

Computing Curriculum Intent



The Computing curriculum at Sunnybrow Primary is designed to enable pupils to embrace and utilise new technologies through the application of essential knowledge, principles and concepts. "Whether you want to uncover the secrets of the universe, or you want to pursue a career in the 21st century, basic computer programming is an essential skill to learn." Stephen Hawking Theoretical Physicist, Cosmologist and Author. Pupils must be equipped to operate in a rapidly changing workplace and to be prepared for the career opportunities that will be open to them.

In order to exceed in the adult world, we need to empower our children with the knowledge and skills to use technology positively, responsibly and safely. Through our teaching of the computing curriculum, we intend to equip our children to use computational thinking and creativity to understand and change the world. We want our pupils to be creators not consumers and our broad curriculum encompassing 'Computer Science', 'Digital Literacy & Information Technology' and 'Online Safety' reflects this.

There is an emphasis on the importance of Online Safety for all year groups. We want our pupils to understand that there is a lways a choice with using technology and as a school we utilise technology (including social media) to model positive use. We recognise that the best prevention for a lot of issues we currently see with technology and social media is through education. We want our pupils to have a breadth of experience to develop their understanding of themselves as individuals and as responsible digital citizens.

We want children to become autonomous, independent users of computing technologies, gaining confidence and enjoyment from their activities. We want the use of technology to support learning across the entire curriculum and to ensure that our curriculum is accessible to every child.

Not only do we want children to be digitally literate and competent end-users of technology but through our computer science lessons we want them to develop creativity, resilience and problem-solving and critical thinking skills, this will help our children in the next stage of their life preparing them for the ever-changing digital world. These key skills will give the children knowledge that they can draw upon and help them to demonstrate cultural awareness to make them successful in society.

By the time they leave Sunnybrow Primary, children will have gained key knowledge and skills in the three main areas of the computing curriculum: computer science (programming and understanding how digital systems work), information technology (using computer systems to store, retrieve and send information) and digital literacy (evaluating digital content and using technology safely and respectfully). The objectives within each strand support the development of learning across the key stages, ensuring a solid grounding for future learning and beyond. Our aim is to make sure all of our children are digitally literate so that they are able to express themselves and develop their ideas through information and computer technology—at a level suitable for the future workplace and as active participants in a digital world.

	Autumn [1]	Autumn [2]	Spring [1]	Spring [2]	Summer [1]	Summer [2]	
FS	Within the revised EYFS state	l utory framework, the <i>'Techno</i>	l logy' strand within <i>Understand</i>	l ding the World has been remo	l oved. However, there are oppo	l ortunities within each area	
	of the framework to enable practitioners to effectively prepare children for studying the computing curriculum.						
	As with all curriculum areas, the focus within Computing within the Early Years is about making children 'School Ready' and there are lots of opportunities within EYFS for young children to use technology to solve problems and produce creative outcomes. As young children take part in a variety of tasks with digital devices (such as moving a B Bot around a classroom), they will already be familiar with the device before being asked to undertake tasks related to the KS1 Computing Curriculum, such as writing and						
	testing a simple program. No	ot only will children be keen to	again use a device they had p	oreviously enjoyed using, but t	heir cognitive load will also be	ereduced, meaning they	
	more likely to succeed when	undertaking activities linked	to the next stage in their learn	ing.			
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	The September 2020 release						
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RAMP Model



Model - Create a model of the story using picture cards or programming blocks.

Program - Use the sequence cards

Program - Use the sequence cards (pictorial algorithm) to then create a program.

* Use of 'RAMP Model' ongoing throughout the academic year, linked to various texts.

Children to use physical coding robots (e.g. Bee-Bots, Blue-Bots etc) to program a physical device. Ongoing throughout the academic year.

<u>Computer Science -</u> Theory

Where opportunities allow, pupils discuss the range of technology used in places such as homes and schools.

Information Technology

Our Story 2 App (FREE) — Creating a digital book.

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<u>Computer Science - Theory</u>

Pupils share their experiences of 'using' technology both in and out of school.

Information Technology

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Pupils identify the main parts of a computer system (monitor, mouse, keyboard, printer etc).

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Information Technology

Our Story 2 App (FREE) – Creating a digital book.

https://apps.apple.com/us/app/our-story-2/id1474216884

ChatterPix Kids App

(FREE) – Animating a character, image or drawing.

https://apps.apple.com/gb/app/chatterpix-kids/id734046126

Shadow Puppet Edu App

(FREE) – Create a multimedia presentation linked to current topic.

https://apps.apple.com/us/app/shadow-puppet-edu/id888504640

Use of the above apps will be ongoing throughout the academic year and will be used where appropriate linked to different texts and topics. Using the apps will help to make the pupils 'School Ready' and they will develop use of these apps throughout KS1.

Consider use of 'iPad telephones' (£9.95 –

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White/dp/B009CC4J7M/ref=sr 1 2?crid=39CXUPNT7CNNT&keyw ords=Classy+Retro+Handset+For+ Iphone%2Clpad%2CTablet%2CPc %2CSmartphones+-

WHITE&gid=1647199109&s=elec tronics&sprefix=classy+retro+han dset+for+iphone+ipad+tablet+pc +smartphones+-

white%2Celectronics%2C82&sr=1 -2

Online Safety

Education for a **Connected World**

1: Self-Image & Identity



EYFS - Self-Image & Identity (All Activities)

Amazon) when using these audio recording apps:

https://www.amazon.co.uk/Class y-Handset-Iphone-Tablet-Smartphones-

White/dp/B009CC4J7M/ref=sr 1 2?crid=39CXUPNT7CNNT&keyw ords=Classy+Retro+Handset+For+ Iphone%2CIpad%2CTablet%2CPc %2CSmartphones+-

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Online Safety

Education for a Connected World

4: Online Safety



EYFS - Online **Bullying** (All Activities)



* Deliver during Anti-Bullying Week in November

2: Online Relationships



EYFS - Online Relationships (All Activities)

Amazon) when using these audio recording apps:

https://www.amazon.co.uk/Class y-Handset-Iphone-Tablet-Smartphones-

White/dp/B009CC4J7M/ref=sr 1 2?crid=39CXUPNT7CNNT&keyw ords=Classy+Retro+Handset+For+ Iphone%2CIpad%2CTablet%2CPc %2CSmartphones+-

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white%2Celectronics%2C82&sr=1

Online Safety

Education for a **Connected World**

3: Online Reputation



EYFS - Online Reputation (All Activities)



* Deliver during the week of Safer Internet Day in February.

5. Managing Online



EYFS - Managing Online Information

(All Activities)

Information

Amazon) when using these audio recording apps:

https://www.amazon.co.uk/Class y-Handset-Iphone-Tablet-Smartphones-

White/dp/B009CC4J7M/ref=sr 1 2?crid=39CXUPNT7CNNT&keyw ords=Classy+Retro+Handset+For+ Iphone%2CIpad%2CTablet%2CPc %2CSmartphones+-

WHITE&gid=1647199109&s=elec tronics&sprefix=classy+retro+han dset+for+iphone+ipad+tablet+pc +smartphones+-

white%2Celectronics%2C82&sr=1

Online Safety

Education for a **Connected World**

6. Health, Wellbeing & Lifestyle



EYFS - Health, Wellbeing & Lifestyle

(All Activities)

Amazon) when using these audio recording apps:

https://www.amazon.co.uk/Class y-Handset-Iphone-Tablet-Smartphones-

White/dp/B009CC4J7M/ref=sr 1 2?crid=39CXUPNT7CNNT&keyw ords=Classy+Retro+Handset+For+ Iphone%2CIpad%2CTablet%2CPc %2CSmartphones+-

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white%2Celectronics%2C82&sr=1 -2

Online Safety

Education for a **Connected World**

7. Privacy & Security



EYFS - Privacy & Security (All Activities)

Amazon) when using these audio recording apps:

https://www.amazon.co.uk/Class y-Handset-Iphone-Tablet-Smartphones-

White/dp/B009CC4J7M/ref=sr 1 2?crid=39CXUPNT7CNNT&keyw ords=Classy+Retro+Handset+For+ Iphone%2CIpad%2CTablet%2CPc %2CSmartphones+-

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white%2Celectronics%2C82&sr=1

Online Safety

Education for a **Connected World**

8. Copyright & Ownership



EYFS - Copyright & Ownership (All Activities)

Hector's World -
Recognising what
information would be
classed as 'personal
information' – <i>Hector's</i>
World videos (Details,
Details, Details)
https://www.thinkuknow.co.uk/4
_7/hectorsworld/

Year

National Curriculum Objectives and Outcomes:

1/2

Computer Science – Coding & Computational Thinking

Α

Understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions.

- Y1 Children understand that an algorithm is a set of instructions used to solve a problem or achieve an objective. They know that a computer program turns an algorithm into code that the computer can understand.
- Y2 Children can explain that an algorithm is a set of instructions to complete a task. When designing simple programs, children show an awareness of the need to be precise with their algorithms so that they can be successfully converted into code.

Create and debug simple programs.

- Y1 Children can work out what is wrong with a simple algorithm when the steps are out of order and can write their own simple algorithm. Children know that an unexpected outcome is due to the code they have created and can make logical attempts to fix the code.
- Y2 Children can create a simple program that achieves a specific purpose. They can also identify and correct some errors. Children's program designs display a growing awareness of the need for logical, programmable steps.

Use logical reasoning to predict the behaviour of simple programs.

- Y1 When looking at a program, children can read code one line at a time and make good attempts to envision the bigger picture of the overall effect of the program. Children can, for example, interpret where a Bee-Bot will end up at the end of the program.
- Y2 Children can identify the parts of a program that respond to specific events and initiate specific actions. For example, they can write a cause and effect sentence of what will happen in a program.

Computer Science - Theory

Recognise common uses of information technology beyond school.

- Y1 Children understand what is meant by technology and can identify a variety of examples both in and out of school. They can make a distinction between objects that use modern technology and those that do not e.g. a microwave vs. a chair.
- Y2 Children can effectively retrieve relevant, purposeful digital content using a search engine. They can apply their learning of effective searching beyond the classroom and can share this knowledge. Children make links between technology they see around them, coding and multimedia work they do in school e.g. animations, interactive code and programs.

Information Technology

Use technology purposefully to create, organise, store, manipulate and retrieve digital content.

- Y1 Children are able to sort, collate, edit and store simple digital content e.g. children can name, save and retrieve their work and follow simple instructions to access online resources.
- Y2 Children demonstrate an ability to organise data using, for example, a database and can retrieve specific data for conducting simple searches. Children are able to edit more complex digital data such as music compositions. Children are confident when creating, naming, saving and retrieving content. Children use a range of media in their digital content including photos, text and sound.

Online Safety

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

- Y1- Children understand the importance of keeping information, such as their usernames and passwords, private and actively demonstrate this in lessons. Children take ownership of their work and save this in their own private space such as their My Work folder on Purple Mash.
- Y2 Children know the implications of inappropriate online searches. Children begin to understand how things are shared electronically such as posting work to school social media accounts. They develop an understanding of communicating safely online (e.g. using email safely by using 2Res pond activities on Purple Mash) and know ways of reporting inappropriate behaviours and content.



Information Technology

Year 1 Pupils



1.1: Exploring Purple Mash

(4 Lessons)



https://drive.google.com/file/d/1

IKsQNU7J27j328U6ODldAmdFdD N pbG/view?usp=sharing

KNOWLEDGE ORGANISERS

https://drive.google.com/file/d/1

IYuEK6QE3YIiKOzJxqN0gGCyeO6sEr/view?usp=sharing

Year 2 Pupils



2.6: Creating Pictures (5

Lessons)



Information Technology



2.7: Making
Music (3 Lessons)



https://drive.google.com/file/d/1 9PiX jjxr uzBUxdA6HPX11l3BprV KZX/view?usp=sharing

KNOWLEDGE ORGANISERS

https://drive.google.com/file/d/1 9PiX jjxr uzBUxdA6HPX11l3BprV KZX/view?usp=sharing

Computer Science –
Coding & Computational
Thinking

Unplugged Activity – Play Hokey Cokey and get children to follow the steps (algorithm). Second time pause and predict what comes next (e.g. after left arm in – do



<u>Computer Science –</u>
<u>Coding & Computational</u>
<u>Thinking</u>



1.5: Maze Explorers

(4 Lessons)



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Something the second series of the second series o

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Information Technology

Our Story 2 App (FREE) — Create a digital book linked to current topic.



Information Technology



1.6: Animated Stories

(5 Lessons)



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https://drive.google.com/file/d/1 9PiX jjxr uzBUxdA6HPX11l3BprV KZX/view?usp=sharing

<u>Computer Science –</u>
<u>Coding & Computational</u>
<u>Thinking</u>

Bee Bots/Blue Bots (Practical Programming)



<u>Computer Science –</u>
<u>Coding & Computational</u>
<u>Thinking</u>

Busy Bundle – FREE Version App (Helicopter Rescue Activity)

https://apps.apple.com/gb/app/busy-bundle/id660198295

Block-a-Doodle-Do App (£0.99 / £0.49 VPP)

https://apps.apple.com/gb/app/block-a-doodle-doo/id495941469

Path Puzzler App

(£0.99 / £0.49 VPP)

https://apps.apple.com/gb/app/path-puzzler/id600530552

Information Technology

Shadow Puppet Edu App (FREE) – Create a multimedia presentation inked to current topic. Children to learn how to



Information Technology



2.4: Questioning (5 Lessons)



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KNOWLEDGE ORGANISERS

https://drive.google.com/file/d/1 9PiX jjxr uzBUxdA6HPX11l3BprV KZX/view?usp=sharing

Information Technology

Moldiv App (FREE)—
Create a pic collage
(sorting images —
rows/columns etc linked to
current topic e.g. insects
which can fly/not fly etc).



https://drive.google.com/file/d/1 9PiX jjxr uzBUxdA6HPX11l3BprV KZX/view?usp=sharing



https://drive.google.com/file/d/1 9PiX jjxr uzBUxdA6HPX11l3BprV KZX/view?usp=sharing

Computer Science -**Coding & Computational Thinking**

Unplugged Activity -

Physical programming. Guide your partner (as if a robot) around a course in the hall, playground or classroom. How can you give precise instructions to your partner (algorithm)? What ways can you debug (find and fix errors) in your algorithm? (e.g. turn around, take 3 steps backwards etc).

Online Safety

Education for a **Connected World**

children say left leg, right leg etc . . .both of these would be 'logical' answers). Use pictorial algorithm of steps of the Hokey Cokey - character with right arm, left arm etc coloured in. Drop cards and then stick onto hall wall. Are these correct? Get children to sort into the correct order (debugging). Extend to use of 'instrumental version' of Hokey Cokey. Get children to choose their own actions (hands on heads etc). They are now creating their own algorithms. How could this be represented in pictures?(pictorial algorithm). At Christmas parties etc look at other 'guided dances' (e.g. Cha Cha Slide) where children are following an algorithm.

Hokey Cokey song:

https://www.youtube.co m/watch?v=TMCthi3pFE Q

https://apps.apple.com/us /app/our-story-2/id1474216884

ChatterPix Kids App

(FREE) - Animate a character (linked to topic) and bring them to life.

https://apps.apple.com/gb /app/chatterpixkids/id734046126

Online Safety

Education for a Connected World

3: Online Reputation



KS1 - Online Reputation (Activities 1,3 & 4)



* Deliver during the week of Safer Internet Day in February.

5. Managing Online Information



KS1 - Managing Online Information

(Activity 1)

Online Safety

Education for a Connected World

6. Health, Wellbeing & Lifestyle



KS1 - Health, Wellbeing & Lifestyle

(Activity 1 - Explaining rules to stay safe at school and home)

Additional Online Safety Activity

Who's That Behind the Mask? (foam masks and emojis) Appreciate the impact of their online words. Use of foam masks, statement cards (positive and negative) and emojis. How would someone be feeling (the face behind the mask) if you said . . . ? Use emojis (happy, sad, angry, crying etc emojis) to show how you think your online words would make some feel.

addimages and to record sound (and possibly text) over the top of their images. Pupils will develop these skills through use of 'Clips' app at KS2.

https://apps.apple.com/us /app/shadow-puppetedu/id888504640

Online Safety

Education for a Connected World

7. Privacy & Security



KS1 - Privacy & Security (Activities 1 and 2)

Additional Online Safety Activity

Smartie the Penguin -Explain why it is important to communicate safely and respectfully online.

Read 'Adventures of Smartie the Penauin'

https://www.childnet.com/resou rces/smartie-the-penguin and discuss the different scenarios that Smartie

https://apps.apple.com/gb/app/ moldiv-photo-editorcollage/id608188610

Online Safety

Education for a Connected World

8. Copyright & Ownership



KS1 - Copyright & **Ownership**

(Activity 1 – When

does work belong to me?)

Additional Online Safety Activity

Show 'Lee and Kim' CEOP video:

https://www.youtube.com/watc h?v=EeadD0jS48E

Learn Captain Syd's song about how to stay safe online.

Use masks to identify who was playing the part of the different animals in the game. Were they nice or nasty? Refer to Captain Syd's tips for how to stay safe online.

Link to access masks: https://drive.google.com/drive/f

1: Self-Image & Identity

KS1 - Self-Image & Identity



(Activities 1 and 2)

Additional Online Safety Activity

Chicken Clicking - Read the story of 'Chicken Clicking' (physical book by Jeanne Willis priced at £6.38).

https://www.amazon.co.uk/Chick en-Clicking-Online-Safety-Picture/dp/1783441615/ref=sr 1 1?keywords=chicken+clicking&q id=1646757795&sprefix=chicken +click%2Caps%2C297&sr=8-1

What personal information did the chick share online? Who did the chick think she was talking too? What did the Fox use to try to trick the chick?

Instrumental version:

https://www.youtube.com/w
atch?v=DFI0xnIdHOc

Online Safety

Education for a Connected World

4: Online Bullying



KS1 – Online Bullying (Activity 1)



* Deliver during Anti-Bullying Week in November

2: Online Relationships



KS1 – Online Relationships (Activities 1 & 2) finds himself in. What decisions should he make?

olders/1XpdFjA 8WkDs1SBx3UzV Xwa-vrqmWc8-?usp=sharing

Year 1/2

National Curriculum Objectives and Outcomes:

Computer Science – Coding & Computational Thinking

В

Understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions. Y1 - Children understand that an algorithm is a set of instructions used to solve a problem or achieve an objective. They know that a computer program turns an algorithm into code that the computer can understand.

Y2 - Children can explain that an algorithm is a set of instructions to complete a task. When designing simple programs, children show an awareness of the need to be precise with their algorithms so that they can be successfully converted into code.

Create and debug simple programs.

- Y1 Children can work out what is wrong with a simple algorithm when the steps are out of order and can write their own simple algorithm. Children know that an unexpected outcome is due to the code they have created and can make logical attempts to fix the code.
- Y2 Children can create a simple program that achieves a specific purpose. They can also identify and correct some errors. Children's program designs display a growing awareness of the need for logical, programmable steps.

Use logical reasoning to predict the behaviour of simple programs.

- Y1 When looking at a program, children can read code one line at a time and make good attempts to envision the bigger picture of the overall effect of the program. Children can, for example, interpret where a Bee-Bot will end up at the end of the program.
- Y2 Children can identify the parts of a program that respond to specific events and initiate specific actions. For example, they can write a cause and effect sentence of what will happen in a program.

Computer Science - Theory

Recognise common uses of information technology beyond school.

- Y1 Children understand what is meant by technology and can identify a variety of examples both in and out of school. They can make a distinction between objects that use modern technology and those that do not e.g. a microwave vs. a chair.
- Y2 Children can effectively retrieve relevant, purposeful digital content using a search engine. They can apply their learning of effective searching beyond the classroom and can share this knowledge. Children make links between technology they see around them, coding and multimedia work they do in school e.g. animations, interactive code and programs.

Information Technology

Use technology purposefully to create, organise, store, manipulate and retrieve digital content.

- Y1 Children are able to sort, collate, edit and store simple digital content e.g. children can name, save and retrieve their work and follow simple instructions to access online resources.
- Y2 Children demonstrate an ability to organise data using, for example, a database and can retrieve specific data for conducting simple searches. Children are able to edit more complex digital data such as music compositions. Children are confident when creating, naming, saving and retrieving content. Children use a range of media in their digital content including photos, text and sound.

Online Safety

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

Y1- Children understand the importance of keeping information, such as their usernames and passwords, private and actively demonstrate this in lessons. Children take ownership of their work and save this in their own private space such as their My Work folder on Purple Mash.

Y2 - Children know the implications of inappropriate online searches. Children begin to understand how things are shared electronically such as posting work to school social media accounts. They develop an understanding of communicating safely online (e.g. using email safely by using 2Respond activities on Purple Mash) and know ways of reporting inappropriate behaviours and content.



Information Technology

Year 1 Pupils



1.1: Exploring Purple Mash

(4 Lessons)



https://drive.google.com/file/d/1

IKsQNU7J27j328U6ODldAmdFdD N pbG/view?usp=sharing



Information Technology



1.3: Pictograms

(3 Lessons)



https://drive.google.com/file/d/18CIY6NIYRCXYZ5-

mulyR7ZM0APteSrpm/view?usp=
sharing

KNOWLEDGE ORGANISERS



<u>Computer Science</u> – <u>Coding & Computational</u> Thinking



2.1: Coding - Crash Course

(6 Lessons)



https://drive.google.com/file/d/1 8wZpvcktRf7UtWFBFzo1itmUuH6 AdhZK/view?usp=sharing



Information Technology



2.3: Spreadsheets (4 Lessons)



https://drive.google.com/file/d/1 9DT5Rs fqdygZZR4osv505IKyUAP Jb3q/view?usp=sharing





Information Technology

Skitch App (FREE) - Use

Skitch app to annotate an

image (linked to current

appropriate labels. Discuss

arrows, text etc in relation

to background colours of

'Magazine Feature' (green

Tab at bottom of screen)'

topic) to show key

features and include

choice of colours of

Moldiv App (FREE) -

image.



Theory

1.9: Technology
Outside of School

(2 Lessons)



Computer Science -

https://drive.google.com/file/d/1 8i4rL_Q8d6cGCFcQFwOfEu69ixz9 CjAQ/view?usp=sharing



KNOWLEDGE ORGANISERS

KNOWLEDGE ORGANISERS

https://drive.google.com/file/d/1

IYuEK6QE3YIiKOzJxqN0gGCyeO6sEr/view?usp=sharing

Year 2 Pupils



2.6: Creating **Pictures**

(5 Lessons)



https://drive.google.com/file/d/1 9PiX jjxr uzBUxdA6HPX11l3BprV KZX/view?usp=sharing

KNOWLEDGE ORGANISERS

https://drive.google.com/file/d/1 9U09rgAoU4DCxFdVx8ltC9QNkN pl1 GN/view?usp=sharing

Computer Science -**Coding & Computational Thinking**

Children to use physical coding robots (e.g. Bee-Bots, Blue-Bots etc) to program a physical device to achieve a given goal. This could be linked to a

https://drive.google.com/file/d/1 8CIY6NIYRCxYZ5-

mulvR7ZM0APteSrpm/view?usp= sharing

Computer Science -**Coding & Computational Thinking**

Code-a-Pillar App (FREE) pupils develop from using physical coding robots to now using them in 2D form on the screen. Progression of 'directional language' from simply up, down, left and right to now using the language of 'forward' and 'turn left', 'turn right' etc.

https://apps.apple.com/gb/app/t hink-leam-code-apillar/id1110815901

Online Safety Activity

Online Safety

Education for a **Connected World**

4. Online Bullying



KS1 - Online **Bullying**

(Activities 2, 3 & 4)

KNOWLEDGE ORGANISERS

https://drive.google.com/file/d/1 90N9Q0waZA4OJQrI9k0p6vbQ8 MKLAOVM/view?usp=sharing

Information Technology

Shadow Puppet Edu -Build upon Y1 skills by

adding text and music in addition to simply photos and audio to make a multimedia presentation linked to topic.

Online Safety

Education for a Connected World

2.Online Reputation



KS1 - Online Reputation (Activity 2)

* Deliver during the week of Safer Internet Day in February.

5. Managing Online Information



KS1 - Managing Online Information

(Activities 2, 3, 4 & 5)

https://drive.google.com/file/d/1 9EvaXaa6TnnlMGulGbo0tFJfgb4k 04Td/view?usp=sharing

Computer Science -Theory

Unplugged Activity iWristband. Discuss

'Wearable Technology' as 'common us of use of ICT beyond school'. What examples do the children know? (adults in their lives will have Apple Watches, FitBits etc – teachers may also have examples they can demonstrate). Explain that the task for the pupils is to design their own 'iWristband'. What features would your watch contain? Using carboard strap and paper-folder concertina book pupils make a watch with icons to demonstrate the different features of their

Lesson slides:

https://drive.google.com/drive/f

iWatch. Showcase your

end of the lesson and

discuss feedback.

watches to the class at the

Make persuasive advert/travel brochure to encourage someone to visita location. Prop

Our Story 2- Combine multiple apps (Skitch, Moldiv etc) to use images within a digital book linked to topic.

Computer Science -**Coding & Computational Thinking**

Cupcake Doodle App -

Discuss 'recipes' as being a form of algorithms (what ways do you 'debug' when cooking?). Use Cupcake Doodle app to simulate the process of following an algorithm when cooking.

Unplugged Activity: 'Monster Hop' (could also be linked to Dinosaurs, Aliens etc). Make a physical track for pupils to follow an algorithm (different footprints in different directions). These can either be made of paper/card or could be

https://drive.google.com/file/d/1 8inrxrXR8E4XktIvxxzsGXaaDvYmD Im6/view?usp=sharing

Computer Science -Theory

Create a 'Getting Up' (what do you do from getting out of bed until you leave the house to come to school?) Algorithm flowchart. Focus on the 'precise' nature of steps (for example you do not just get out of bed and have your breakfast'there are many steps to this. Use '2Chart' (Purple Mash) to create your flowchart.

Online Safety

Education for a Connected World

8. Copyright & Ownership



KS1 - Copyright & **Ownership** (Activity 4)

Additional Online Safety Activity

Penguin Pig - Read the story of 'Penguin Pig' by Stuart Spendlow. Discuss

current topic/book (e.g. Little Red Riding Hood visiting grandma's house).

Online Safety

Education for a Connected World

1: Self Image & Identity



KS1 – Self Image & Identity (Activities 3 & 4)

Additional Online Safety Activity

Digiduck's Big Decision -Read 'DigiDuck's Big Decision' story (free PDF).

https://www.childnet.com/resources/digiduck-stories/digiducks-big-decision/

Discuss online images and how you must always ask permission before posting an image of someone else online. Make an avatar using 'Twinkl Avatar Creator App' (FREE).

https://apps.apple.com/gb/app/twinkl-avatarcreator/id573456162

Explain to children that an avatar is a way of



* Deliver during Anti-Bullying Week in November.

2. Online Relationships



KS1 – Online Relationships

(Activities 3, 4, 5 & 6)

Additional Online Safety Activity

Password Activity- Colours and animals on laminated cards. Get child to choose a password when fanned out for rest of the class to see and then get them to choose a password and put in an envelope in the corridor. Treat your password like a toothbrush! Make a password using 'characters' (Disney, Frozen etc). How many combinations with 3 characters, 4 characters etc? Link to Numeracy probability etc.

Online Life is Real Life -Know how to stay safe at places such as supermarkets.

Additional Online Safety Activity

Online Safety in Fairy
Tales - link to texts (e.g.
Cinderella, Little Red
Riding Hood). Identify
information that character
should and should not
share online if they were
placing and advert for
'owner of shoe' etc.

olders/17iBYccf0Pgh97looAS9-7KCxYXCP 2 ?usp=sharing

Online Safety

Education for a Connected World

6. Health, Wellbeing & Lifestyle



KS1 – Health, Wellbeing & Lifestyle

(Activities 3 & 4 – Who are Technology Rules For?)

Additional Online Safety Activity

Secrets - What should you do with these secrets? Give children a list of secrets (big secrets and little secrets) and discuss whether appropriate to keep it a secret and what you should if concerned.

drawn onto the playground in chalk etc.

Link to example video:

https://drive.google.com/drive/folders/17soBjUAiq17uBrLWpdlEo9EoTB12 kTR?usp=sharing

Online Safety

Education for a Connected World

7. Privacy & Security



KS1 – Privacy & Security
(Activities 3 & 4)

Additional Online Safety Activity

Detective Digiduck – Read the story *'Detective Digiduck'*

https://www.childnet.com/resources/digiduck-stories/detective-digiduck/

This Digiduck story, focusses on reliability of online information. The aim is to encourage young children to start to think about online content and help them to understand that what they read or see online might be true,

how people online are not always who they say they are.

protecting your identity online. Explain that whilst this is useful for us to protect our identity, some people want to protect their identity for different reasons (link to Wolf dressing as grandma in Little Red Riding Hood).

How can we link these rules to rules for staying safe online? What makes a good friend? Friends online should behave in same way as friends on the playground in the classroom etc.

Recap skill of using 'Our Story 2' app by making digital book with rules for how to stay safe and act correctly online.



untrue, or someone's opinion.

Year

National Curriculum Objectives and Outcomes:

3/4

Computer Science - Coding & Computational Thinking

Α

Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts.

- Y3 Children can turn a simple real-life situation into an algorithm for a program by deconstructing it into manageable parts. Their design shows that they are thinking of the desired task and how this translates into code. Children can identify an error within their program that prevents it following the desired algorithm and then fix it.
- Y4 When turning a real-life situation into an algorithm, the children's design shows that they are thinking of the required task and how to accomplish this in code using coding structures for selection and repetition. Children make more intuitive attempts to debug their own programs.

Use sequence, selection and repetition in programs; work with variables and various forms of input and output.

- Y3 Children demonstrate the ability to design and code a program that follows a simple sequence. They experiment with timers to achieve repetition effects in their programs. Children are beginning to understand the difference in the effect of using a timer command rather than a repeat command when creating repetition effects. Children understand how variables can be used to store information while a program is executing.
- Y4 Children's use of timers to achieve repetition effects are becoming more logical and are integrated into their program designs. They understand 'if statements' for selection and attempt to combine these with other coding structures including variables to achieve the effects that they design in their programs. As well as understanding how variables

can be used to store information while a program is executing, they are able to use and manipulate the value of variables. Children can make use of user inputs and outputs such as 'print to screen'. e.g. 2Code.

Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs.

- Y3 Children's designs for their programs show that they are thinking of the structure of a program in logical, achievable steps and absorbing some new knowledge of coding structures. For example, 'if' statements, repetition and variables. They make good attempts to 'step through' more complex code in order to identify errors in algorithms and can correct this. In programs they can 'read' programs with several steps and predict the outcome accurately.
- Y4 Children's designs for their programs show that they are thinking of the structure of a program in logical, achievable steps and absorbing some new knowledge of coding structures. For example, 'if' statements, repetition and variables. They can trace code and use step through methods to identify errors in code and make logical attempts to correct this. e.g. traffic light algorithm in 2Code. In programs such as Logo, they can 'read' programs with several steps and predict the outcome accurately.

Computer Science - Theory

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.

- Y3 Children can list a range of ways that the internet can be used to provide different methods of communication. They can use some of these methods of communication, e.g. being able to open, respond to and attach files to emails. They can describe appropriate email conventions when communicating in this way.
- Y4 Children recognise the main component parts of hardware which allow computers to join and form a network. Their ability to understand the online safety implications associated with the ways the internet can be used to provide different methods of communication is improving.

Information Technology

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.

- Y3 Children can collect, analyse, evaluate and present data and information using a selection of software, e.g. using a branching database (2Question), using software such as 2Graph. Children can consider what software is most appropriate for a given task. They can create purposeful content to attach to emails.
- Y4 Children are able to make improvements to digital solutions based on feedback. Children make informed software choices when presenting information and data. They create linked content using a range of software. Children share digital content within their community via a variety of methods.

Online Safety

Use technology safely, respectfully and responsibly; recognise acceptable/ unacceptable behaviour; identify a range of ways to report concern about content and contact.

- Y3 Children demonstrate the importance of having a secure password and not sharing this with anyone else. Furthermore, children can explain the negative implications of failure to keep passwords safe and secure. They understand the importance of staying safe and the importance of their conduct when using familiar communication tools. They know more than one way to report unacceptable content and contact.
- Y4 Children can explore key concepts relating to online safety and can help others to understand the importance of online safety. Children know a range of ways of reporting inappropriate content and contact.

Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content.

- Y3 Children can carry out simple searches to retrieve digital content. They understand that to do this, they are connecting to the internet and using a search engine such as Purple Mash search or internet-wide search engines.
- Y4 Children understand the function, features and layout of a search engine. They can appraise selected webpages for credibility and information at a basic level.



Information Technology



3.3: Spreadsheets

(3 Lessons)



https://drive.google.com/file/d/1 ACqfWV0rYfTiY0d8RvUqz4SeQ9jl PSzw/view?usp=sharing



Information Technology



4.6: Animation

(3 Lessons)



https://drive.google.com/file/d/1 C3YA5oRvhJf-

VCKGqC6aiYgEvatQVqsL/view?usp=sharing

KNOWLEDGE ORGANISERS



Information Technology



3.5: Email

(6 Lessons)



https://drive.google.com/file/d/1 AeR8Om1Iq vXKqr-M2lqfHssfNQg7WA/view?usp=sharing



Information Technology



4.9: Making Music

(4 Lessons)



https://drive.google.com/file/d/1 CT5SRW1040vSG0mK5iyMzxisO brxF0iD/view?usp=sharing





<u>Computer Science –</u>
<u>Coding & Computational</u>
<u>Thinking</u>

Year 3 Pupils



3.1: Coding

(6 Lessons)





Information Technology



3.9: Presenting – PowerPoint /

Keynote

(4 Lessons)



https://drive.google.com/file/d/1 B9agxBO3ilpbtfRiFpOGNSkvDufK Bjow/view?usp=sharing

KNOWLEDGE ORGANISERS

https://drive.google.com/file/d/1 AGHo8i2rdHpCNQCB6w5JiF1KOA N5MoWm/view?usp=sharing



3.8: Graphing

(2 Lessons)



https://drive.google.com/file/d/1 B73JpBYhvR3IOQ02L4AnjBEPfXZ QuAJO/view?usp=sharing



https://drive.google.com/file/d/1 B8zvXexdn6 XLxS789t2b429WNa 2qzRm/view?usp=sharing

Computer Science -**Coding & Computational Thinking**

Code Karts School Edition App (£4.49 / £2.75 VPP):

https://apps.apple.com/gb/app/ code-kart-schooledition/id1314658831

Online Safety

Education for a **Connected World** https://drive.google.com/file/d/1 CCb8III4wvCZEvrsShPGZKJwXS-RqROU/view?usp=sharing

Computer Science -**Coding & Computational Thinking**

RodoCodo: Code Hour App (FREE):

https://apps.apple.com/gb/app/ rodocodo-codehour/id1597648605

* Consider purchase and used of 'Rugged Robots' as a physical coding robot for use in KS2. https://www.tts-

group.co.uk/ruggedrobot/1013531.html

Online Safety

Education for a Connected World

4. Online Bullying



KS2 - Online **Bullying**

(Activities 3 & 4)



* Deliver during Anti-Bullvina Week in November

2. Online Relationships

https://drive.google.com/file/d/1 AfwBF HcYhfGJbdaxOxP2J22Wtx PiObR/view?usp=sharing

Computer Science -**Coding & Computational Thinking**

Scratch Jr: Use 'Scratch Jr Coding Cards' (green cards) to first introduce pupils to the Scratch programming language. https://www.amazon.co.uk/Scrat ch-Jr-Coding-Cards-Activities/dp/1593278993

Online Safety

Education for a Connected World

3. Online Reputation



KS2 - Online Reputation (Activity 4)



* Deliver during the week of Safer Internet

Day in February

5. Managing Online Information



KS2 - Managing Online Information

(Activities 1 & 2)

https://drive.google.com/file/d/1 CUmW5amuohDzl8CN7Pu55Dve0 pG9Nmz7/view?usp=sharing

Computer Science -**Coding & Computational Thinking**

A.L.E.X. App (FREE): https://apps.apple.com/gb/app/

a-l-e-x/id597040772 * Consider purchase of

'Let's Go Code Activity' set so as to combine the plugged with the unplugged activity through use of the floor mats. https://www.amazon.co.uk/Lea

Online Safety Education for a Connected World

rning-Resources-Lets-Code-

Activity/dp/B01N7MMCMO

6. Health, Wellbeing & Lifestyle



KS2 - Health, Wellbeing & Lifestyle

(Activity 1)

Additional Online Safety Activity

https://drive.google.com/file/d/1 9z6PQi8aiS7kiDa7VdQsBmLQ8Ep 32pku/view?usp=sharing



https://drive.google.com/file/d/1 A02AJMecHRJmCRVIu4zzh3taKnE WG3ob/view?usp=sharing

Year 4 Pupils



4.1: Coding

(6 Lessons)



https://drive.google.com/file/d/1 BTRFdSXMstFdnN ugKk2Z 5NFe etcQRJ/view?usp=sharing



https://drive.google.com/file/d/1 BULQL6DfBa 9WapafwqslcRZMVu7shu/view?usp=sharing

Information Technology

PhotoSpeak App - Bring to life a character from a book, history topic etc. Progression of skills from KS1 when ChatterPix Kids

Keynote (App Prototype)



https://drive.google.com/file/d/1 BPO4Ik7Pd7VksqqFrkR8vGmESrA YCCly/view?usp=sharing

Computer Science -**Coding & Computational Thinking**

Unplugged Activity: 'Sandwich Bot'. Children to create an algorithm using precise and unambiguous instructions in order to get their teacher ('Sandwich Bot **3000')** to make a jam sandwich. https://drive.google.com/drive/f

olders/1Jls0t6vlOG5URo2vTUJE7 83uLlkrk DB?usp=sharing

Videos of Phil Bagge as 'Sandwich Bot':

https://www.youtube.com/watc h?v=VFUs3GvMSVc

https://www.youtube.com/watc h?v=leBEFaVHIIE

Online Safety

Education for a **Connected World**

8. Copyright & Ownership

1.Self-Image & Identity



KS2 - Self-Image & Identity (Activity 1)

Additional Online Safety Activity

Play, Like, Share - 'Play, Like, Share' (CEOP Video) - Episode 1 (link to sites/apps like YouTube and TikTok that children are regularly using) https://www.youtube.com/watch ?v=WpnqtGyc ec&t=193s



KS2 – Online Relationships (Activity 2)

Additional Online Safety Activity

Oscar and the Three Elves

- Read 'Oscar and the

Three Elves' (free pdf Christmas Story with an
online safety message)
https://www.walkwoodms.worcs
.sch.uk/Content/files/42ca-NOSStory-Oscar-and-the-3-Elves.pdf

Additional Online Safety Activity

Tek the Modern Cave Boy
- Read the story of 'Tek The Modern Cave Boy' by
Patrick McDonnell. Discuss
the notion of 'screen time'.
Use '2Count' (Purple
Mash) to make graphs of
most popular apps,
average screen time etc.

Play, Like Share- Show 'Play Like Share' CEOP Video - Episode 2.

https://www.youtube.com/watc
h?v=NscU1ZHYPDk&t=7s

Create a page (fictitious person, maybe a superhero or character from class novel etc) for a social media website (Facebook style).

What information would you include? What information should you not display? Why do you think that websites such as Facebook etc have an age limit of 13? Think about the layout and design of the page, combining images, text and other media in a visually effective way.

app was used for animation.

Online Safety Education for a Connected World

7. Privacy & Security



KS2 – Privacy & Security (<u>NO</u> Y3 Activity)

Additional Online Safety Activity

Hidden Extras - Look at range of website offering holidays to New York. How do you know that a website is genuine?
Discuss 'hidden extras' (suitcase allowance etc) with different travel companies and the 'true cost' of a holiday?



KS2 – Copyright & Ownership (Activities 2 & 3)

Additional Online Safety Activity

Combine 'Twinkl Avatar'
Creator' with 'Photo
Speak' to put a different
voice behind Avatar.
Image you see on screen is
not always that 'behind
the mask'. Discuss what
you would do if you had
concerns relating to online
conversations.

Year 3/4

National Curriculum Objectives and Outcomes:

Computer Science - Coding & Computational Thinking

Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts.

- В
- Y3 Children can turn a simple real-life situation into an algorithm for a program by deconstructing it into manageable parts. Their design shows that they are thinking of the desired task and how this translates into code. Children can identify an error within their program that prevents it following the desired algorithm and then fix it.
- Y4 When turning a real-life situation into an algorithm, the children's design shows that they are thinking of the required task and how to accomplish this in code using coding structures for selection and repetition. Children make more intuitive attempts to debug their own programs.

Use sequence, selection and repetition in programs; work with variables and various forms of input and output.

- Y3 Children demonstrate the ability to design and code a program that follows a simple sequence. They experiment with timers to achieve repetition effects in their programs. Children are beginning to understand the difference in the effect of using a timer command rather than a repeat command when creating repetition effects. Children understand how variables can be used to store information while a program is executing.
- Y4 Children's use of timers to achieve repetition effects are becoming more logical and are integrated into their program designs. They understand 'if statements' for selection and attempt to combine these with other coding structures including variables to achieve the effects that they design in their programs. As well as understanding how variables can be used to store information while a program is executing, they are able to use and manipulate the value of variables. Children can make use of user inputs and out puts such as 'print to screen'. e.g. 2Code.

Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs.

- Y3 Children's designs for their programs show that they are thinking of the structure of a program in logical, achievable steps and absorbing some new knowledge of coding structures. For example, 'if' statements, repetition and variables. They make good attempts to 'step through' more complex code in order to identify errors in algorithms and can correct this. In programs they can 'read' programs with several steps and predict the outcome accurately.
- Y4 Children's designs for their programs show that they are thinking of the structure of a program in logical, achievable steps and absorbing some new knowledge of coding structures. For example, 'if' statements, repetition and variables. They can trace code and use step through methods to identify errors in code and make logical attempts to correct this. e.g. traffic light algorithm in 2Code. In programs such as Logo, they can 'read' programs with several steps and predict the outcome accurately.

Computer Science - Theory

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.

- Y3 Children can list a range of ways that the internet can be used to provide different methods of communication. They can use some of these methods of communication, e.g. being able to open, respond to and attach files to emails. They can describe appropriate email conventions when communicating in this way.
- Y4 Children recognise the main component parts of hardware which allow computers to join and form a network. Their ability to understand the online safety implications associated with the ways the internet can be used to provide different methods of communication is improving.

Information Technology

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.

- Y3 Children can collect, analyse, evaluate and present data and information using a selection of software, e.g. using a branching database (2Question), using software such as 2Graph. Children can consider what software is most appropriate for a given task. They can create purposeful content to attach to emails.
- Y4 Children are able to make improvements to digital solutions based on feedback. Children make informed software choices when presenting information and data. They create linked content using a range of software. Children share digital content within their community via a variety of methods.

Online Safety

Use technology safely, respectfully and responsibly; recognise acceptable/ unacceptable behaviour; identify a range of ways to report concern about content and contact.

- Y3 Children demonstrate the importance of having a secure password and not sharing this with anyone else. Furthermore, children can explain the negative implications of failure to keep passwords safe and secure. They understand the importance of staying safe and the importance of their conduct when using familiar communication tools. They know more than one way to report unacceptable content and contact.
- Y4 Children can explore key concepts relating to online safety and can help others to understand the importance of online safety. Children know a range of ways of reporting inappropriate content and contact.

Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content.

- Y3 Children can carry out simple searches to retrieve digital content. They understand that to do this, they are connecting to the internet and using a search engine such as Purple Mash search or internet-wide search engines.
- Y4 Children understand the function, features and layout of a search engine. They can appraise selected webpages for credibility and information at a basic level.



Information Technology



Computer Science –
Coding & Computational
Thinking



<u>Computer Science –</u>
<u>Coding & Computational</u>
<u>Thinking</u>



Information Technology



3.4: Touch Typing



Information Technology



<u>Computer Science</u> – Theory



4.4: Writing for Different

Audiences

(5 Lessons)



https://drive.google.com/file/d/1 Bx8vKtoGCLr41akCzMRMDu0hnT kB8w4J/view?usp=sharing



KNOWLEDGE ORGANISERS

https://drive.google.com/file/d/1 <u>Bxv6mKCRAGivxagADKKIHwz2llm</u> <u>gFsEy/view?usp=sharing</u>

<u>Computer Science –</u>
<u>Coding & Computational</u>
<u>Thinking</u>

Scratch

Online Safety

Education for a Connected World

1.Self-Image & Identity



KS2 - Self-Image & Identity (NO_Y4 Activity)

Additional Online Safety
Activity



4.5: Logo

(4 Lessons)



https://drive.google.com/file/d/1 BzmqqPuVWQqmDr7AvaAO9XeR XWf4mrsC/view?usp=sharing



https://drive.google.com/file/d/1 C101TPpbTfd5om6MBQtn9 EZX NDY00HS/view?usp=sharing

Information Technology

Green Screen by Do:Ink app to make a TV programme linked to current topic.

Online Safety

Education for a Connected World

4. Online Bullying



KS2 – Online Bullying (Activity 2)



* Deliver during Anti-Bullying Week in November

Year 3 Pupils



3.1: Coding

(6 Lessons)



https://drive.google.com/file/d/1 9z6PQj8aiS7kjDa7VdQsBmLQ8Ep 32pku/view?usp=sharing



https://drive.google.com/file/d/1 A02AJMecHRJmCRVIu4zzh3taKnE WG3ob/view?usp=sharing

Year 4 Pupils



4.1: Coding

(6 Lessons)



https://drive.google.com/file/d/1 BTRFdSXMstFdnN ugKk2Z 5NFe etcQRJ/view?usp=sharing



(4 Lessons)



https://drive.google.com/file/d/1 AJWFcUJG55q xjS3zk6q7puy0JEt 6bF8/view?usp=sharing

*also BBC Dance Mat Typing

https://www.bbc.co.uk/bitesize/topics/zf2f9j6/articles/z3c6tfr



https://drive.google.com/file/d/1 AcFEGtyg1rmnHtb8ZFH9YmlP7GX QRjkN/view?usp=sharing

Computer Science –
Coding & Computational
Thinking

A.L.E.X. App (FREE):

https://apps.apple.com/gb/app/a-l-e-x/id597040772

Online Safety

Education for a Connected World

6. Health, Wellbeing & Lifestyle



KS2 – Health, Wellbeing & Lifestyle

(NO Y4 Activity)

purple mash

3.6: Branching Databases

(4 Lessons)



https://drive.google.com/file/d/1 AvtSfvmvGKuc3cAjcCNXGpPWzw q52h6t/view?usp=sharing



https://drive.google.com/file/d/1 AyrofESEIHKhMVW4a1D1AeCVv5 Dg0Ekj/view?usp=sharing

<u>Computer Science</u> – <u>Coding & Computational</u> Thinking

Unplugged Activity – 'Dot Draw Code'. Children to create their own design and then produce the code as to how someone else would make their image.

https://drive.google.com/drive/f olders/1YTS5LX1Ydz6qdRNI2ecC 9NhCisUm0qXp?usp=sharing

Online Safety

Education for a Connected World



4.7 Effective Searching

(3 Lessons)



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https://drive.google.com/file/d/1 CLReuQNUbUvT8QAgkm46-ALYYi GLGU1/view?usp=sharing



4.8: Hardware Investigators

(2 Lessons)



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KNOWLEDGE ORGANISERS

https://drive.google.com/file/d/1 CNCZ5So9SriM-

Read the story 'When Charlie McButton Loses **Power'** by Suzanne Collins. Discuss the notion of 'screen time' and create a video using 'Clips' app to explain safe and responsible strategies for using technology (e.g. no electronic devices at the tea table, tablet not taken to bed etc).

2. Online Relationships



KS2 - Online Relationships (Activity 3)

Additional Online Safety Activity

Jigsaw - Watch the CEOP video 'Jiqsaw'

https://www.youtube.com/watch ?v=kA60vGu3tH4

Discuss how Becky reports her concerns (clicks on the 'Report Abuse' button). Look at a wide range of common websites and apps and look at ways you can report abuse. Make a display for classroom or communal area around school.

https://drive.google.com/file/d/1 BULQL6DfBa 9WapafwqslcRZMVu7shu/view?usp=sharing

Information Technology

* 1 Lesson

Online Safety Education for a Connected World

3. Online Reputation



KS2 - Online Reputation (Activity 1)

* Deliver during the week of Safer Internet Day in February

5. Managing Online Information



KS2 – Managing Online Information

(Activity 5)

Additional Online Safety Activity

Penguin Pig - Read the story 'Penguin Pig' by Stuart Spendlow. Explain how people online are strangers and that they are not always who they

Additional Online Safety Activity

Internet Research - Using

the Internet to research current topic. Use search engine (e.g. Google). Pupils to use 'image' tab to search for pictures. Introduce the more advance skills of different size and types of images (e.g. colour, black and white and transparent backgrounds). Use the Internet research to complete a writing activity on **Purple Mash**.

7. Privacy & Security



KS2 - Privacy & Security (Activities 2 & 4)

Additional Online Safety Activity

Troll Stinks - Read the story 'Troll Stinks' by Jeanne Willis. Discuss the impact that our online words have on people (online life is 'real life', the things that we do and say online have just as much impact on people as what they do when we say things face-to-face). Have a list of statement cards and pupils to have different emojis (happy, sad, angry, crying etc). Use emojis to indicate how the person at the other end of the screen would be feeling if you had said/done the action on the statement card.

2Z0HKiYsnMuDlp4r4z0/view?usp =sharing

Information Technology

Clips app to demonstrate knowledge and understanding of current topic by making a presentation. Share with wider audience via school Twitter account.

Online Safety

Education for a Connected World

- 8. Copyright & Ownership
- 8. Copyright & Ownership (n/a)

Additional Online Safety Activity

Use search engine (e.g. 'Google'). Pupils to use 'image' tab to search for pictures. Introduce the more advanceskills of different size and types of images (e.g. colour, black and white and transparent backgrounds). Progress to using search tools (e.g. +, and " ") to return more accurate results.

		say they ar	e. Relate to	
		games and	apps that	
		pupils are:	accessing (e.g.	
		Fortnite, R	oblox etc).	
		Discuss ho	w many of these	
		games and	apps allow the	
		ability to 'c	ommunicate'	
		and that th	is is the reason	
		why any ga	me that has	
		'open chat	functionality is	
		given a 13-	rating. Look at	
		the setting	s functions on	
		various po	pular	
		apps/game	s and create a	
		display for		
		class/comi	nunal area to	
		help suppo	rt other pupils	
		to staysafe	e online.	
Voor I No	ational Curricuulus	n Ohiactives and Outcomes.		

Year

National Curriculum Objectives and Outcomes:

5/6

Computer Science – Coding & Computational Thinking

Α

Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts.

Y5 - Children may attempt to turn more complex real-life situations into algorithms for a program by deconstructing it into manageable parts. Children are able to test and debug their programs as they go and can use logical methods to identify the approximate cause of any bug but may need some support identifying the specific line of code.

Y6 - Children are able to turn a more complex programming task into an algorithm by identifying the important aspects of the task (abstraction) and then decomposing them in a logical way using their knowledge of possible coding structures and applying skills from previous programs. Children test and debug their program as they go and use logical methods to identify the cause of bugs, demonstrating a systematic approach to try to identify a particular line of code causing a problem.

Use sequence, selection and repetition in programs; work with variables and various forms of input and output.

Y5 - Children can translate algorithms that include sequence, selection and repetition into code with increasing ease and their own designs show that they are thinking of how to accomplish the set task in code utilising such structures. They are combining sequence, selection and repetition with other coding structures to achieve their algorithm design.

Y6 - Children translate algorithms that include sequence, selection and repetition into code and their own designs show that they are thinking of how to accomplish the set task in code utilising such structures, including nesting structures within each other. Coding displays an improving understanding of variables in coding, outputs such as sound and movement, inputs from the user of the program such as button clicks and the value of functions.

Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs.

- Y5 When children code, they are beginning to think about their code structure in terms of the ability to debug and interpret the code later, e.g. the use of tabs to organise code and the naming of variables.
- Y6 Children are able to interpret a program in parts and can make logical attempts to put the separate parts of a complex algorithm together to explain the program as a whole.

Computer Science - Theory

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.

- Y5 Children understand the value of computer networks but are also aware of the main dangers. They recognise what personal information is and can explain how this can be kept safe. Children can select the most appropriate form of online communications contingent on audience and digital content.
- Y6 Children understand and can explain in some depth the difference between the internet and the World Wide Web. Children know what a WAN and LAN are and can describe how they access the internet in school.

Information Technology

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.

- Y5 Children are able to make appropriate improvements to digital solutions based on feedback received and can confidently comment on the success of the solution. They objectively review solutions from others. Children are able to collaboratively create content and solutions using digital features within software such as collaborative mode. They are able to use several ways of sharing digital content.
- Y6 Children make clear connections to the audience when designing and creating digital content. The children design and create their own blogs to become a content creator on the internet, e.g. 2Blog. They are able to use criteria to evaluate the quality of digital solutions and are able to identify improvements, making some refinements.

Online Safety

Use technology safely, respectfully and responsibly; recognise acceptable/ unacceptable behaviour; identify a range of ways to report concern about content and contact.

Y5 - Children have a secure knowledge of common online safety rules and can apply this by demonstrating the safe and respectful use of a few different technologies and online services. Children implicitly relate appropriate online behaviour to their right to personal privacy and mental wellbeing of themselves and others.

Y6 - Children demonstrate the safe and respectful use of a range of different technologies and online services. They identify more discreet inappropriate behaviours through developing critical thinking, e.g. 2Respond activities. They recognise the value in preserving their privacy when online for their own and other people's safety

Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content.

Y5 - Children search with greater complexity for digital content when using a search engine. They are able to explain in some detail how credible a webpage is and the information it contains.

Y6 - Children readily apply filters when searching for digital content. They are able to explain in detail how credible a webpage is and the information it contains. They compare a range of digital content sources and are able to rate them in terms of content quality and accuracy. Children use critical thinking skills in everyday use of online communication.



Information Technology



6.4 Blogging

(4 Lessons)



https://drive.google.com/file/d/1 E mzkpBSb8K95Dygdl6kGu1fWsz hr-KM/view?usp=sharing



Information Technology



5.5 Game Creator

(5 Lessons)



https://drive.google.com/file/d/1 DLabHOUfGoVPYmE2SmAzV 36V HX1N-WI/view?usp=sharing

KNOWLEDGE ORGANISERS



Computer Science — Coding & Computational Thinking

Year 5 Pupils



5.1: Coding

(6 Lessons)



https://drive.google.com/file/d/1 CWw5IcUHLE kOzrgG 7Do fPnR7iDt/view?usp=sh



Information Technology



5.8: Word Processing –

Word/Pages

(8 Lessons: Lessons 1-4)



https://drive.google.com/file/d/1 <u>DodIDa jw8cla jiSMAM25dQmwgX</u> oLZLjL/view?usp=sharing



Information Technology



5.8: Word Processing –

Word/Pages

(8 Lessons: Lessons 5-8)



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Information Technology



5.6: 3D Modelling

(4 Lessons)



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https://drive.google.com/file/d/1 Dam bHmSvTBktT78gFeB99iTm6

KNOWLEDGE ORGANISERS

https://drive.google.com/file/d/1 EgfU6-2id-Ofp0CYzZyV9F0uNIejU8oo/view?

Computer Science –
Coding & Computational
Thinking

Lightbot Hour of Code

Online Safety

usp=sharing

Education for a Connected World

1.Self-Image & Identity



KS2 – Self-Image & Identity (Activities 2, 3 &

4)

https://drive.google.com/file/d/1 DPixjkxMpdgdwZVGSzasKCGlezQ FW4V8/view?usp=sharing

Computer Science – Coding & Computational Thinking

Unplugged Activity: Flanimals / Crazy **Characters.** Use the book **'Flanimals'** by Ricky Gervais. Each pupil to be given image of a 'Flanimal'. Sit back-to-back with partner and describe using 'precise' language how to draw your Flanimal. Pupils then create their own 'Flanimal' and create a precise stepby-step set of instructions as to how someone else would draw this.

* This lesson is based on the Barefoot Computing 'Crazy Characters' lesson: https://www.barefootcomputing. org/resources/crazy-characteralgorithms

Flanimals Book:

https://www.amazon.co.uk/Flani mals-Ricky-Gervais/dp/0571220770/ref=tm aring



https://drive.google.com/file/d/1 Ca7RNKNNZosRTQh572tm0Ki8V2 hwy5Jp/view?usp=sharing

Year 6 Pupils



6.1: Coding

(6 Lessons)



https://drive.google.com/file/d/1 E7utwfsOpjau6F7jaehcCUvusz9X wf 2/view?usp=sharing



https://drive.google.com/file/d/1 EH6n4kGu0wV9JMys5za0rrJAUz1r-Xx/view?usp=sharing

Information Technology

PuppetPals 2 School Edition app (£5.99 / £2.99

VPP) – Create an animation with you as the character linked to a current topic or text.

KNOWLEDGE ORGANISERS

https://drive.google.com/file/d/1 DvoPm0uB1SochRG1YNXduMlNA mabPpKN/view?usp=sharing

Computer Science – Coding & Computational Thinking

Scratch - 'Scratch Coding Cards' ('Pong Game').

https://www.amazon.co.uk/Scrat ch-Coding-Cards-Natalie-Rusk/dp/1593279760/ref=asc df 1593279760/?tag=googshopuk-21&linkCode=df0&hvadid=24091 0969091&hvpos=&hvnetw=g&hv rand=10156897798194215999&h vpone=&hvptwo=&hvqmt=&hvde v=c&hvdvcmdl=&hvlocint=&hvloc phy=1006736&hvtargid=pla-650434061007&psc=1&th=1&psc =1

Online Safety

Education for a Connected World

6. Health, Wellbeing & Lifestyle



KS2 – Health, Wellbeing & Lifestyle

(Activity 3)

KNOWLEDGE ORGANISERS

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<u>Computer Science –</u> <u>Coding & Computational</u> <u>Thinking</u>

SpriteBox Code Hour App (FREE):

https://apps.apple.com/us/app/spritebox-code-hour/id1161515477

Progression to text-based programming and use of Java.

Online Safety

Education for a Connected World

7. Privacy & Security



KS2 - Privacy & Security (NO Y5 Activity)

Additional Online Safety Activity

'Tree Octopus' website www.zapatopi.net/treeoct opus um-I5_/view?usp=sha



ring

Minecraft: Make 3D world (temple for a God/Pharaoh) (follow-on from previous 3D unit) linked to either Egyptian or Mayans topic.

* Links to KS2 D&T Curriculumalso (generate develop, model and communicate ideas through CAD)

<u>Computer Science –</u> <u>Coding & Computational</u> Thinking

Unplugged Activity -

Create an unambiguous and precise step-by-step set of instructions linked to a current topic. This could for example be how to play the Mayan game of 'Pok-a-Tok' or how an

m hrd swatch 0? encoding=UT F8&aid=&sr=

Online Safety

Education for a Connected World

4. Online Bullying



KS2 - Online **Bullying** (Activity 2)



* Deliver during Anti-Bullying Week in November

2.Online Relationships



KS2 - Online Relationships (Activities 1, 4 &

5)

https://apps.apple.com/us/app/p uppet-pals-2-schooledition/id557616416

Online Safety

Education for a Connected World

3. Online Reputation



KS2 - Online Reputation (Activities 2 & 5)



* Deliver during the week of Safer Internet Day in February

5. Managing Online Information

(Activities 4 & 6)



KS2 - Managing Online Information

Additional Online Safety Activity

YouNewsEd' app combined with 'Pic

Collage' app. Children to make their own 'Fake News' story. Link to online safety objective of 'being discerning in evaluating digital content' and also the notion of propaganda during WW2 where fake news very much originated.

Children carry out series of comprehension type questions based on website content (do not tell them that website is fake at this stage!!!) End less on by asking children to evaluate what they read and researched then reveal that website is FAKE!!!!! (there is no such thing as a Tree Octopus) We cannot always trust what we read and see online!

Tree Octopus Comprehension:

https://drive.google.com/file/d/1 nhjlyZloentUTJIhk6IHWoABR1xeD xpl/view?usp=sharing

Egyptian slave would build a pyramid.

Online Safety

Education for a **Connected World**

8. Copyright & Ownership



KS2 - Copyright & Ownership (Activities 1 & 4)

Year

National Curriculum Objectives and Outcomes:

5/6

Computer Science - Coding & Computational Thinking

В

Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller

Y5 - Children may attempt to turn more complex real-life situations into algorithms for a program by deconstructing it into manageable parts. Children are able to test and debug their programs as they go and can use logical methods to identify the approximate cause of any bug but may need some support identifying the specific line of code.

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Computer Science - Theory

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Online Safety

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Y6 - Children demonstrate the safe and respectful use of a range of different technologies and online services. They identify more discreet inappropriate behaviours through developing critical thinking, e.g. 2Respond activities. They recognise the value in preserving their privacy when online for their own and other people's safety

Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content.

Y5 - Children search with greater complexity for digital content when using a search engine. They are able to explain in some detail how credible a webpage is and the information it contains.

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Information Technology



6.9: Spreadsheets

– Excel or

Numbers

(8 Lessons: Lessons 1-4)



Information Technology



6.9: Spreadsheets

– Excel or

Numbers

(8 Lessons: Lessons 5-8)



Computer Science –
Coding & Computational
Thinking

Year 5 Pupils



5.1: Coding



<u>Computer Science</u> – Theory



6.8 Binary

(4 Lessons)



Information Technology



5.4: Databases

(4 Lessons)



<u>Computer Science</u> – Theory



6.6 Networks

(3 Lessons)



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https://drive.google.com/file/d/1 FRtKKVo0eg3hn0uFqqrzboq2Cl4J VF7F/view?usp=sharing

<u>Computer Science –</u>
<u>Coding & Computational</u>
Thinking

Scratch

Online Safety

Education for a Connected World

1.Self-Image & Identity



KS2 - Self-Image & Identity (NO Y6 Activity)

Additional Online Safety Activity

'I've seen Alex's Willy'
video from NSPCC
https://www.youtube.com/watc

h?v=sch WMid6go



https://drive.google.com/file/d/1 FQqBN2zhR1MLeN0J86Pf2dkT8dr t4OTg/view?usp=sharing



https://drive.google.com/file/d/1 FRtKKVo0eg3hn0uFqqrzboq2Cl4J VF7F/view?usp=sharing

Computer Science –
Coding & Computational
Thinking

Scratch???

Online Safety

Education for a Connected World

4. Online Bullying



KS2 – Online Bullying (NO Y6 Activity)



* Deliver during Anti-Bullying Week in

November

2.Online Relationships



KS2 – Online Relationships (6 Lessons)



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aring

KNOWLEDGE ORGANISERS

https://drive.google.com/file/d/1 Ca7RNKNNZosRTQh572tm0Ki8V2 hwy5Jp/view?usp=sharing

Year 6 Pupils



6.1: Coding

(6 Lessons)



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https://drive.google.com/file/d/1 EH6n4kGu0wV9JMys5za0rrJAUz1r-Xx/view?usp=sharing

Information Technology



https://drive.google.com/file/d/1 FLXQS2Rw 573vOY6aEkIE90WIU Otg5vF/view?usp=sharing



https://drive.google.com/file/d/1 FPowSIcDe nDtXirFzOSK iTtvpiV A6d/view?usp=sharing

Online Safety

Education for a Connected World

6. Health, Wellbeing & Lifestyle



KS2 – Health, Wellbeing & Lifestyle

(Activities 2 & 6)

Additional Online Safety Activity

Play, Like, Share' (CEOP Video) – Episode 3.

https://www.youtube.com/watc
h?v=tQZGA6dsWpo

Create a 'Kahoot' quiz to test pupils' knowledge and



https://drive.google.com/file/d/1 CyC sMal07XcvpzdXiLS02Oc0HAp-5r/view?usp=sharing



https://drive.google.com/file/d/1 CyXyhkseXemxe N pY7BKNij4OA pm08o/view?usp=sharing

Computer Science –
Coding & Computational
Thinking

Underground Algorithms

BBC: MicroBits *

Online Safety

Education for a Connected World

7. Privacy & Security



KS2 – Privacy & Security (Activity 3)



https://drive.google.com/file/d/1 EmrJUWD7O 1bcdGY08WaOIEG wHWPK0al/view?usp=sharing



https://drive.google.com/file/d/1 F0Q7R8N29Fxxah0p44ImtxmlUb-32YoB/view?usp=sharing

<u>Computer Science –</u>
<u>Coding & Computational</u>
Thinking

SpriteBox Hour of Code
App (FREE). Progress to
use of text-based
programming (Java) in
preparation for transition

Information Technology

to KS3.

iMovie – Make movie trailer linked to current topic.

Online Safety Education for a Connected World

8. Copyright & Ownership

Message of 'Be Share Aware'. Followinto 'Grandma Rule'. Follow this up by 'Talking PANTS' with the pupils: (Activity 6)

Additional Online Safety Activity

Read the story 'The Technology Tail' by Julia Cook. Compare this to own onlinelives. Create a class breakdown of 'online life'. What are the popular apps, sites etc that are used? Does language, behaviour etc in these mirror that within school and within the classroom? Discuss Whats App groups and other popular ways of communicating as a group outside of school. Is the administrator of the group fair? Do they 'police' the group well? Would you be happy for your parent, teacher etc to see and read the things that are shared in the group? If you wouldn't say it in the classroom, then you shouldn't say it online. Create 'Class Conduct' for use of popular apps such as WhatsApp, Instagram, Snapchat etc and for

Garageband – Use 'Smart' instruments to create a musical composition linked to current topic.

Online Safety

Education for a Connected World

3. Online Reputation



KS2 – Online Reputation (Activities 3 & 6)



* Deliver during the week of Safer Internet

Day in February

5. Managing Online Information



KS2 – Managing Online Information

(Activity 3)

Additional Online Safety Activity

Trying same search on different search engines (e.g. Edge, Google Chrome, Bing, Yahoo etc). Do they all return the results? What might the reason for the difference?

understanding of the key messages from the video.



KS2 – Copyright & Ownership (NO Y6 Activity)

	(companies pay to have their results ranked higher)		
versation is possible. re these on class	5 .		
olay, within communal as within school etc.			