The Weald Federation: Computing

With God's Love, we grow and learn together.

Intent

Computing is an important part of the world we live in and is constantly changing. Our curriculum reflects this, teaching a progression of both computing skills and knowledge to prepare our pupils for an ever-changing digital world. We want our pupils to understand and apply the principles associated with computing, how digital systems work and how to put this knowledge to use through programming. We also want our pupils to be digitally literate, able to use, express themselves and develop their ideas through technology. E-safety is an important thread that runs through our entire curriculum and reflects the challenges of being online, ensuring that our pupils know how to be safe. Computing is an area that is rapidly developing all around us and the content we teach is regularly reviewed and updated to reflect this.

Implementation

The starting point for all of our teaching in The Weald Federation is the National Curriculum. Its aims are 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.

We base our teaching on the Teach Computing scheme of work. Units are taught using a spiral curriculum with each of the main themes revisited regularly enabling pupils to connect, consolidate and build upon prior learning. In line with the National Curriculum, approximately half of children's lessons focus on programming and coding. E-safety is explicitly taught throughout the year, making with links to the PSHE curriculum to ensure pupils learn about the importance of staying safe online.

The curriculum is designed to cover the three main strands of computing, which are:

- COMPUTER SCIENCE: programming + data and information
- INFORMATION TECHNOLOGY: computer systems and networks + creating media
- DIGITAL LITERACY: using technology safely and responsibly

Pupils at our schools primarily use Chromebooks or laptops, but do have access to other devices and a variety of software packages. We believe it is important for pupils to learn how to transfer skills; discussing similarities and differences whilst providing opportunities to apply what they already know to new scenarios and situations. Children will have the opportunity to use a range of hardware including laptops, Chromebooks, tablets, cameras, microphones and computer-controlled electronics. Where possible, computing is linked to other areas of the curriculum and real-life situations and scenarios, helping pupils to embed and understand their learning.

Assessment is continuous to monitor progress and identify any support (or increased challenge) that might be required. We have high ambitions for every pupil, particularly SEND, disadvantaged and vulnerable pupils. Where needed, lessons are adapted to ensure that children who need further support have appropriate scaffolding, enabling them to successfully access the learning, whilst pupils who require further challenge will be stretched.

Impact

When children leave one of our primary schools, they will be able to apply the fundamental principles and concepts of computer science, information technology and digital literacy across a range of scenarios and tasks. They will be responsible, confident and creative users of technology and understand the opportunities and challenges that a digital world brings. Fundamentally, they will be able to apply their learning to new situations, understanding the world around them and be ready for the next phase of their education. As with all subjects, we hope that the learning journey our pupils go on will enable them to achieve highly and ensure that they are able to make valuable contributions to our ever-changing and diverse world.

The Weald Federation: Computing Curriculum Map Cycle A

A	Term 1	Term 2	Term 3	Term 4	Term 5	Term 6
Yr 1 & 2	**Our Planet**	**Into Winter**	**China**	**Toy Stories**	**Kenya**	**On Safari**
	Computing systems and networks (1.1) Technology around us	**Creating Media (2.2)** Digital photography	**Programming A (1.3)** Moving a robot	**Data and information (2.4)** Pictograms	**Creating media (1.5)** Digital writing	**Programming A (2.3)** Robot algorithms
	Online Safety Owning your creative work	**Online Safety** Safe image searching	**Online Safety** Staying SMART online	**Online Safety** My Personal Information	**Online Safety** What is Email?	**Online Safety** Keeping Zibb Safe Online
	Use Google Earth to explore our planet	*Greenscreen / record a weather broadcast*	*Use Google maps and Google Earth to explore China*	*Use paint packages on chrome books*	*Use Google maps and Google Earth to explore Kenya*	*Web cams and how they work – African safari footage (inc. live cameras)*
Yr 3 & 4	**Stone Age to Iron Age**	**Frozen**	**Robots**	**Extreme Earth**	**Ancient Egypt**	**Ancient Greece**
	Computing systems and networks (3.1) Connecting computers	**Creating media (3.2)** Stop-frame animation	**Data and information (3.4)** Branching databases	**Creating media (4.2)** Audio production	**Creating media (3.5)** Desktop publishing	**Data and information (4.4)** Data logging
	Online Safety What is cyber bullying	**Online Safety** To buy or not to buy?	**Online Safety** Keep it to yourself!	**Online Safety** Emailing	**Online Safety** Online communication	**Online Safety** Party planners
	Use the internet and search function to find out facts about the Stone Age	*Create a poem in Word – change font shape and size for effect*	*Use floorbot / beebots*	*Create an Explanation text (one slide – powerpoint)*	*Explore British Museum website to look at Egyptian arterfacts*	*Explore Ancient Athens using Mozaik website*
Yr 5 & 6	**Africa**	**Adventure**	**Courage**	**Travel Through Time**	**Coasts**	**Oceans**
	Computing systems and networks (5.1) Systems and Searches	**Creating media (6.2)** Webpage creation	**Creating media (5.5)** Introduction to vector graphics	**Creating media (6.5)** 3D modelling	**Data and information (5.4)** Flat-file databases	**Data and information (6.4)** Introduction to spreadsheets
	Online Safety Spam!	**Online Safety** Sites to Cite	**Online Safety** Powerful passwords	**Online Safety** Online safety comics	**Online Safety** Falser photography	**Online Safety** Online safety story planning
	Green screen – write and produce tv report cc: English	*Paint.net – use layering function to create propaganda posters*	*Powerpoint – multiple pages, importing text and images*	*Powerpoint – multiple pages, text, images, transitions and backgrounds*	*Design / model flood proof house*	*Graphs and data gathering linked to oceans*

Bold headings = Based on Teach Computing scheme of work … Online safety lessons based on Twinkl scheme of work

Italics = suggested computer/software skills linked to other subject / curriculum areas

NB: See EYFS curriculum map to see how learning in EYFS feeds into the whole school curriculum map for computing

The Weald Federation: Computing Curriculum Map Cycle B

B	Term 1	Term 2	Term 3	Term 4	Term 5	Term 6
Yr 1 & 2	**Into the Woods**	**Lighting up the Sky**	**Man on the Moon**	**India**	**Sea Explorers**	**Pirates Ahoy!**
	Computing systems and networks (2.1) IT around us	**Creating media (1.2)** Digital painting	**Programming B (1.6)** Programming animations	**Data and information (1.4)** Grouping data	**Creating media (2.5)** Digital music	**Programming B (2.6)** Programming quizzes
	Online Safety Digital footprints	**Online Safety** Keywords to search	**Online Safety** You be the judge	**Online Safety** Rate & review	**Online Safety** Be kind online	**Online Safety** Cyber snakes and ladders
	Taking digital photos	*Creating media – using paint packages*	*Use Chatterpix to create planet fact files*	*Use Google Maps & Google Earth - India*	*Use Google Maps & Google Earth – Seas & Oceans*	*Green screen – singing sea shanties on a ship*
Yr 3 & 4	**Invasion!**	**There be Dragons…**	**Fantastical Adventures**	**Chocolate!**	**Environmental Heroes**	**Rivers**
	Computing systems and networks (4.1) The internet	**Programming A (3.3)** Sequencing Sounds	**Programming B (3.6)** Event & actions in programs	**Creating media (4.5)** Photo editing	**Programming A (4.3)** Repetition in shapes	**Programming B (4.6)** Repetition in games
	Online Safety Cyberbullying	**Online Safety** Super searchers	**Online Safety** Copycats!	**Online Safety** Too much information	**Online Safety** The online community	**Online Safety** Cyber superheroes
	Use Chatterpix (or similar) to create a class newsreel of Roman inventions / legacy	*Use 'layering' function in paint.net to show where the Vikings invaded*	*Write poem using Word – change font size and style for effect*	*Paint package – scene inspired by Charlie & the Chocolate Factory*	*Use search engines to find out about local history*	*Create an online safety poster using powerpoint*
Yr 5 & 6	**Rainforests**	**Potions!**	**To Infinity & Beyond**	**Journeys**	**Victorians**	**Inventions**
	Computing systems and networks (6.1) Communication & collaboration	**Programming A (5.3)** Selection in physical computing	**Programming B (5.6)** Selection in quizzes	**Creating media (5.2)** Video production	**Programming A (6.3)** Variables in games	**Programming B (6.6)** Sensing movement
	Online Safety Cyberbullying	**Online Safety** Secure websites	**Online Safety** People online	**Online Safety** Girls and boys online	**Online Safety** SMARTbots	**Online Safety** Let's get quizzical!
	Use chatterpix (or similar) to share deforestation message	*Digital photography – use sway or powerpoint to share Harry Potter experience*	*Powerpoint – multiple pages, importing text and images*	*Paint package – paint.net – use layering to create Dreamtime inspired art*	*Multimedia – create print / wallpaper effect using repeated patterns*	*Powerpoint – multiple pages, text, images, transitions and backgrounds*

Bold headings = Based on Teach Computing scheme of work … Online safety lessons based on Twinkl scheme of work

Italics = suggested computer/software skills linked to other subject / curriculum areas

NB: See EYFS curriculum map to see how learning in EYFS feeds into the whole school curriculum map for computing

The Weald Federation: Computing – Progression of Knowledge & Skills (assessment points)

	Key Stage 1	Lower Key Stage 2	Upper Key Stage 2
COMPUTER SCIENCE	**Programming**		
	• Understands what commands are • Can use commands to control a device & achieve a goal • Understands that a program is a set of commands • Understands that an algorithm is a set of instructions • Can write a program to achieve an aim • Can make predictions about programs • Can debug and improve simple programs	• Understands that commands have outcomes • Can write a program from a task description • Can develop, adapt and refine a program • Can use loops in programs • Can compare infinite loops and count-controlled loops • Can develop a process for debugging • Can debug and improve more complex programs	• Understands what variables are and know how to use them • Can write a purposeful program using variables • Can write programs including controlled loops • Can control a simple circuit connected to a computer • Can design, write and create a program that uses selection • Can write code to control a device for a purpose • Can debug, improve and evaluate projects
	Data & Information		
	• Understands that objects can be labelled and grouped • Can label and group objects based on properties • Understands that data can be represented in pictograms and tally charts • Can present and discuss data • Can draw conclusions from represented data	• Understands that attributes can be used to define data and can select appropriate attributes to find desired data • Understands what a branching database is and use this to sort information • Can select what data needs to be collected • Understands that data can be collected over time, (including use of a data logger) • Can answer questions using data	• Can compare paper and computer-based databases • Can apply knowledge of a database to ask and answer real-world questions • Understands how spreadsheets organise data • Can manipulate data sets using spreadsheets • Can write and use formulas in a spreadsheet
INFORMATION TECHNOLOGY	**Computer Systems & Networks**		
	• Knows what technology they have in their lives and can name the types of technology found in shops, schools and at home • Understands reasons why we use IT • Can use a mouse and a keyboard • Can open a file • Is able to create a typed document and save it	• Understands how inputs and outputs work in digital technology and use this to achieve an aim • Understands the difference between digital and analogue systems • Beginning to understand how networks connect people and how they work • Understands how computers are digitally connected in networks • Beginning to understand the role of some devices in a network	• Understands what a digital system is • Recognises the role of computer systems in our lives • Understands that the internet forms part of some systems • Understands how systems and networks enable collaborative working • Understands what the internet and WWW are and that they are different
	Creating Media		
	• Can use technology purposefully to create digital content to meet a brief • Can select and use a range of tools • Can edit and improve own pieces (created digitally)	• Can select, use and combine a variety of software on a range of devices • Understands how to create and edit content using IT • Can use editing tools (e.g. copy & paste) to create content	• Can create digital content for a specific purpose and understand what makes digital content effective • Can plan and create a web page using software • Can effectively edit and improve work produced
DIGITAL LITERACY	**Using technology safely and responsibly**		
	• Can use digital technology to find information • Can navigate the web to complete simple searches • Knows what personal information is and why to keep it private • Can say who they would go to for help if they were worried by something they saw online • Can choose appropriate websites and avoid sites / pop ups that are not appropriate or accurate	• Can search for information on the web in different ways • Understands that not all information on the WWW is accurate • Understands how to protect their identity online (including use of passwords) and how to report any concerns • Knows what to do if they see inappropriate content or they are contacted by someone they do not know online • Understands what cyberbullying is and how to be a member of a respectful and positive online community	• Understands how search results are selected and ranked • Can carry out specific searches on the WWW and understands how search engines work • Knows how to protect private information online, understanding the importance of online security and how to create a secure password • Know that there are rights and responsibilities in an online community, when playing online games or on a social network and understands how to be respectful online as well as offline • Understands how to stay safe when using technology, can recognise dangers and know and what to do if ever they feel unsafe or unsure about content or behaviour online or offline

The Weald Federation: Computing – Areas of Study

YEAR 1 & 2 – Cycle A	YEAR 1 & 2 – Cycle B	YEAR 3 & 4 – Cycle A	YEAR 3 & 4 – Cycle B	YEAR 5 & 6 – Cycle A	YEAR 5 & 6 – Cycle B
Technology around us (TC 1.1) • Identify technology • Identify a computer and its main parts • Use a mouse in different ways • Use a keyboard to type on a computer and to edit text • Create rules for using technology responsibly **Digital Photography** (TC 2.2) • Use a digital device to take a photograph • Make choices when taking a photograph • Describe what makes a good photograph • Describe how photographs can be improved • Use tools to change an image • Recognise that phots can be changed **Moving a robot** (TC 1.3) • Explain what a given command will do • Act out a given word • Combine forwards and backwards commands to make a sequence • Combine four direction commands to make sequences • Plan a simple program • Find more than one solution to a problem **Pictograms** (TC 2.4) • Count and compare objects using tally charts • Recognise that objects can be presented as pictures • Create a pictogram • Select objects by attributes and make comparisons • Recognise that people can be described by attributes • Explain that we can present information using a computer	**Information Technology Around Us** (TC 2.1) • Recognise the uses and features of IT • Identify the uses of IT in the school • Identify IT beyond the school • Explain how IT helps us • Explain how to us IT safely • Recognise that choices are made using IT **Digital Painting** (TC 1.2) • Describe what different freehand tools do • Use the shape tool and line tools • Make careful choices when painting a digital picture • Explain why tools have been chosen • Use a computer to paint a picture • Compare painting a picture on a computer and on paper **Programming Animations** (TC 1.6) • Choose a command for a given purpose • Show that a series of commands can be joined together • Identify the effect of changing a value • Explain that each sprite has its own instructions • Design the parts of a project • Use an algorithm to create a program **Grouping Data** (TC 1.4) • Label objects • Identify that objects can be counted • Describe objects in different ways • Count objects with the same properties • Compare groups of objects • Answer questions about	**Connecting Computers** (TC 3.1) • Explain how digital devices function • Identify input and output devices • Recognise how digital devices can change the way we work • Explain how a computer network can be used to share information • Explore how digital devices can be connected • Recognise the physical components of a network **Stop Frame Animation** (TC 3.2) • Explain that an animation is a sequence of drawings and photographs • Relate animated movement with a sequence of images • Plan an animation • Identify the need to work consistently and carefully • Review and improve an animation • Evaluate the impact of adding other media to an animation **Branching Databases** (TC 3.4) • Create questions with yes/no answers • Identify the attributes needed to collect data about an object • Create a branching database • Explain why it is helpful for a database to be well-structured • Plan the structure of a branching database • Independently create an identification tool **Audio Production** (TC 4.2) • Explain that audio recordings can be edited • Recognise the different parts of creating a podcast project • Apply audio editing skills independently • Combine audio to enhance a	**The Internet** (TC 4.1) • Describe how networks physically connect to other networks • Recognise how networked devices make up the internet • Outline how websites can be shared via the World Wide Web (WWW) • Describe how content can be added and accessed on the World Wide Web (WWW) • Recognise that the content of the WWW is created by people • Evaluate the consequences of unreliable content **Sequencing Sounds** (TC 3.3) • Explore a new programming environment • Identify that commands have an outcome • Explain that a program has a start • Recognise that a sequence of commands can have an order • Change the appearance of my project • Create a project from a task description **Events & Actions in Programs** (TC 3.6) • Explain how a sprite moves in an existing project • Create a program to move a sprite in four directions • Adapt a program to a new context • Develop a program by adding features • Identify and fix bugs in a program • Design and create a maze-based challenge **Photo Editing** (TC 4.5) • Explain that the composition of digital images can be changed • Explain that colours can be	**Systems & Searches** (TC 5.1) • Explain that computers can be connected together to form systems • Recognise the role of computer systems in our lives • Experiment with search engines • Describe how search engines select results • Explain how search results are ranked • Recognise why the order of results is important and to whom **Webpage Creation** (TC 6.2) • Review an existing website and consider its structure • Plan the features of a web page • Consider the ownership and use of images • Recognise the need to preview pages • Outline the need for a navigation path • Recognise the implications of linking content owned by other people **Introduction to Vector Graphics** (TC 5.5) • Identify that drawing tools can be used to produce different outcomes • Create a vector drawing by combining shapes • Use tools to achieve a desired effect • Recognise that vector drawings consist of layers • Groups objects to make them easier to work with • Apply what I have learnt about vector drawings **Flat-File Databases** (TC 5.4) • Use a form to record information	**Communication & Collaboration** (TC 6.1) • Explain the importance of internet addresses • Recognise how data is transferred across the internet • Explain how sharing information online can help people work together • Evaluate different ways of working together online • Recognise how we communicate using technology • Evaluate different methods of online communication **Selection in Physical Computing** (TC 5.3) • Control a simple circuit connected to a computer • Write a program that includes count-controlled loops • Explain that a loop can stop when a condition is met • Explain that a loop can be used to repeatedly check whether a condition has been met • Design a physical project that includes selection • Create a program that controls a physical computing project **Selection in Quizzes** (TC 5.6) • Explain how selection is used in computer programs • Relate that a conditional statement connects a condition to an outcome • Explain how selection directs the flow of a program • Design a program which uses selection • Create a program which uses selection • Evaluate my program **Video Production** (TC 5.2) • Explain what makes a video effective

Digital writing (TC 1.5)
- Use a computer to write
- Add and remove text on a computer
- Identify that the look of text can be changed on a computer
- Make careful choices when changing text
- Explain why tools have been chosen
- Compare typing on a computer to writing on paper

Robot algorithms (TC 2.3)
- Describe a series of instructions as a sequence
- Explain what happens when we change the order of instructions
- Use logical reasoning to predict the outcome of a program
- Explain that programming projects can have code and artwork
- Design an algorithm
- Create and debug a program

Online Safety
- Create, name & date my digital creative work
- Safely search for images online
- Understand how to communicate safely online
- Understand what personal information I need to keep safe
- Explore how to use email to safely communicate
- Apply online safety knowledge to help others make good choices online

groups of objects

Digital music (TC 2.5)
- Say how music makes us feel
- Identify that there are patterns in music
- Experiment with sound using a computer
- Use a computer to create a musical pattern
- Create music for a purpose
- Review and refine our computer work

Programming Quizzes (TC 2.6)
- Explain that a sequence of commands has a start
- Explain that a sequence of commands has an outcome
- Create a program using a given design
- Change a given design
- Create a program using my own design
- Decide how my project can be improved

Online Safety
- Understand that the information I put online leaves a digital footprint
- Use keywords in an online search to find out about a topic
- Recognise whether a website is appropriate for children
- Rate and review informative websites
- Identify kind and unkind behaviour online
- Apply safety knowledge to different scenarios

podcast project
- Evaluate the effective use of audio

Desktop Publishing (TC 3.5)
- Recognise how text and images convey information
- Recognise that text and layout can be edited
- Choose appropriate page settings
- Add content to a desktop publishing publication
- Consider how different layouts can suit different purposes
- Consider the benefits of desktop publishing

Data Logging (TC 4.4)
- Explain that data gathered over time can be used to answer questions
- Use a digital device to collect data automatically
- Explain that a data logger collects 'data points' from sensors over time
- Recognise how a computer can help us analyse data
- Identify the data needed to answer questions
- Use data from sensors to answer questions

Online Safety
- Know what cyber bullying is and how to address it
- Understand how websites use advertisements to promote products
- Create strong passwords and understand privacy settings
- Safely send and receive emails
- Explore different ways children can communicate online
- Use knowledge about online safety to plan a party online

changed in digital images
- Explain how cloning can be used in photo editing
- Explain that images can be combined
- Combine images for a purpose
- Evaluate how changes can improve an image

Repetition in Shapes (TC 4.3)
- Identify that accuracy in programming is important
- Create a program in a text-based language
- Explain what 'repeat' means
- Modify a count-controlled loop to produce a given outcome
- Decompose a task into small steps
- Create a program that uses count-controlled loops to produce a given outcome

Repetition in Games (TC 4.6)
- Develop the use of count-controlled loops in a different programming environment
- Explain that in programming there are infinite loops and count controlled loops
- Develop a design that includes two or more loops which run at the same time
- Modify an infinite loop in a given program
- Design a project that includes repetition

Online Safety
- Identify how messages can hurt someone's feelings and how to respond to a hurtful message online
- Understand 'plagiarism' and how to avoid it
- Create a safe online profile
- Explain how to be a responsible digital citizen
- Create an online safety superhero character

- Compare paper and computer-based databases
- Outline how you can answer questions by grouping and then sorting data
- Explain that tools can be used to select specific data
- Explain that computer programs can be used to compare data visually
- Use a real-world database to answer questions

Introduction to Spreadsheets (TC 6.4)
- Create a data set in a spreadsheet
- Build a data set in a spreadsheet
- Explain that formulas can be used to produce calculate data
- Apply formulas to data
- Create a spreadsheet to plan an event
- Choose suitable ways to present data

3D Modelling (TC 6.5)
- Recognise that you can work in three dimensions on a computer
- Identify that digital 3D objects can be modified
- Recognise that objects can be combined in a 3D model
- Create a 3D model for a given purpose
- Plan my own 3D model
- Create my own 3D model

Online Safety
- Identify spam emails and know what to do with them
- Write citations for websites used in research
- Create strong passwords
- Recognise when, why and how photographs we see online may have been edited
- Apply online safety rules to real-life scenarios

- Identify digital devices that can record video
- Capture video using a range of techniques
- Create a storyboard
- Identify that video can be improved through reshooting and editing
- Consider the impact of the choices made when making and sharing a video

Variables in Games (TC 6.3)
- Define a 'variable' as something that is changeable
- Explain why a variable is used in a program
- Choose how to improve a game by using variables
- Design a project that builds on a given example
- Use my design to create a project
- Evaluate mu project

Sensing Movement (TC 6.6)
- Create a program to run on a controllable device
- Explain that selection can control the flow of a program
- Update a variable with a user input
- Use a conditional statement to compare a variable to a value
- Design a project that uses inputs and outputs on a controllable device
- Develop a program to use inputs and outputs on a controllable device

Online Safety
- Identify good strategies to deal with cyberbullying
- Can identify secure websites by identifying privacy seals of approval
- Understands the benefits and pitfalls of online relationships
- Can identify how the media play a powerful role in shaping ideas about boys and girls
- Can apply online safety knowledge to create a multiple choice quiz

National Curriculum in England: Computing

Purpose of Study

A high-quality computing education equips pupils to use computational thinking and creativity to understand and change the world. Computing has deep links with mathematics, science, and design and technology, and provides insights into both natural and artificial systems. The core of computing is computer science, in which pupils are taught the principles of information and computation, how digital systems work, and how to put this knowledge to use through programming. Building on this knowledge and understanding, pupils are equipped to use information technology to create programs, systems and a range of content. Computing also ensures that pupils become digitally literate – able to use, and express themselves and develop their ideas through, information and communication technology – at a level suitable for the future workplace and as active participants in a digital world.

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.

Attainment Targets

By the end of each key stage, pupils are expected to know, apply and understand the matters, skills and processes specified in the relevant programme of study.

Computing content (statutory) Key Stage 1

Pupils should be 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.

Computing content (statutory) Key Stage 2

Pupils should be 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