



The Oaks Community Primary School

Computing Overview

<u>Reception</u>	
<u>Suggested basic skills</u>	<u>Online safety</u>
Use a mouse to rearrange objects and pictures on a screen	Play appropriate games on the Internet
Recognise text, images and sound when using ICT	Talk about good and bad choices when using websites – being kind, telling a grown up if something upsets us & keeping ourselves safe by keeping information private
Use a camera or sound recorder to collect photos or sound	
Use paint programs to create pictures	
Begin to use a keyboard see programming	
Develop an interest in ICT by using age appropriate websites or programs	

Year 1

Term	Online Safety	Basic Skills	Title	Unit summary / curriculum links
Autumn 1	Recognise privacy, staying safe and seeking permission (PSHE). Address how this applies to online also. Understand that you need to follow certain rules to remain safe when visiting places online.	-Recognise text, images and sound when using ICT	1.1 We are Treasure hunters	In this unit, the children will program a toy to move around a map to find buried treasure. They will start by thinking of algorithms for their routes, then input these as stored programs for the robot. They predict how the robot will move and will debug their programs.
Autumn 2	How behaviour effects others (PSHE). Begin to understand that if you say something online it has an effect on the people that it is aimed at.	-Use a mouse to rearrange objects and pictures on a screen. -Use a camera or sound recorder to collect photos or sound. -Record their own voices and play back to an audience.	1.2 We are TV Chefs	In this unit, pupils produce short videos of themselves making a healthy meal or snack. They also decompose a complex problem into smaller parts - an important idea from computer science.
Spring 1	Using the internet and digital devices, communicating online (PSHE). Explore how email and apps can be used to communicate with real people within their schools, families and communities and how to do this safely. Fake emails and spam messages.	-Use paint programs to create pictures. -Use a mouse to rearrange objects and pictures on a screen. -Opening programmes such as powerpoint, paint, word etc.	1.3 We are painters	This unit will particularly engage children who love the illustrations in the books they read. It is a great opportunity for the children to work creatively.
Spring 2	Learn that many websites ask for information that is private & discuss how to responsibly handle such requests.	-Develop an interest in ICT by using age appropriate websites or programs. -Begin to use a keyboard. -Logging into a laptop and shutting the laptop down correctly.	1.4 We are collectors	In this unit, the pupils will use web search engines to collect pictures of different types of animals and then explore ways in which those pictures can be organised.
Summer 1	Begin to understand that if you create something then you own it.	-Use a camera or sound records to collect photos or sound. -Record their own voices and play back to an audience. -Recognise text, images and sound when using ICT.	1.5 We are storytellers	In this unit, the children create a talking book that they can share with others.
Summer 2	Begin to evaluate what they see online. Think: Is this person who they say they are? Why does someone want me to see this? Why does someone want me to send this? What does this person want my personal information? How rules and restrictions help to keep us safe online (PSHE).	-Use paint programs to create pictures. -Begin to use a keyboard to type. -Opening programmes such as Powerpoint, paint, word etc.	1.6 We are celebrating	In this unit, pupils will have the opportunity to create a digital greetings card, which could be used for a religious festival such as Diwali or Christmas, pupils' birthdays, or simply to say thank you or good luck.

Year 2

Term	Online safety	Basic skills	Title	Unit summary / curriculum links
Autumn 1	Making friends, feeling lonely and getting help (PSHE). How you can seek help online and who you can trust.	-Develop an interest in ICT by using age appropriate websites or programs. -Know when & how to use a SPACE BAR (thumbs) to make spaces between words. -Logging into a laptop and shutting the laptop down correctly.	2.1 We are astronauts	In this unit, the children will build on work from Unit 1.1 - We are treasure hunters to program a sprite (such as a spaceship) to move around the screen. This unit acts as a springboard for programming in Year 3.
Autumn 2	Managing secrets, resisting pressure and getting help, recognise hurtful behaviour (PSHE). Explore what cyber-bullying means and what to do when they encounter it.	-Logging into online platforms. -Know when and how to use the SPACE BAR (thumbs) to make spaces between words. -Use index fingers (left and right hand) on a keyboards to build words & sentences.	2.2 We are game testers	In this unit, the pupils will try to work out how some simple Scratch games work. They also look at free online or open source games and share their favourite games with the class.
Spring 1	The internet in everyday life, online content and information (PSHE). Stay safe online by choosing websites that are good for them to visit and not inappropriate sites. Age restrictions.	-Add images and text to a template document using an image & bank of words. -Use an increasing variety of tools and effects in paint programs and talk about their choices. - Logging into a laptop and shutting the laptop down correctly.	2.3 We are photographers	In this unit, the children review photos online, practise using a digital camera, take photos to fit a given theme, edit their photos, and then select their best images to include in a shared portfolio.
Spring 2	Understand that keyword searching is an effective way to locate information online & how to select and use the best search results. Discuss criteria for rating informational websites a site and realise that not all websites are equally good sources of information.	-Use templates to make electronic books. -Add text and images to a template document using an image & word bank. -Use index fingers (left & right hand) on a keyboard to build words & sentences.	2.4 We are researchers	The children research a topic - safely, effectively and efficiently - using a structured approach (mind mapping). They share their findings with others through a short multimedia presentation.
Summer1	Know that if they put information online it leaves a digital footprint or "trail" and they need to manage it so it's not hurtful.	-Logging on to online platforms. -Know when and how to use the RETURN/ENTER key. Use SHIFT & CAPS LOCK to enter capital letters. Use DELETE & BACKSPACE buttons to correct text. Create sentences, SAVE & edit later.	2.5 We are detectives	In this unit, the children are challenged to solve a mystery by reading, sending and replying to emails, and by listening to a witness statement. They use a fact file sheet to create a table and identify the culprit.
Summer 2	How to use the internet in an emergency. Which websites can help us if we need urgent information or care.	-Create own documents, adding text and images. -Logging into online platforms. -Know when and how to use the RETURN/ENTER key. Use SHIFT & CAPS LOCK to enter capital letters. Use DELETE & BACKSPACE buttons to correct text. Create sentences, SAVE & edit later.	2.6 We are zoologists	In this unit, the children go on a bug hunt, recording and identifying the small animals they find. They then organise the data they have collected, record it using a graphing package, and interpret the graph to answer questions about the animals.

Year 3

Term	Online safety	Basic skills	Unit	Expectation
Autumn 1	Personal boundaries, safely responding to others and the impact of hurtful behaviour (PSHE). Wellbeing - How comments and content online can have an impact on other people and themselves.	- Logging into Google Classroom and accessing tasks set by the class teacher. -Use an increasing variety of tools and effects in paint programs and talk about their choices. -Explore the effects of sound and music in animation and video.	3.1 We are programmers	In this unit, the children create an animated cartoon using characters they design. They use a paint tool to create characters and backgrounds. They then create an animation by translating a storyboard into a series of scripted instructions (program) for graphic objects.
Autumn 2	Recognising respectful behaviour, the importance of self respect and courtesy and being polite. Wellbeing - How comments and content online can have an impact on other people and themselves. Discuss what actions could be taken if they are uncomfortable or upset online, e.g. report abuse button.	-Amend text and save changes. -Use individual fingers to input text & use SHIFT key to type characters. -Amend text by highlighting & using SELECT/ DELETE & COPY/PASTE.	3.2 We are bug fixers	In this unit, the children work with six example Scratch projects. They explain how the scripts work, finding and correcting errors in them, and explore creative ways of improving them. The children learn to recognise some common types of programming error, and practise solving problems through logical thinking.
Spring 1	How the internet is used, assessing information online (PSHE). How content can be used and shared.	-Explore & begin to evaluate the use of multimedia to enhance communication. -Explore the use of video, animation & green screening. -Look at own work and consider how it can be improved for effectiveness.	3.3 We are presenters	Do your children love watching sport or other performances on TV? This unit gives them a chance to make a short narrated video of themselves practising a sport or other skill, and to use this to help improve their performance.
Spring 2	Choosing secure passwords for age-appropriate websites. Talk about what games they enjoy playing and what good choices are when playing games, e.g. content, screen time, age restrictions.	-Use individual fingers to input text & use SHIFT key to type characters. -Amend text by highlighting & using SELECT/ DELETE & COPY/PASTE. -Know how to use CTRL + C to copy and CTRL + P to paste.	3.4 We are network engineers	In this unit, the pupils investigate how computer networks work. They use a simulation and learn some simple command prompt (C:) tools for testing network connections.
Summer1	Discuss the dangers of sharing personal information and why they should ask themselves questions about who people really are online. Understand how to recognise scam emails and messages and what to do if they receive them.	-Explore & begin to evaluate the use of multimedia to enhance communication. -Look at own work & consider how it can be improved for effectiveness. -Know how to use CTRL + C to copy and CTRL + P to paste. -Amend text and save changes.	3.5 We are communicators.	This unit allows the children to learn about a number of e-safety matters in a positive way. They will work with a partner in another class, learning how to use email and video conferencing safely.
Summer 2	Begin to understand about disinformation, misinformation and hoaxes. Begin to explore fake websites.	- Create and begin to edit presentation documents & text, experimenting with fonts, size, colour, alignment for emphasis and effect. -Create own documents, adding text and images.	3.6 We are opinion pollsters	In this unit, the children create their own opinion poll, seek responses, and then analyse the results.

Year 4

Term	Online safety	Basic skills	Title	Unit summary / curriculum links
Autumn 1	Positive friendships, including online (PSHE). Wellbeing - How comments and content online can have an impact on other people and themselves.	-Explore the effects of sound and music in animation and videos. -Use a keyboard effectively, including the use of shortcuts.	4.1 We are software developers	The pupils start by playing and analysing educational computer games, identifying those features that make a game successful. They then plan and design a game, with a clear target audience in mind. They create a working prototype, and then develop it further to add functionality and improve the user interface. They test their game and make any necessary changes.
Autumn 2	Responding to hurtful behaviour, managing confidentiality and recognising risks online (PSHE). Discuss what actions could be taken if they are uncomfortable or upset online, e.g. report abuse button. Wellbeing - How comments and content online can have an impact on other people and themselves.	- Create and begin to edit presentation documents & text, experimenting with fonts, size, colour, alignment for emphasis and effect. -Use a range of effects in art programs, including brush sizes, repeats and reflections. -Be confident in creating & modifying text and presentation documents to achieve a specific purpose.	4.2 We are toy designers	In this unit, the children work together to design a simple toy that incorporates sensors and outputs and then create an on-screen prototype of their toy in Scratch. Finally, they pitch their toy idea to a Dragons' Den-style panel.
Spring 1	How data is shared and used (PSHE). Discuss how content can be used and shared.	-Use ICT tools to create musical phrases. -Explore how multimedia can create atmosphere & appeal to different audiences.	4.3 We are musicians	How many children in your class play an instrument? How many of them like singing, or simply enjoy listening to music? In this unit, the children produce music suitable for any purpose they choose.
Spring 2	The importance of choosing secure passwords for age appropriate websites. Talk about which online games they enjoy playing and what good choices are when playing games, e.g. content, screen time, age restrictions.	-Explore how multimedia can create atmosphere & appeal to different audiences. -Use font sizes and effects such as bullet points appropriately. -Look at their own and a friend's work & provide feedback that is constructive and specific.	4.4 We are HTML editors.	In this unit the children learn about the history of the web, before studying HTML (hypertext mark-up language), the language in which web pages are written. They learn to edit and write HTML, and then use this knowledge to create a web page.
Summer 1	Use Google Classroom to share information and talk about who can see information that we share online and how to communicate safely and respectfully.	-Be confident in creating & modifying text and presentation documents to achieve a specific purpose. -Use a keyboard effectively, including the use of keyboard shortcuts. -Use font sizes & effects such as bullet points appropriately.	4.5 We are co-authors .	Wikipedia is a free online encyclopaedia that anyone can view and edit. In this unit, the pupils collaborate to create a 'mini Wikipedia'. They then go on to add or amend content on the real Wikipedia.
Summer 2	Comment and provide positive feedback on the work of classmates in school or online, or the work of others online.	-Explore the use of video, animation & green screening for a specific audience. -Use art programs & online tools to modify photos for a specific purpose using a range of effects. -Look at their own and a friend's work & provide feedback that is constructive and specific.	4.6 We are meteorologists.	This unit brings together data measurement, analysis and presentation, as the children take on the role of meteorologists and weather presenters.

Year 5

Term	Online safety	Basic skills	Title	Unit summary / curriculum links
Autumn 1	Managing friendships and peer influence (PSHE). Wellbeing - How comments and content online can have an impact on other people and themselves.	-Use art programs & online tools to modify photos for a specific purpose using a range of effects. -Select an appropriate ICT or online tool to create and share ideas.	5.1 We are game developers	The pupils plan their own simple computer game. They design characters and backgrounds, and create a working prototype, which they develop further based on feedback they receive.
Autumn 2	Feeling safe - including online (PSHE). Discuss their own personal use of the Internet and choices they make. Discuss the importance of keeping an adult informed about what you're doing online, and how to report concerns.	-Know how and when to use spell check. -Select an appropriate ICT or tool to create and share ideas.	5.2 We are cryptographers	The pupils learn more about communicating information securely through an introduction to cryptography (the science of keeping communication and information secret). They investigate early methods of communicating over distances, learn about two early ciphers, and consider what makes a secure password.
Spring 1	How information online is targeted, different media types and their role and impact (PSHE). Discuss how to protect computers from virus threats.	Explore the effects of multimedia (photos, video, sound) in a presentation or video and show how they can be modified. -Use a range of effects in art programs and online tools, discussing the choices made and their effectiveness.	5.3 We are artists	The pupils use vector and turtle graphics to explore geometric art, taking inspiration from the work of Escher, Riley and traditional Islamic artists, as well as experimenting with complex 'fractal' landscapes.
Spring 2	How information online is targeted, different media types and their role and impact (PSHE). Discuss how persuasive language can be used to target certain individuals.	-Develop skills using transitions and hyperlinks to enhance the structure of presentations. -Explore the effect on multimedia (photos, video, sound) in a presentation or video and show how they can be modified. -Use online tools to create and share presentations and films.	5.4 We are web developers	In this unit, the pupils work together to create a website explaining e-safety and responsible online behaviour.
Summer 1	Explore fake websites, including scam emails and messages and what to do if you receive these messages.	-Develop skills using transitions and hyperlinks to enhance the structure of presentations. - Know how to use text and video editing tools in programs to refine their work. -Use online tools to create and share presentations and film.	5.5 We are bloggers	Blogging provides a worldwide audience for pupils' work. Commenting on others' work extends pupils' sense of membership of a learning community beyond school. In this unit, pupils create a media-rich blog, comment on blogs and respond to comments.
Summer 2	Make children aware of the different types of online fraud and what they can do to protect themselves from this.	-Use a wide range of effects in art programs and online tools, discussing the choices made and their effectiveness. -Know how to use text and video editing tools in programs to refine their work. -Use excel to create spreadsheets and basic formulas.	5.6 We are architects	In this unit, the pupils research examples of art gallery architecture, before using Trimble SketchUp to create their own virtual gallery. Finally, they use the gallery to exhibit their own artwork.

Year 6

Term	Online safety	Basic skills	Title	Unit summary / curriculum links
Autumn 1	Recognising and managing pressure: consent in different situations (PSHE). Wellbeing - How comments and content online can have an impact on other people and themselves.	-Discuss audience, atmosphere and structure of a presentation or video. -Identify the purpose for selecting an appropriate online tool. -Evaluate the effectiveness of their own work and the work of others.	6.1 We are app planners.	The Year 6 units form a sequence, beginning with this one in which the pupils learn about the capabilities of smartphones, think of a problem that a smartphone or tablet app could solve, and then pitch the idea for their app.
Autumn 2	Explore the safe and responsible use of online communication tools, e.g. blogs, messaging. Explore how to keep personal data safe if using online communication.	-Discuss audience, atmosphere and structure of a presentation or video. -Identify the purpose for selecting an appropriate online tool. -Evaluate the effectiveness of their own work and the work of others.	6.2 We are project managers .	This is the second in a sequence of Year 6 units in which pupils work collaboratively to develop a smartphone or tablet app. Pupils apply computational thinking about the task of managing a complex project.
Spring 1	Evaluate media sources; sharing things online (PSHE). Recap knowing that information they put online will leave a digital footprint.	-Discuss audience, atmosphere and structure of a presentation or video. -Identify the purpose for selecting an appropriate online tool. -Evaluate the effectiveness of their own work and the work of others.	6.3 We are market researchers.	The pupils conduct research into the potential market for their app, using an online survey together with interviews or focus groups. They analyse the data and information they obtain and create a presentation summarising their findings.
Spring 2	Evaluate media sources; sharing things online (PSHE). Revisit: How content can be used and shared. Disinformation, misinformation and hoaxes. Fake websites and scam emails.	-Use excel to create spreadsheets and add formula (possible link to other curriculum areas)	6.4 We are interface designers .	In this unit, the children will start to design the look/ feel of their app's interface. They begin by sketching ideas, planning the different screen layouts for their app and developing these using a wireframing tool.
Summer1	Link with RSE and RRSA already covered and make children aware that not all content online is appropriate or safe. In particular make children aware of grooming, live streaming and pornography.	-Collect information and media from a range of sources (considering copyright issues) into a presentation for a specific audience. -Use sound, images, text, transitions, hyperlinks and HTML code effectively in presentations. -Store presentations and videos online where they can be accessed by themselves and share with others.	6.5 We are app developers	In this unit, the pupils draw on their work from the previous Year 6 units to create a working app. They write down their algorithms, and use a programming toolkit to code them.
Summer 2	Link with RSE and RRSA already covered and make children aware that not all content online is appropriate or safe. In particular make children aware of grooming, live streaming and pornography.	-Collect information and media from a range of sources (considering copyright issues) into a presentation for a specific audience. -Use sound, images, text, transitions, hyperlinks and HTML code effectively in presentations. -Store presentations and videos online where they can be accessed by themselves and share with others.	6.6 We are marketers	The pupils work collaboratively to produce marketing materials for the app they have been developing in the Year 6 units. They create a poster or flyer, develop a simple website, and shoot a short video.