repeat commands.

Year 4

- Experiment with variables to control models.
- Give an on-screen robot specific instructions to take them from A to B.
- Make accurate predictions and explain why something will happen.
- Debug a program.

Year 5

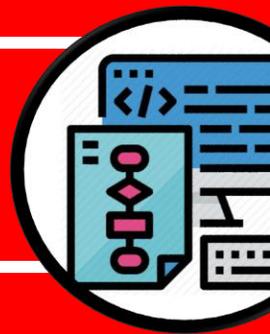
- Combine sequences of instructions and procedures to turn devices on and off.
- Use technology to control an external device.
- Talk about how a computer model can provide information about a physical system.
- Design algorithms that use repetition and 2-way selection.
- Use a variable to increase programming possibilities.

Year 6

- Deconstruct a problem into smaller steps, recognising similarities to solutions used before.
- Explain and program each of the steps in an algorithm.
- Evaluate the effectiveness and efficiency of an algorithm while continually testing it.
- Recognise when a variable is needed to achieve a required output.
- Use a variable and operations to stop a program.
- Use logical reasoning to detect errors in algorithms.
- Use selection in programs.

COMPUTING

Key Skills - IMPLEMENTATION



Skills progression: Information Technology

Year 1

- Use a camera.
- Create digital content for a purpose.
- Be creative with different technology tools.
- Retrieve and manipulate digital content.
- Store digital content.
- Use a keyboard to enter text.
- Record sound and playback.
- Create digital artwork.
- Use a programme to write and illustrate a short story.
- Save my work in the right place and retrieve it.
- Use a basic word processing package.

Year 2

- Organise digital content.
- Be creative with different technology tools.
- Use technology to organise and present my ideas.
- Save documents in the right place and retrieve it.
- Create a simple digital painting.
- Use technology to organise and present ideas.
- Use the keyboard to add, delete and space text.

Year 3

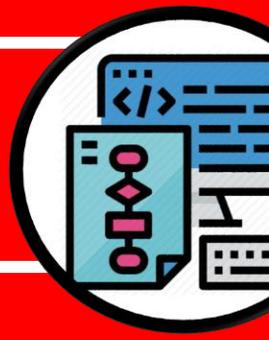
- Design and create content.
- Present information.
- Create different effects using different technology tools.
- Write and deliver a presentation.
- Use appropriate keyboard commands to amend text, including using spellchecker.
- Evaluate work and prove its effectiveness.
- Deliver a presentation.

Year 4

- Confidently explore new media.
- Adapt or create images to enhance work.
- Create a simple animation.
- Use software for a purpose.
- Create, modify and present a document for a purpose.
- Use a keyboard confidently and make use of a spellchecker.
- Change the appearance of text to increase its effectiveness.

COMPUTING

Key Skills - IMPLEMENTATION



Skills progression: Information Technology

Year 5

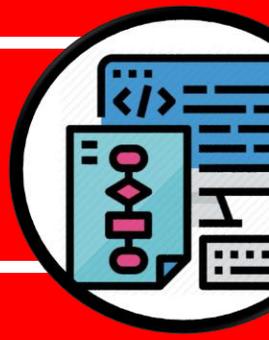
- Write and deliver a presentation, incorporating a range of media.
- Select, use and combine the appropriate technology tools to create effects that will have an impact on others.
- Select an online or offline tool to create and share ideas.
- Review and improve work.
- Use photos, videos and sound to create an atmosphere when presenting to different audiences.
- Use software for a purpose.
- Use appropriate layout, text and graphics.
- Evaluate information.

Year 6

- Write and deliver a presentation, incorporating a range of media.
- Select, use and combine software on a range of digital devices.
- Use a range of technology for a specific project.
- Talk about audience, atmosphere and structure when planning.
- Be digitally discerning when evaluating my work and the work of others.

COMPUTING

Key Skills - IMPLEMENTATION



Skills progression: Information Technology - Data

Year 1

N/A

Year 2

- Make a chart or graph using data collected.
- Talk about data shown in a chart or graph.
- Say what kind of information could be used to help investigate a question.

Year 3

- Collect information.
- Present information
- Organise data in different ways.
- Plan, create and search a database to answer questions.
- Use a range of software for similar purposes.
- Talk about the different ways data can be organised.

Year 4

- Understand that software can be used to present data.
- Use software to accomplish given goals.
- Collect and present data.
- Use software to manipulate data.

Year 5

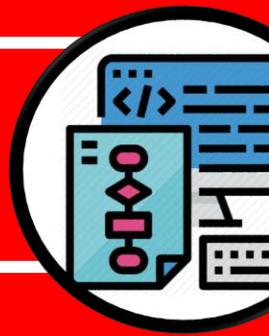
- Manipulate data.
- Organise data in different ways.
- Collect data and identify when it is inaccurate.
- Use software to present data for a purpose.

Year 6

- Check the data collected for accuracy.
- Interpret the data collected.
- Use the skills developed to analyse a database.
- Use technology for a specific project.

COMPUTING

Key Skills - IMPLEMENTATION



Skills progression: Digital Literacy

Year 1

- Recognise the way we use technology in our world.
- Tell an adult when something unexpected or worrying is seen online.
- Agree and follow sensible e-safety rules.

Year 2

- Explain why personal information needs to be kept private.
- Describe the things that happen online which an adult must be told about.

Year 3

- Explain why passwords and personal information must be kept private.
- Talk about what makes a secure password and why they are important.
- Protect personal information when online.
- Post positive comments online.
- Discuss ways to communicate with others online.
- Understand how to stay safe when communicating online.
- Use email safely.
- Report concerns to adults.
- Describe the World Wide Web as part of the internet that contains websites.
- Talk about parts of a computer.
- Make good choices when online.
- Understand the need for rules to keep safe when online.
- Use the internet to find information.

Year 4

- Protect myself and friends from harm online.
- Understand the need to keep personal information private.
- Know that anything posted online can be seen by others.
- Report concerns to adults.

Year 5

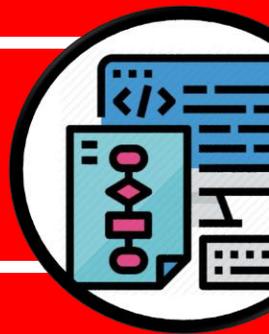
- Explain why protection online is needed for ourselves and others and the best way to do this, including reporting concerns to adults.
- Know that anything posted online can be seen, used and may affect us and others.
- Recognise the risks of using the internet, understanding why people may publish content that is not accurate.

Year 6

- Recognise the risks of using social media, understanding why people may publish content that is not accurate.
- Know that anything posted online can be seen, used and may affect myself and others.

PSHE curriculum covers a unit on keeping safe online – Spring 1 which includes discussions about the dangers of being online as well as the advantages and what to do if a friend is in trouble.

COMPUTING IMPACT



At Portswood Primary School we ensure that our computing planning and teaching is high quality, providing variety and promoting interest in the subject.

Children enjoy computing. When speaking with pupils across the school, they are enthusiastic about their learning and are able to articulate why the subject is important.

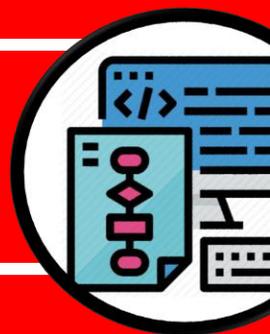
Pupils of all ages can explain how to stay safe online and what to do if they encounter any issues.

Computing allows children to develop skills which are relevant to their everyday life and they are able to use their own knowledge and understanding to enhance their learning.

As the strands of computing are revisited throughout Key Stage 1 and 2, there is a clear skills progression within the subject. Pupils become adept at using specific software, such as Scratch, but are also given ample opportunity to explore a range of programmes. This allows them to use and apply their skills with confidence.

Within Computer Science, for example, pupils explore algorithms using BeeBots in Year 1. They then progress to writing simple code using Scratch in Year 2. In LKS2, pupils develop their skills to create a simple maze game and in UKS2 they apply their knowledge to produce quizzes and create Lego projects to fulfil a specific purpose.

COMPUTING IMPACT



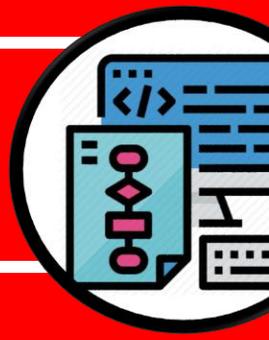
The quality of teaching is high. Teachers use their subject knowledge to engage and inspire pupils.

As a school, we strive to use IT across the curriculum to support and enhance learning experiences, too. For example, in Year 5 pupils use their Digital Literacy skills to create CVs linked to the novel they study. In Year 1, BeeBots are programmed to move around the model streets of Portswood which are created in their Geography study of the local area.

Planning for each computing unit is adapted from the MTP. The short term planning is either taught as a block or in a series of sessions over a half-term or term.

In computing, pupils show enthusiasm and very good attitudes to their learning. They are proud of their outcomes and are able to discuss the relevance of their learning, both across the curriculum and within their lives outside of school. Well planned units mean pupils are shown clear models and they make good progress learning and using skills.

COMPUTING IMPACT



By the time pupils leave Portswood Primary School, they are **aware** of how to be **safe**, **responsible** users of information technology. Pupils know what to do if they encounter any issues online.



Be smart on the internet

S SAFE Keep safe by being careful not to give out personal information when chatting or posting online. Personal information includes your email address, phone number and password.

M MEETING Meeting someone you have only been in touch with online can be dangerous. Only do so with your parents' or carers' permission and even then only when they can be present. Remember online friends are still strangers even if you have been talking to them for a long time.

A ACCEPTING Accepting emails, IM messages, or opening files, pictures or texts from people you don't know or trust can lead to problems – they may contain viruses or nasty messages!

R RELIABLE Someone online might lie about who they are, and information on the internet may not be true. Always check information with other websites, books or someone who knows.

T TELL Tell your parent, carer or a trusted adult if someone or something makes you feel uncomfortable or worried, or if you or someone you know is being bullied online. You can report online abuse to the police at www.thinkuknow.co.uk

www.kidsmart.org.uk

KidSMART Visit Childnet's Kidsmart website to play interactive games and test your online safety knowledge. You can also share your favourite websites and online safety tips by Joining Hands with people all around the world.

Childnet International www.childnet.com

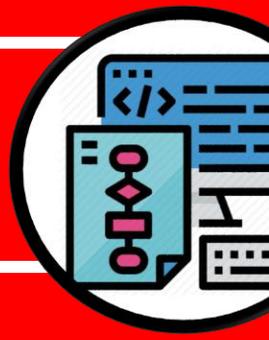
THINK U KNOW

ZIP IT

BLOCK IT

FLAG IT

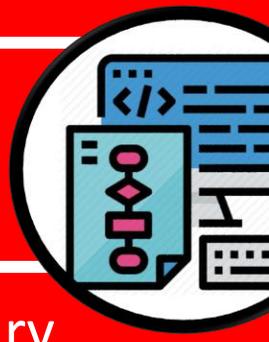
COMPUTING IMPACT



By the time pupils leave Portswood Primary school, they are **computer literate**. They can use technology to **find, share** and **present** information.

For examples of excellent work, please see the Subject Lead and class teachers.

COMPUTING IMPACT

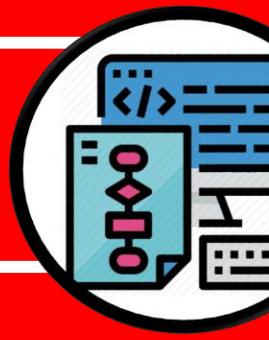


By the time pupils leave Portswood Primary School, they are able to use **technology confidently and creatively** to design programmes and **solve** problems.



COMPUTING

IMPACT – Pupil Voice



What our pupils say about computing:

I enjoy computing because it is so exciting.

I loved using the BeeBots and we gave them instructions so they move. You call it a code.

I learn how to do things I couldn't do before and it's really fun exploring.

Computing is definitely my favourite lesson at school because I can practise typing and then you can type anything.

Computing is great because it is interesting and I like using the internet to research. It's useful because things I learn can help me in all my lessons.

I love coding. It's cool that we get to make games and you can design it and make it look however you want. The teachers let you be creative. I like coding at home, too.

I'll always remember the projects we did, especially on Scratch because they were so much fun. We use research to help us with all of our learning and I like presenting my work using the computer too.