

Oakfield Schools – Computing Curriculum



Intent

The Computing curriculum at Oakfield Infant and Junior School Federation 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.

Technology is everywhere and will play a pivotal part in students' lives, therefore, we want to model and educate our pupils on how to use technology positively, responsibly and safely. We want our pupils to be creators not consumers and our broad curriculum encompassing ‘Computer Science’, ‘Information Technology’ and ‘Online Safety’ reflects this. We want our pupils to understand that there is always a choice with using technology and as a school we utilise technology 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.

Technology provides accessibility opportunities for our pupils and also allows them to share their learning in creative ways. Our knowledge rich curriculum has to be balanced with the opportunity for pupils to apply their skills creatively which will in turn help our pupils become proficient computer scientists.

We want our pupils to be fluent with a range of tools to best express their understanding and hope by Upper Key Stage 2, children have the independence and confidence to choose the best tool to fulfil the task and challenge set by teachers.

Implementation

Computing skills are taught explicitly at Oakfield, with every pupil receiving dedicated Computing lessons throughout each half-term. Each half-term has a focus on either Information Technology or Computer Science, with Online Safety lessons also taught during each half-term. The skills acquired are then embedded throughout the curriculum in all subjects. Online Safety lessons are mapped to the '*Education for a Connected World*' framework and some of these activities will be reinforced via PSHE lessons and during assemblies. Learning is sequenced to build knowledge, skills and vocabulary. Throughout units of work teachers will make links and encourage children to make connections between past learning and new content. We recognise prior learning and build on it with memorable learning experiences with targeted support where necessary. Each unit meets the needs of the National Curriculum and is broken down to cover every element of each of the three strands of Computing.

Alongside our Computing advisor we have created a comprehensive curriculum to best embed and cover every element of the Computing curriculum. The progression of knowledge and skills statements build year on year to deepen and challenge our learners. We have also used the NCCE curriculum tied with Purple Mash to create a comprehensive curriculum providing full coverage and a variety of skills for our children. Purple Mash is a child friendly computing system that mirrors a lot of programmes seen in the 'real' world (*e.g. font buttons are the same, email formats are the same*). By using Purple Mash we are exposing the children to real-word systems but giving them freedom to explore using a child-friendly interface. It is also safe in terms of who and what they can access. As well as using Purple Mash we use NCCE materials and guidance to formulate our curriculum. This has helped create a cohesive structure with clear activities that match our progression of skills documents.

Whole class floor books are used to evidence computing work, and allow children to reflect on their learning throughout the year. Summative end of unit questions are used to assess children's retention of key skills taught through the units.

Impact

The impact of our Computing curriculum is that we provide pupils with a set of skills to embed a lifelong love of learning and that they build on the knowledge and skills from previous learning. We ensure that every child can become a confident user of technology, while being able to use it to accomplish a wide variety of goals, both at home and in school. Children will have a secure and comprehensive knowledge of how technology works in the world around them and will develop their understanding of how to deal with online situations safely. Children will become confident global citizens.

Through the explicit teaching of Computing skills, both the teachers and the pupils assess their learning continuously throughout the lesson. To help children get to a deep level of understanding we use quizzes and knowledge organisers that we return to again and again. This is known as interleaving. The knowledge organisers outline what we want the children to know within each unit.

By nature Computing is going to be practical and hands on. We use 'floor books' to record the learning the children have done in Computing, as well as giving the children the opportunity to record individually, particularly as they move towards the end of Year 2. Thoughts and ideas are recorded here as well as pictures of work.

Special Educational Needs and Computing

How do we ensure all children can access computing lessons?

Although a child may have been identified as having a special educational need, they may not have a special educational need in computing. Effective quality first teaching is the key to enabling all children to participate and develop their knowledge and skills. Differentiation within lessons is a vital component to ensure that a balance of support and challenge are achieved for all abilities. This is the same in every subject and differentiation is adjusted as expectations of individual pupils rise through progress.

Challenge and support specific to computing may include:

- Open ended tasks allowing for children to explore as far as comfortable
- First hand and hands on experiences
- Teaching advance and specific vocabulary, which can be pre-taught as required
- Using videos, small group or 1:1 recapping of programmes
- Pupil knowledge organisers

Pupils not secure within a lesson sequence are noted and adjustments made to the differentiation or level of support given. Similarly, added challenge is given if pupils are identified as requiring it. This may be noted by the teacher through questioning or the use of written work. Using an interleaving approach means that pupils continually revisit their learning, gradually building a deeper understanding. The way computing also appears in other subjects allows those skills to be consistently revisited in different contexts.

	Autumn [1]	Autumn [2]	Spring [1]	Spring [2]	Summer [1]	Summer [2]
Year 1	National Curriculum Objectives and Outcomes: <u>Computer Science – Coding & Computational Thinking</u> Understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions. <i>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.</i> Create and debug simple programs. <i>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.</i> Use logical reasoning to predict the behaviour of simple programs. <i>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.</i> <u>Computer Science - Theory</u> Recognise common uses of information technology beyond school. <i>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.</i> <u>Information Technology</u> Use technology purposefully to create, organise, store, manipulate and retrieve digital content. <i>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.</i> <u>Online Safety</u> 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 <i>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.</i>					



Information Technology

1.1: Exploring Purple Mash

(4 Lessons)



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KNOWLEDGE ORGANISERS

<https://drive.google.com/file/d/1IYuEK6QE3YIiKOzJxqN0gGCyeO6-sEr/view?usp=sharing>

Online Safety

Education for a Connected World

1: Self-Image & Identity

(2 Activities)

PROJECT EVOLVE

<https://projectevolve.co.uk/toolkit/resources/years/year-one/self-image-and-identity/>



Information Technology

1.3: Pictograms
(3 Lessons)



<https://drive.google.com/file/d/18CIY6NIYRCxYZ5-mulyR7ZMOAPteSrpm/view?usp=sharing>



KNOWLEDGE ORGANISERS

<https://drive.google.com/file/d/18CTV035kvvmjzYQLR1UBNnAI4H9YFmc/view?usp=sharing>



Allocate **Unit 1.3 Quiz (Purple Mash)** to all pupils in order to assess knowledge of the unit and skills.



Computer Science – Coding & Computational Thinking

1.5: Maze Explorers

(4 Lessons)



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KNOWLEDGE ORGANISERS

https://drive.google.com/file/d/18Pn2Alzq1uLkWYmTe1x0MYih_pNP82Y/view?usp=sharing



Allocate **Unit 1.5 Quiz (Purple Mash)** to all pupils in order to assess knowledge of the unit and skills.



Information Technology

1.6: Animated Stories

(5 Lessons)



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KNOWLEDGE ORGANISERS

<https://drive.google.com/file/d/18RtDg9NFu4As6kDNb7JDzX6vcilHBTVE/view?usp=sharing>



Allocate **Unit 1.6 Quiz (Purple Mash)** to all pupils in order to assess knowledge of the unit and skills.



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).

Use **'Folens Cards'** as ideas for this activity:

<https://drive.google.com/file/d/1AhmLtYK4aqCTUYPIFfP8Pdr5xFGXWIUN/view?usp=sharing>

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 children say left leg, right



Computer Science – Theory

1.9: Technology Outside of School
(2 Lessons)



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KNOWLEDGE ORGANISERS

<https://drive.google.com/file/d/18inrxrXR8E4XktlyxxzsGXaaDyYmDlm6/view?usp=sharing>



Allocate **Unit 1.9 Quiz (Purple Mash)** to all pupils in order to assess knowledge of the unit and skills.

Additional Online Safety Activity Chicken Clicking - Read the story of '<i>Chicken Clicking</i>' (physical book by Jeanne Willis priced at £6.38). https://www.amazon.co.uk/Chicken-Clicking-Online-Safety-Picture/dp/1783441615/ref=sr_1_1?keywords=chicken+clicking&qid=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? YouTube Link: https://www.youtube.com/watch?v=bRQgIbfGfTU	Online Safety Education for a Connected World 4. Online Bullying (1 Activity)  * Deliver during Anti-Bullying Week in November PROJECT EVOLVE https://projectevolve.co.uk/toolkit/resources/years/year-one/online-bullying/ 2. Online Relationships (4 Activities) PROJECT EVOLVE https://projectevolve.co.uk/toolkit/resources/years/year-one/online-relationships/ Additional Online Safety Activity Hector's World - Recognising what information would be classed as 'personal information' – Hector's World videos (Details, Details, Details) https://www.youtube.com/watch?v=snbQ3GTXogo	Information Technology Use technology purposefully to create, organise, store, manipulate and retrieve digital content. Our Story 2 App (FREE) – Create a digital book linked to current topic. 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/chatterpix-kids/id734046126 Online Safety Education for a Connected World 3. Online Reputation (2 Activities)  * Deliver during the week of Safer Internet Day in February PROJECT EVOLVE	Online Safety Education for a Connected World 6. Health, Wellbeing & Lifestyle (1 Activity) PROJECT EVOLVE https://projectevolve.co.uk/toolkit/resources/years/year-one/health-well-being-and-lifestyle/ 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.	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.com/watch?v=TMCThi3pFEQ Instrumental version: https://www.youtube.com/watch?v=DFI0xnIdHOC Use of Blue Bots etc. (Practical Programming). Children to program a physical device. Transition	 Use NCCE Teach Computing 'Technology Around Us' unit https://teachcomputing.org/curriculum/key-stage-1/computing-systems-and-networks-technology-around-us as a stimulus for exploring the different technology in our lives at school and at home. Online Safety Education for a Connected World 8. Copyright & Ownership (4 Activities) PROJECT EVOLVE https://projectevolve.co.uk/toolkit/resources/years/year-one/copyright-and-ownership/ Additional Online Safety Activity Show 'Lee and Kim' CEOP video: https://drive.google.com/file/d/1b4CZb6362ffvESwfuVgi_81Clip8gqHK9/view?usp=sharing 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
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			https://projectevolve.co.uk/toolkit/resources/years/year-one/online-reputation/ 5. Managing Online Information (3 Activities)  https://projectevolve.co.uk/toolkit/resources/years/year-one/managing-online-information/		from unplugged to plugged. <u>Computer Science – Coding & Computational Thinking</u> Busy Bundle – FREE Version App (Helicopter Rescue Activity) https://apps.apple.com/gb/app/busy-bundle/id660198295 Path Puzzler App (£0.99 / £0.49 VPP) https://apps.apple.com/gb/app/path-puzzler/id600530552 <i>Link to where algorithms are used in the 'real world' (e.g. sat-navs being an example of a 'route algorithm'. Get pupils to plot the steps using a whiteboard and discuss which routes are 'more precise' (e.g. 3 steps instead of 5) and again compare to the real-world (e.g. various ways of travelling to the Metrocentre, but you want the quickest way). Teach children 'how to debug', rather than simply saying 'have another go'. Can we take animal X 'first', is there 'another way' of taking animal y?</i> <u>Information Technology</u> Shadow Puppet Edu App (FREE) – Create a multimedia presentation inked to current topic. Children to learn how to add images and to record sound (and possibly text)	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/folders/1XpdFjA_8WkDs1SBx3UzVXwa-vrqmWc8-?usp=sharing
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					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-puppet-edu/id888504640 Online Safety Education for a Connected World 7. Privacy & Security (3 Activities)  https://projectevolve.co.uk/toolkit/resources/years/year-one/privacy-and-security/ Additional Online Safety Activity Smartie the Penguin - Explain why it is important to communicate safely and respectfully online. Read 'Adventures of Smartie the Penguin' https://www.childnet.com/resources/smartie-the-penguin and discuss the different scenarios that Smartie finds himself in. What decisions should he make?	
National Curriculum Objectives and Outcomes: Computer Science – Coding & Computational Thinking						

Year 2

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

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.

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.

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.

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.

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

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

purple mash 2.6: Creating Pictures (5 Lessons)



https://drive.google.com/file/d/19PiX_ijxr_uzBUxdA6HPX11I3BprVKZX/view?usp=sharing



KNOWLEDGE ORGANISERS

https://drive.google.com/file/d/19U09rqAoU4DCxFdVx8ltC9QNKnp11_GN/view?usp=sharing



Allocate **Unit 2.6 Quiz (Purple Mash)** to all pupils in order to assess knowledge of the unit and skills.



Information Technology

purple mash 2.7: Making Music (3 Lessons)



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KNOWLEDGE ORGANISERS

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Allocate **Unit 2.7 Quiz (Purple Mash)** to all pupils in order to assess knowledge of the unit and skills.

Information Technology

Skitch App (FREE) – Use Skitch app to annotate an image (linked to current



Computer Science – Coding & Computational Thinking

purple mash 2.1: Coding - Crash Course (6 Lessons)



<https://drive.google.com/file/d/18wZpvcktRf7UtWFBFzo1itmUuH6AdhZK/view?usp=sharing>



KNOWLEDGE ORGANISERS

<https://drive.google.com/file/d/190N9Q0waZA4OJQrl9k0p6vbQ8MKLAQVM/view?usp=sharing>



Allocate **Unit 2.1 Quiz (Purple Mash)** to all pupils in order to assess knowledge of the unit and skills.



Information Technology

purple mash 2.3: Spreadsheets (4 Lessons)



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KNOWLEDGE ORGANISERS

<https://drive.google.com/file/d/19EvqXag6TnnlMGulGbo0tFJfgb4k04Td/view?usp=sharing>



Allocate **Unit 2.3 Quiz (Purple Mash)** to all pupils in order to assess knowledge of the unit and skills.

Online Safety

Education for a Connected World



Computer Science – Theory



Use NCEE Teach Computing **'IT Around Us'** unit (lessons 1-4)

<https://teachcomputing.org/g/curriculum/key-stage-1/computing-systems-and-networks-it-around-us> as a stimulus for exploring how information technology is being used for good in our lives.

Unplugged Activity – iWristband. Discuss **'Wearable Technology'** as 'common use 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



Information Technology

purple mash 2.4: Questioning (5 Lessons)



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KNOWLEDGE ORGANISERS

<https://drive.google.com/file/d/19Hw9B-v5zctKo5IvL1rNJREfv8o8NI6X/view?usp=sharing>



Allocate **Unit 2.4 Quiz (Purple Mash)** to all pupils in order to assess knowledge of the unit and skills.

	Online Safety Education for a Connected World 1. Self-Image & Identity (2 Activities)  https://projectevolve.co.uk/toolkit/resources/years/year-one/self-image-and-identity/ Additional Online Safety Activity Digiduck's Big Decision - Read '<i>DigiDuck's Big Decision</i>' 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 '<i>Twinkl Avatar Creator</i>' (FREE). https://apps.apple.com/gb/app/twinkl-avatar-creator/id573456162 Explain to children that an avatar is a way of protecting your identity online. Explain that whilst this is useful for us to protect our identity, some people want to protect	topic) to show key features and include appropriate labels. Discuss choice of colours of arrows, text etc in relation to background colours of image. https://apps.apple.com/us/app/skitch-snap-mark-up-send/id490505997 Moldiv App (FREE) – 'Magazine Feature' (green Tab at bottom of screen)' Make persuasive advert/travel brochure to encourage someone to visit a location. Progression of skills from when Moldiv was used in Year 1. https://apps.apple.com/gb/app/moldiv-photo-editor-collage/id608188610 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 (£0.99 / £0.49 VPP) – Discuss 'recipes' as being a form of algorithms (<i>what ways do you 'debug' when cooking?</i>). Use Cupcake	Online Safety Education for a Connected World 3. Online Reputation (3 Activities)  * Deliver during the week of Safer Internet Day in February  https://projectevolve.co.uk/toolkit/resources/years/year-one/online-reputation/ 5. Managing Online Information (5 Activities)  https://projectevolve.co.uk/toolkit/resources/years/year-one/managing-online-information/ Additional Online Safety Activity Online Safety in Fairy Tales - link to texts (e.g. <i>Cinderella</i>, <i>Little Red Riding Hood</i>). Identify information that character should and should not share online if they were placing and advert for 'owner of shoe' etc.	6. Health, Wellbeing & Lifestyle (2 Activities)  https://projectevolve.co.uk/toolkit/resources/years/year-one/health-well-being-and-lifestyle/ Additional Online Safety Activity Secrets - What should you do with these secrets? Give children a list of secrets (<i>big secrets and little secrets</i>) and discuss whether appropriate to keep it a secret and what you should if concerned. 	features would your watch contain? Using cardboard strap and paper-folder concertina book pupils make a watch with icons to demonstrate the different features of their iWatch. Showcase your watches to the class at the end of the lesson and discuss feedback. Lesson slides: https://drive.google.com/drive/folders/17iBYccf0Pgh97looAS9-7KCxYXCP_2?usp=sharing Computer Science – Coding & Computational Thinking Children to use physical coding robots (e.g. <i>Bee-Bots</i>, <i>Blue-Bots</i> etc) to program a physical device to achieve a given goal. This could be linked to a current topic/book (e.g. <i>Little Red Riding Hood</i> visiting grandma's house). Progression in skills from when physical programming robots were used in Year 1. Unplugged Activity: 'Monster Hop' (could also be linked to <i>Dinosaurs</i>, <i>Aliens</i> etc). Make a physical track for pupils to follow an algorithm	Online Safety Education for a Connected World 8. Copyright & Ownership (2 Activities)  https://projectevolve.co.uk/toolkit/resources/years/year-one/copyright-and-ownership/ Additional Online Safety Activity Penguin Pig – Read the story of '<i>Penguin Pig</i>' by Stuart Spendlow. Discuss how people online are not always who they say they are.
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	their identity for different reasons (<i>link to Wolf dressing as grandma in Little Red Riding Hood</i>).	Doodle app to simulate the process of following an algorithm when cooking. https://apps.apple.com/us/app/cupcake-doodle/id681277169 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 4. Online Bullying (3 Activities)  * Deliver during Anti-Bullying Week in November PROJECT EVOLVE https://projectevolve.co.uk/toolkit/resources/years/year-one/online-bullying/ 2. Online Relationships (7 Activities) PROJECT EVOLVE		(different footprints in different directions). These can either be made of paper/card or could be drawn onto the playground in chalk etc. Link to example video: https://drive.google.com/drive/folders/17soBjUAiq17uBrLWpdIEo9EoTB12_kTR?usp=sharing Computer Science – Coding & Computational Thinking Create a ‘Getting Up’ (<i>what do you do from getting out of bed until you leave the house to come to school?</i>) 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’ (<i>Purple Mash</i>) to create your flowchart. Online Safety Education for a Connected World 7. Privacy & Security (4 Activities) PROJECT EVOLVE	
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		https://projectevolve.co.uk/toolkit/resources/years/year-one/online-relationships/ <u>Additional Online Safety Activity</u> 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. <i>Treat your password like a toothbrush!</i> Make a password using 'characters' (<i>Disney, Frozen etc</i>). How many combinations with 3 characters, 4 characters etc? Link to Numeracy – probability etc. Click here to download <i>colours and animals</i> for this activity: https://drive.google.com/drive/folders/1zAuudGegbKo6BCIYlaAWIPM_GOrjME0P?usp=sharing Online Life is Real Life - Know how to stay safe at places such as supermarkets. How can we link these rules to rules for staying safe online? What makes a			https://projectevolve.co.uk/toolkit/resources/years/year-one/privacy-and-security/ <u>Additional Online Safety Activity</u> Detective Digiduck – Read the story '<i>Detective Digiduck</i>' 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, untrue, or someone's opinion.	
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		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.				
Year 3	National Curriculum Objectives and Outcomes: <u>Computer Science – Coding & Computational Thinking</u> Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts. <i>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.</i> Use sequence, selection and repetition in programs; work with variables and various forms of input and output. <i>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.</i> Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs. <i>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.</i> <u>Computer Science - Theory</u> 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. <i>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.</i> <u>Information Technology</u>					

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.

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.

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.



Information Technology

purple mash 3.3: Spreadsheets
(3 Lessons)



<https://drive.google.com/file/d/1ACqfWV0rYfTtY0d8RvUqz4SeQ9jIPszw/view?usp=sharing>



KNOWLEDGE ORGANISERS



Computer Science – Theory

Teach Computing Use NCCE Teach Computing 'Connecting Computers' unit (lessons 1-6)

<https://teachcomputing.org/g/curriculum/key-stage-2/computing-systems-and-networks-connecting-computers>

Challenge your learners to develop their understanding of digital devices, with an initial focus on inputs, processes,



Information Technology

purple mash 3.5: Email
(6 Lessons)



https://drive.google.com/file/d/1AeR8Om1lq_vXKqr-M2lqfHs-sfNQg7WA/view?usp=sharing



KNOWLEDGE ORGANISERS



Information Technology

purple mash 3.6: Branching Databases
(4 Lessons)



<https://drive.google.com/file/d/1AvtSfvmvGKuc3cAjcCNXGpPWzwq52h6t/view?usp=sharing>



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Computer Science – Coding & Computational Thinking

purple mash 3.1: Coding
(6 Lessons)



<https://drive.google.com/file/d/19z6PQi8aiS7kiDa7VdQsBmLQ8Ep32pku/view?usp=sharing>



KNOWLEDGE ORGANISERS



Information Technology

purple mash 3.9: Presenting – PowerPoint
(4 Lessons)



<https://drive.google.com/file/d/1O0nBXU1r6SJ97dDUGMUSIOeeNg-FRYOX/view?usp=sharing>



KNOWLEDGE ORGANISERS

https://drive.google.com/file/d/1AGHo8i2rdHpCNQCB6w5JiF1KOA/N5MoWm/view?usp=sharing  Allocate Unit 3.3 Quiz (Purple Mash) to all pupils in order to assess knowledge of the unit and skills.  3.8: Graphing (2 Lessons)  https://drive.google.com/file/d/1B73JpBYhvr3lIQOQ2L4AnjBEPfXZQuAJO/view?usp=sharing  KNOWLEDGE ORGANISERS https://drive.google.com/file/d/1B8zvXexdn6_XLxS789t2b429WNa2qzRm/view?usp=sharing  Allocate Unit 3.8 Quiz (Purple Mash) to all pupils in order to assess	and outputs. Start by comparing digital and non-digital devices, before introducing them to computer networks that include network infrastructure devices like routers and switches. Computer Science – Coding & Computational Thinking RodoCodo: Hour of Code app. Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs. 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.	https://drive.google.com/file/d/1AfwBF_HcYhfGJbdqxOxP2J22WtxPiObR/view?usp=sharing  Allocate Unit 3.5 Quiz (Purple Mash) to all pupils in order to assess knowledge of the unit and skills. Computer Science – Coding & Computational Thinking Scratch Jr app: https://apps.apple.com/us/app/scratchjr/id895485086 Use 'Scratch Jr Coding Cards' (green cards) to first introduce pupils to the Scratch programming language. https://www.amazon.co.uk/Scratch-Jr-Coding-Cards-Activities/dp/1593278993 Create and debug simple programs. 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	https://drive.google.com/file/d/1AyrofESEIHKhMVW4a1D1AeCVv5Dg0Ekj/view?usp=sharing  Allocate Unit 3.6 Quiz (Purple Mash) to all pupils in order to assess knowledge of the unit and skills. Information Technology Green Screen by Do:Ink app to make a TV programme linked to current topic. https://apps.apple.com/gb/app/green-screen-by-do-ink/id730091131 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. Children are able to make improvements to digital solutions based on feedback. Children make informed software choices	https://drive.google.com/file/d/1A02AJMecHRJmCRVlu4zzh3taKnEWG3ob/view?usp=sharing  Allocate Unit 3.1 Quiz (Purple Mash) to all pupils in order to assess knowledge of the unit and skills. Online Safety Education for a Connected World 7. Privacy & Security (4 Activities)  https://projectevolve.co.uk/toolkit/resources/years/year-three/privacy-and-security/ Additional Online Safety Activity Hidden Extras - Look at range of website offering holidays to a worldwide destination. How do you know that a website is genuine? Discuss 'hidden extras' (suitcase allowance	https://drive.google.com/file/d/1BPO4Ik7Pd7VksqgFrkR8yGmESrAYCCly/view?usp=sharing  Allocate Unit 3.9 Quiz (Purple Mash) to all pupils in order to assess knowledge of the unit and skills. 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/folders/1Jls0t6vIOG5URo2vTUJE783uLlkrk_DB?usp=sharing Videos of Phil Bagge as 'Sandwich Bot': https://www.youtube.com/watch?v=VFUs3GvMSVc https://www.youtube.com/watch?v=leBEFaVHlIE Online Safety Education for a Connected World
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	knowledge of the unit and skills. Online Safety Education for a Connected World 1. Self-Image & Identity (2 Activities)  https://projectevolve.co.uk/toolkit/resources/years/year-three/self-image-and-identity/ 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=WpngtGyc_ec&t=193s	https://apps.apple.com/gb/app/rodododo-code-hour/id1597648605 *** Rugged Robot*** Information Technology  3.4: Touch Typing (4 Lessons)  https://drive.google.com/file/d/1AJWFcUJG55q_xjS3zk6q7puy0JEt6bF8/view?usp=sharing *also BBC Dance Mat Typing https://www.bbc.co.uk/bitesize/topics/zf2f9i6/articles/z3c6tfr  KNOWLEDGE ORGANISERS https://drive.google.com/file/d/1AcFEGtyg1rmnHtb8ZFHYmIP7GxQRjK/view?usp=sharing  Allocate Unit 3.4 Quiz (Purple Mash) to all pupils in order to assess knowledge of the unit and skills.	logical, programmable steps. Online Safety Education for a Connected World 3. Online Reputation (3 Activities)  * Deliver during the week of Safer  Internet Day in February https://projectevolve.co.uk/toolkit/resources/years/year-three/online-reputation/ 5. Managing Online Information (5 Activities)  https://projectevolve.co.uk/toolkit/resources/years/year-three/managing-online-information/ Additional Online Safety Activity Tek the Modern Cave Boy - Read the story of 'Tek – The Modern Cave Boy' by Patrick McDonnell.	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. Talkr App (FREE) – Bring to life a character from a book, history topic etc. Progression of skills from KS1 when ChatterPix Kids app was used for animation. https://talkrapp.com/ Online Safety Education for a Connected World 6. Health, Wellbeing & Lifestyle (2 Activities)  https://projectevolve.co.uk/toolkit/resources/years/year-three/health-well-being-and-lifestyle/ Additional Online Safety Activity Play, Like Share- Show 'Play Like Share' CEOP Video – Episode 2.	etc) with different travel companies and the 'true cost' of a holiday?	8. Copyright & Ownership (2 Activities)  https://projectevolve.co.uk/toolkit/resources/years/year-three/copyright-and-ownership/
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Online Safety
**Education for a
 Connected World**

4. Online Bullying

(3 Activities)



* Deliver during Anti-
 Bullying Week in
 November



<https://projectevolve.co.uk/toolkit/resources/years/year-three/online-bullying/>

2. Online Relationships

(7 Activities)



<https://projectevolve.co.uk/toolkit/resources/years/year-three/online-relationships/>

**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-NOS-Story-Oscar-and-the-3-Elves.pdf>

https://www.amazon.co.uk/Tek-Modern-Cave-Patrick-McDonnell/dp/0316338052/ref=sr_1_1?keywords=tek+the+modern+cave+boy&qid=1656583610&s_prefix=Tek+the+m%2Caps%2C165&sr=8-1

**Book Read Aloud
 (YouTube):**

<https://www.youtube.com/watch?v=KoctbSakfD0>

Discuss the notion of
 'screen time'. Use '**2Count**
 (Purple Mash) to make
 graphs of most popular
 apps, average screen time
 etc.

<https://www.youtube.com/watch?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.

Facebook Template:

https://docs.google.com/document/d/1ZAKNkc4hPjIHdYRvu1ywlls_zP_bJXUf/edit?usp=sharing&ouid=115688390933151199123&rtpof=true&sd=true

Year 4	National Curriculum Objectives and Outcomes: <u>Computer Science – Coding & Computational Thinking</u> Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts. <i>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.</i> Use sequence, selection and repetition in programs; work with variables and various forms of input and output. <i>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.</i> Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs. <i>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.</i> <u>Computer Science - Theory</u> 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. <i>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.</i> <u>Information Technology</u> 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. <i>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.</i> <u>Online Safety</u> Use technology safely, respectfully and responsibly; recognise acceptable/ unacceptable behaviour; identify a range of ways to report concern about content and contact. <i>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.</i> Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content.
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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

4.4: Writing for Different Audiences

(5 Lessons)



<https://drive.google.com/file/d/1Bx8yKtoGCLr41akZMRMDu0hnTkB8w4J/view?usp=sharing>



KNOWLEDGE ORGANISERS

<https://drive.google.com/file/d/1Bxv6mKCRAGivxagADKKIHwz2llmqFsEy/view?usp=sharing>



Allocate **Unit 4.4 Quiz (Purple Mash)** to all pupils in order to assess knowledge of the unit and skills.



Computer Science – Coding & Computational Thinking

4.5: Logo
(4 Lessons)



<https://drive.google.com/file/d/1BzmqqPuVWQgmDr7AvaAO9XerXWf4mrsC/view?usp=sharing>



KNOWLEDGE ORGANISERS

https://drive.google.com/file/d/1C101TPpbTfd5om6MBQtn9_EZXNDY00HS/view?usp=sharing



Allocate **Unit 4.5 Quiz (Purple Mash)** to all pupils in order to assess knowledge of the unit and skills.



Computer Science – Coding & Computational Thinking

4.1: Coding
(6 Lessons)



https://drive.google.com/file/d/1BTRFdSXMstFdnN_ugKk2Z_5NFeetcQRJ/view?usp=sharing



KNOWLEDGE ORGANISERS

https://drive.google.com/file/d/1BULQL6DfBa_9Wapafwqsl-cRZMVu7shu/view?usp=sharing



Allocate **Unit 4.1 Quiz (Purple Mash)** to all pupils in order to assess knowledge of the unit and skills.



Information Technology

4.6: Animation
(3 Lessons)



<https://drive.google.com/file/d/1C3YA5oRvhJf-VCKGqC6aiYgEyatQVqSL/view?usp=sharing>



KNOWLEDGE ORGANISERS

<https://drive.google.com/file/d/1CCb8III4wyCZEvrsShPGZKJwXS-RaROU/view?usp=sharing>



Allocate **Unit 4.6 Quiz (Purple Mash)** to all pupils in order to assess knowledge of the unit and skills.



Information Technology

4.9: Making Music

(4 Lessons)



<https://drive.google.com/file/d/1CT5SRW1O4OvSG0mK5iyMzxsiObrxFOiD/view?usp=sharing>



KNOWLEDGE ORGANISERS

<https://drive.google.com/file/d/1CUmW5amuohDzl8CN7Pu55Dve0pG9Nmz7/view?usp=sharing>



Allocate **Unit 4.9 Quiz (Purple Mash)** to all pupils in order to assess knowledge of the unit and skills.



Computer Science – Theory

Use NCCE Teach Computing
Computing **'The Internet'** unit (lessons 1-4)

<https://teachcomputing.org/g/curriculum/key-stage-2/computing-systems-and-networks-the-internet>

Pupils will apply their knowledge and understanding of networks, to appreciate the internet as a network of networks which need to be kept secure. They will learn that the World Wide Web is part of the internet, and be given opportunities to explore the World Wide Web for themselves to learn about who owns content and what they can access, add, and create.

4.7 Effective Searching

Computer Science – Coding & Computational Thinking A.L.E.X. app. Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs. 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. They can trace code and use step through methods to identify errors in code and make logical attempts to correct this. 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/Learning-Resources-Lets-Code-Activity/dp/B01N7MMCMO	Computer Science – Coding & Computational 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/file/d/1CD5_EA2NV-nMLWtErMW-MERdZL2OURXU/view?usp=sharing Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts. 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. Children make more intuitive attempts to debug their own programs. Online Safety Education for a Connected World 7. Privacy & Security	Online Safety Education for a Connected World 4. Online Bullying (3 Activities)  * Deliver during Anti-Bullying Week in November PROJECT EVOLVE https://projectevolve.co.uk/toolkit/resources/years/4/online-bullying/ 2. Online Relationships PROJECT EVOLVE (7 Activities) https://projectevolve.co.uk/toolkit/resources/years/4/online-relationships/ Additional Online Safety Activity Jigsaw - Watch the CEOP video ‘Jigsaw’ https://drive.google.com/file/d/1NvfkEvLPpJyqSwdkKxNw3z9VoqSE2LnP/view?usp=sharing Discuss how Becky reports her concerns (clicks on the ‘Report Abuse’ button). Look at a wide range of common websites and	Information Technology Clips app to demonstrate knowledge and understanding of current topic by making a presentation. Share with wider audience via school Twitter account. 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. 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 Education for a Connected World	Online Safety Education for a Connected World 6. Health, Wellbeing & Lifestyle (2 Activities) PROJECT EVOLVE https://projectevolve.co.uk/toolkit/resources/years/4/health-well-being-and-lifestyle/ 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.	Computer Science – Coding & Computational 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/folders/1YTS5LX1Ydz6qdRNI2ecC9NhCisUm0qXp?usp=sharing Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts. 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. Children make more intuitive attempts to debug their own programs. Online Safety Education for a Connected World 7. Privacy & Security	(3 Lessons)  https://drive.google.com/file/d/1CD5_EA2NV-nMLWtErMW-MERdZL2OURXU/view?usp=sharing  KNOWLEDGE ORGANISERS https://drive.google.com/file/d/1CLReuQNUbUvT8QAgkm46-ALYYj_GLGU1/view?usp=sharing  Allocate Unit 4.7 Quiz (Purple Mash) to all pupils in order to assess knowledge of the unit and skills.  4.8: Hardware Investigators (2 Lessons)  https://drive.google.com/file/d/1CMMbDwIx8yMmWttd2-ZGWExK_2OI05Q/view?usp=sharing
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	Online Safety Education for a Connected World 1. Self-Image & Identity (2 Activities)  https://projectevolve.co.uk/toolkit/resources/years/4/self-image-and-identity/ Additional Online Safety Activity Read the story <i>'When Charlie McButton Loses Power'</i> by Suzanne Collins. Discuss the notion of 'screen time' and create a video using <i>'Clips'</i> 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).	apps and look at ways you can report abuse. Make a display for classroom or communal area around school.	3. Online Reputation (3 Activities)  * Deliver during the week of Safer  Internet Day in February https://projectevolve.co.uk/toolkit/resources/years/4/online-reputation/ 5. Managing Online Information (5 Activities)  https://projectevolve.co.uk/toolkit/resources/years/4/managing-online-information/ Additional Online Safety Activity Penguin Pig - Read the story <i>'Penguin Pig'</i> by Stuart Spendlow. https://drive.google.com/file/d/1NvfkEvLPpJyq5WdkKxNw3z9VoqSE2LnP/view?usp=sharing Explain how people online are strangers and that they are not always who they say they are. Relate to games and apps that pupils are accessing (e.g. Fortnite, Roblox etc). Discuss how many of these games and apps allow the		(4 Activities)  https://projectevolve.co.uk/toolkit/resources/years/4/privacy-and-security/ Additional Online Safety Activity Troll Stinks - Read the story <i>'Troll Stinks'</i> by Jeanne Willis. https://www.amazon.co.uk/Troll-Stinks-Online-Safety-Picture/dp/1783445696/ref=sr_1_2?crid=2VDCV7KSH0SKX&keywords=troll+stinks&qid=1656584509&srefix=troll+stinks+%2Caps%2C77&sr=8-2 Discuss the impact that our online words have on people (<i>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</i>). 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. Troll Stinks Read Aloud Video (YouTube):	 KNOWLEDGE ORGANISERS https://drive.google.com/file/d/1CNCZ5So9SriM-2Z0HKiYsnMuDlp4r4z0/view?usp=sharing  Allocate Unit 4.8 Quiz (Purple Mash) to all pupils in order to assess knowledge of the unit and skills. Online Safety Education for a Connected World 8. Copyright & Ownership (2 Activities)  https://projectevolve.co.uk/toolkit/resources/years/4/copyright-and-ownership/ Additional Online Safety Activity Use search engine (e.g. <i>'Google'</i>). Pupils to use 'image' tab to search for pictures. Introduce the
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			ability to 'communicate' and that this is the reason why any game that has 'open chat' functionality is given a 13+ rating. Look at the settings functions on various popular apps/games and create a display for class/communal area to help support other pupils to stay safe online. Penguig Pig Read Aloud Video (YouTube): https://www.youtube.com/watch?v=R7pgTXbhizA	https://www.youtube.com/watch?v=nIG9RPQEEz4	more advance skills 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. Guide to 'effective' Internet searching: https://www.techrepublic.com/article/10-tips-for-smarter-more-efficient-internet-searching/
Year 5	National Curriculum Objectives and Outcomes: <u>Computer Science – Coding & Computational Thinking</u> Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts. <i>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.</i> Use sequence, selection and repetition in programs; work with variables and various forms of input and output. <i>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.</i> Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs. <i>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.</i> <u>Computer Science - Theory</u> 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. <i>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.</i>				

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.

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.

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.



Information Technology

 **5.4: Databases**
(4 Lessons)



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Information Technology

 **5.5 Game Creator**
(5 Lessons)



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Computer Science – Coding & Computational Thinking

 **5.1: Coding**
(6 Lessons)



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Information Technology

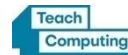
 **5.8: Word Processing – Word**
(8 Lessons: Lessons 1-4)



<https://drive.google.com/file/d/1DodLDaiw8claijSMAM25dQmwgXoLZLjL/view?usp=sharing>



Computer Science – Theory

 Use NCCE Teach Computing **'Sharing Information'** unit (lessons 1-3)

<https://teachcomputing.org/g/curriculum/key-stage-2/computing-systems-and-networks-sharing-information> In this unit, learners will develop their understanding of



Information Technology

 **5.6: 3D Modelling**
(4 Lessons)



https://drive.google.com/file/d/1D_5NbFPDvSmP5TP_sxuq3T0Tm7mi4is/view?usp=sharing

KNOWLEDGE ORGANISERS https://drive.google.com/file/d/1CyXyhkseXemxe_N_pY7BKNij4OA/pm08o/view?usp=sharing Allocate Unit 5.4 Quiz (Purple Mash) to all pupils in order to assess knowledge of the unit and skills. Computer Science – Coding & Computational Thinking Lightbot Code Hour app: Use sequence, selection and repetition in programs; work with variables and various forms of input and output. 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	KNOWLEDGE ORGANISERS https://drive.google.com/file/d/1DPixikxMpdgdwZVGSzasKCGLzQFW4V8/view?usp=sharing Allocate Unit 5.5 Quiz (Purple Mash) to all pupils in order to assess knowledge of the unit and skills. Computer Science – Coding & Computational Thinking Unplugged Activity: Flanimals / Crazy Characters. Use the book <i>‘Flanimals’</i> by Ricky Gervais. Each pupil to be given image of a <i>‘Flanimal’</i>. Sit back-to-back with partner and describe using ‘precise’ language how to draw your Flanimal. Pupils then create their own <i>‘Flanimal’</i> and create a precise step-by-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.com	KNOWLEDGE ORGANISERS https://drive.google.com/file/d/1Ca7RNKNNZosRTQh572tm0Ki8V2hwy5Jp/view?usp=sharing Allocate Unit 5.1 Quiz (Purple Mash) to all pupils in order to assess knowledge of the unit and skills. Online Safety Education for a Connected World 3. Online Reputation (2 Activities) * Deliver during the week of Safer Internet Day Internet Day in February https://projectevolve.co.uk/toolkit/resources/years/5/online-reputation/ 5. Managing Online Information	KNOWLEDGE ORGANISERS https://drive.google.com/file/d/1DvoPm0uB1SochRG1YNXduMlNA/mabPpKN/view?usp=sharing Computer Science – Coding & Computational Thinking Scratch – ‘Scratch Coding Cards’ (‘Pong Game’). https://www.amazon.co.uk/Scratch-Coding-Cards-Natalie-Rusk/dp/1593279760/ref=asc_df_1593279760/?tag=googshopuk-21&linkCode=df0&hvadid=240910969091&hvpos=&hvnw=g&hvpone=&hvpw=&hvpmt=&hvdv=c&hvdvcmdl=&hvllocint=&hvllocphy=1006736&hvtargid=pla-650434061007&psc=1&th=1&psc=1 Online Safety Education for a Connected World 6. Health, Wellbeing & Lifestyle (2 Activities) https://projectevolve.co.uk/toolkit/resources/years/5/health-well-being-and-lifestyle/	computer systems and how information is transferred between systems and devices. Learners will consider small-scale systems as well as large-scale systems. They will explain the input, output, and process aspects of a variety of different real-world systems. Information Technology 5.8: Word Processing – Word/Pages (8 Lessons: Lessons 5-8) https://drive.google.com/file/d/1DodLDaiw8clajiSMAM25dQmwgXoLZLiL/view?usp=sharing KNOWLEDGE ORGANISERS https://drive.google.com/file/d/1DvoPm0uB1SochRG1YNXduMlNA/mabPpKN/view?usp=sharing	KNOWLEDGE ORGANISERS https://drive.google.com/file/d/1Dam_bHmSvTBktT78gFeB99iTm6um-I5_/view?usp=sharing Allocate Unit 5.6 Quiz (Purple Mash) to all pupils in order to assess knowledge of the unit and skills. Computer Science – Coding & Computational 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 Egyptian slave would build a pyramid. Online Safety Education for a Connected World 8. Copyright & Ownership
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	structures to achieve their algorithm design. https://apps.apple.com/us/app/lightbot-code-hour/id873943739 Online Safety Education for a Connected World 1. Self-Image & Identity (3 Activities)  https://projectevolve.co.uk/toolkit/resources/years/5/self-image-and-identity/	org/resources/crazy-character-algorithms Flanimals Book: https://www.amazon.co.uk/Flanimals-Ricky-Gervais/dp/0571220770/ref=tm_m_hrd_swatch_0?encoding=UTF8&qid=&sr= Online Safety Education for a Connected World 4. Online Bullying (3 Activities)  * Deliver during Anti-Bullying Week in November  https://projectevolve.co.uk/toolkit/resources/years/5/online-bullying/ 2. Online Relationships (3 Activities)  https://projectevolve.co.uk/toolkit/resources/years/5/online-relationships/	(6 Activities)  https://projectevolve.co.uk/toolkit/resources/years/5/managing-online-information/		Allocate Unit 5.8 Quiz (Purple Mash) to all pupils in order to assess knowledge of the unit and skills. Online Safety Education for a Connected World 7. Privacy & Security (4 Activities)  https://projectevolve.co.uk/toolkit/resources/years/5/privacy-and-security/ Additional Online Safety Activity 'Tree Octopus' website www.zapatopi.net/treeoctopus Children carry out series of comprehension type questions based on website content (do not tell them that website is fake at this stage!!!) End lesson 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	(2 Activities)  https://projectevolve.co.uk/toolkit/resources/years/5/copyright-and-ownership/
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					what we read and see online! Tree Octopus Comprehension: https://drive.google.com/file/d/1nhilyZloentUTJlhk6IHWoABR1xeDxpl/view?usp=sharing	
Year 6	National Curriculum Objectives and Outcomes: <u>Computer Science – Coding & Computational Thinking</u> Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts. <i>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.</i> Use sequence, selection and repetition in programs; work with variables and various forms of input and output. <i>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.</i> Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs. <i>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.</i> <u>Computer Science - Theory</u> 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. <i>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.</i> <u>Information Technology</u> 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. <i>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.</i>					

Online Safety

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

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.

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

purple mash 6.9: Spreadsheets
– Excel

(8 Lessons: Lessons 1-4)



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<https://drive.google.com/file/d/1FRtKKVo0eg3hn0uFqqrzboq2CI4jVF7F/view?usp=sharing>

**Computer Science –
Coding & Computational
Thinking**



Information Technology

purple mash 6.9: Spreadsheets
– Excel

(8 Lessons: Lessons 5-8)



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<https://drive.google.com/file/d/1FRtKKVo0eg3hn0uFqqrzboq2CI4jVF7F/view?usp=sharing>



Computer Science – Coding & Computational Thinking

purple mash 6.1: Coding
(6 Lessons)



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<https://drive.google.com/file/d/1EH6n4Gu0wV9JMyS5za0r-rJAUz1r-Xx/view?usp=sharing>



Computer Science – Theory

Teach Computing Use NCCE
Teach

Computing
'Communication' unit
(lessons 1-6)

<https://teachcomputing.org/curriculum/key-stage-2/computing-systems-and-networks-communication>

In this unit, the class will learn about the World Wide Web as a communication tool. First, they will learn how we find information on the World Wide Web, through learning how search engines work (including how they select and rank



Information Technology

purple mash 6.4 Blogging
(4 Lessons)



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<https://drive.google.com/file/d/1EgfU6-2id-Ofp0CYzZyV9F0uNlejU8oo/view?usp=sharing>



Computer Science – Theory

purple mash 6.6 Networks
(3 Lessons)



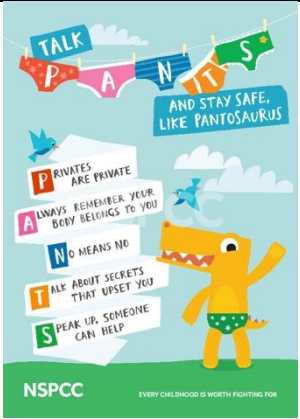
https://drive.google.com/file/d/1EmrJUWD7O_1bcdGY08WaOIEGwHWPk0a/view?usp=sharing



<https://drive.google.com/file/d/1F0Q7R8N29Fxxah0p44lmtxmlUb-32YoB/view?usp=sharing>

Scratch website: https://scratch.mit.edu/ Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts. <i>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.</i> Online Safety Education for a Connected World 1. Self-Image & Identity (3 Activities) PROJECT EVOLVE	 Allocate Unit 6.9 Quiz (Purple Mash) to all pupils in order to assess knowledge of the unit and skills. Computer Science – Coding & Computational Thinking Spritebox Code Hour app: Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs. <i>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.</i> https://apps.apple.com/us/app/spritebox-code-hour/id1161515477 Online Safety Education for a Connected World	 Allocate Unit 6.1 Quiz (Purple Mash) to all pupils in order to assess knowledge of the unit and skills. Information Technology Garageband app - Make musical composition linked to current topic. 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. <i>Children make clear connections to the audience when designing and creating digital content. They are able to use criteria to evaluate the quality of digital solutions and are able to identify improvements, making some refinements.</i>	results) and what influences searching, and through comparing different search engines. They will then investigate different methods of communication, before focusing on internet-based communication. Finally, they will evaluate which methods of internet communication to use for particular purposes.  6.8 Binary (4 Lessons)  https://drive.google.com/file/d/1FLXQS2Rw_573vOY6aEkIE90WlU0tg5vF/view?usp=sharing  KNOWLEDGE ORGANISERS https://drive.google.com/file/d/1FPowSlcDe_nDtXirFzOSK_jTtpjVA6d/view?usp=sharing  Allocate Unit 6.8 Quiz (Purple Mash) to all	 Allocate Unit 6.4 Quiz (Purple Mash) to all pupils in order to assess knowledge of the unit and skills. Computer Science – Coding & Computational Thinking Underground Algorithms. Children to create a 'route algorithm from one Tube station to another. Check using Journey Planner website to see if route is the most precise. Online Safety Education for a Connected World 7. Privacy & Security (6 Activities) PROJECT EVOLVE https://projectevolve.co.uk/toolkit/resources/years/6/privacy-and-security/	 Allocate Unit 6.6 Quiz (Purple Mash) to all pupils in order to assess knowledge of the unit and skills. Information Technology iMovie app – Make movie trailer linked to current topic. 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. <i>Children make clear connections to the audience when designing and creating digital content. They are able to use criteria to evaluate the quality of digital solutions and are able to identify improvements, making some refinements.</i>
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	https://projectevolve.co.uk/toolkit/resources/years/6/self-image-and-identity/ Additional Online Safety Activity <i>'I've seen Alex's Willy'</i> video from NSPCC https://www.facebook.com/nspsc/videos/i-saw-your-willy/10157849113309852/ Message of 'Be Share Aware'. Follow into 'Grandma Rule'. Follow this up by 'Talking PANTS' with the pupils: "The Grandma Rule" 	4. Online Bullying (2 Activities)  * Deliver during Anti-Bullying Week in November PROJECT EVOLVE https://projectevolve.co.uk/toolkit/resources/years/6/online-bullying/ 2. Online Relationships (4 Activities) PROJECT EVOLVE https://projectevolve.co.uk/toolkit/resources/years/6/online-relationships/ Additional Online Safety Activity Read the story 'The Technology Tail' by Julia Cook. Compare this to own online lives. 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 WhatsApp groups and other popular ways of communicating as a group outside of school. Is the	Online Safety Education for a Connected World 3. Online Reputation (2 Activities)  * Deliver during the week of Safer Internet Day in February PROJECT EVOLVE https://projectevolve.co.uk/toolkit/resources/years/6/online-reputation/ 5. Managing Online Information (11 Activities) PROJECT EVOLVE https://projectevolve.co.uk/toolkit/resources/years/6/managing-online-information/ 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? (companies pay to have their results ranked higher)	pupils in order to assess knowledge of the unit and skills. Online Safety Education for a Connected World 6. Health, Wellbeing & Lifestyle (4 Activities) PROJECT EVOLVE https://projectevolve.co.uk/toolkit/resources/years/6/health-well-being-and-lifestyle/ Additional Online Safety Activity <i>Play, Like, Share' (CEOP Video) – Episode 3.</i> https://www.youtube.com/watch?v=tQZGA6dsWpo Create a 'Kahoot' quiz to test pupils' knowledge and understanding of the key messages from the video.		Online Safety Education for a Connected World 8. Copyright & Ownership (2 Activities) PROJECT EVOLVE https://projectevolve.co.uk/toolkit/resources/years/6/copyright-and-ownership/
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	 The poster features a yellow cartoon dinosaur wearing green patterned shorts. Above it, a banner reads 'TALK PANTS AND STAY SAFE, LIKE PANTOSAURUS'. To the left, five speech bubbles contain the acronym: 'P' RIVATES ARE PRIVATE, 'A' LWAYS REMEMBER YOUR BODY BELONGS TO YOU, 'N' O MEANS NO, 'T'ALK ABOUT SECRETS THAT UPSET YOU, and 'S' PEAK UP, SOMEONE CAN HELP. The NSPCC logo and the tagline 'EVERY CHILDHOOD IS WORTH FIGHTING FOR' are at the bottom.	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 popular games such as Fortnite where conversation is possible. Share these on class display, within communal areas within school etc.				
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