COMPUTING   Year 1/2 cycle A   Year 1/2 cycle B   Year 3/4 cycle A   Year 3/4 cycle B   Year 5/6 cycle A   Year 5/6 cycle B

Computer Science	Information Technology	Digital Literacy	Computer Safety (PSHE link)
Know that an algorithm is a set of instructions. Do now – What is an algorithm?	**Know how to sort sound, pictures and text.** Do now – Explain how we sort sound, pictures and text.	**Know what technology is.** Do now – Circle the technology in the pictures.	**Identify the positives and negatives of using technology.** Do now – Name one positive and one negative of technology.
Know that an algorithm written for a computer is called a program. Do now – Write the word for algorithms written by a computer.	**Know how to add sound, pictures and text to a program.** Do now – Write an instruction for adding sound, pictures and text.	**Give examples of technology in school.** Do now – Write an example of technology in school.	**Know who and how to ask for help.** Do now – Write down somebody to ask for help.
Work out what is wrong when the steps are out of order in instructions. Do now – Spot the mistake in the set of instructions.	**Know how to name work.** Do now – What does naming a piece of work mean?	**Give examples of technology at home.** Do now – Write an example of technology at home.	**Name the positive and negative ways you can use technology.** Do now – Give 2 positives and 2 negative ways to use technology.
Fix a code if it isn't working properly. Do now – How are we going to fix the problem in these instructions?	**Know how to save work.** Do now – Which icon means save?	**Know that a chair uses old technology and a smart phone uses new technology.** Do now – Matching activity. Old and new technology.	**Know the risks of sharing images without permission.** Do now – Name one risk of sharing images without permission.
Make good guesses of what is going to happen in a program. Do now – Multiple choice options.	**Know how to find work.** Do now – Which folder is our work saved in?	**Know how to keep login information safe.** Do now – Why do we keep login information safe?	**Understand the types of images that you should and should not post online.** Do now – Name one image you can post online. Name one image you should not post online.

Carefully plan an algorithm so it will work when I make it into code. Do now – Why should we plan algorithms?	**Organise data – for example, using a database.** Do now – Organise the given data (colours etc).	**Know the consequences of not searching online safely.** Do now – Name one consequence of not searching online safely.	**Identify possible dangers and consequences of talking to strangers online.** Do now –Write one danger/consequence of talking to strangers online.
Design a simple program using 2Code that achieves a purpose. Do now – How do you design a program?	**Find data using specific searches.** Do now – What is a specific search?	**Share work and communicate electronically – for example using 2Email.** Do now – Name one way we can communicate electronically.	**Know how to keep safe in online chatrooms.** Do now – Give one way we can keep safe in a chatroom.
Find and correct some errors in a program. Do now – correct the given program.	**Use several programs to present information.** Do now – Name a program we can use to present information.	**Report unkind behaviour and things that upset me online, to a trusted adult.** Do now – Why should we report unkind behaviour online?	**Understand the difference between safe and risky choices online.** Do now – Write what safe and risky means.
Notice something in a program that has an action or effect (does something). Do now – Give an example of an action or effect.	**Collect data and input it into software.** Do now – How can we collect data?	**See where technology is used at school such as in the office or canteen.** Do now – Name technology used in the school office.	**Recognise the key values that are important in positive online relationships.** Do now – What is a positive online relationship?
Make a real-life situation into an algorithm for a program. Do now – Create an algorithm based on a playground game.	**Analyse data using features within software to help such as, formula in 2Calculate.** Do now – What does it mean to analyse?	**Understand that creations such as programs in 2Code, need similar skills to the adult world.** Do now – Name one way we use coding.	**Identify the feelings and emotions that may arise from online bullying.** Do now – How might online bullying make you feel?

Design an algorithm carefully, thinking about what I want it to do and how I can turn it into code. Do now – Why do we need to be careful when designing an algorithm?	**Consider what the most appropriate software to use when given a task.** Do now – I want to organise data, what software shall I use?	**Create a secure password.** Do now – Name 3 things a password should have/be.	**Identify how and who to ask for help.** Do now – Name 3 people you could ask for help. Write how you could ask for help.
Experiment with timers in my programs. Do now – what is a timer?	**Create purposeful (appropriate) content and attach this to emails.** Do now – How can I attach to an email?	**Explain the importance of having a secure password and not sharing it with others.** Do now –Give one reason passwords need to be secure and not shared.	**List reasons for sharing images online.** Do now – write 3 reasons for sharing images online.
Experiment with the effect of using repeat commands. Do now –what does repeat mean?	**Understand the purpose of a search engine and the main features within it.** Do now – Name one feature of a search engine.	**Explain the negative consequences of not keeping passwords safe and secure.** Do now – Give one consequence to not keeping passwords safe and secure.	**Identify rules to follow when sharing images online.** Do now – List a rule to follow when sharing images.
Read programs with several steps and predict what it will do. Do now –predict what the given program will do.	**Look at information on a webpage and make predictions about the accuracy of information contained within it.** Do now – read information from a webpage. Is it accurate?	**Understand the importance of keeping safe online and behaving respectfully.** Do now – How can we behave respectfully online?	**Describe the positive and negative consequences of sharing images online.** Do now – write 2 positive and negative consequences of sharing images online.
Identify different ways that the internet can be used for communication. Do now – Give 3 ways the internet can be used for communication.	**Create and improve solutions to a problem based on feedback.** Do now – Give one solution to the given feedback.	**Use communication tools such as 2Email respectfully and use good etiquette.** Do now – How can we be respectful over email?	**Recognise possible influences and pressures to share images online.** Do now – List 2 possible influences or pressures to share images online.

Use email such as 2Email to respond to others appropriately and attach files. Do now – How can I respond appropriately on email? How do I attach files?	**Review solutions that others have created, using a checklist of criteria.** Do now – Review a given solution using a checklist.	**Report unacceptable content and contact online in more than one way to a trusted adult.** Do now – Give 2 ways we can report unacceptable content.	**List the key applications that we may use now and in the future.** Do now – Name 2 applications we use now and in the future.
Use selection (decision) in my programming. For example, using an 'if statement'. Do now – create an 'if statement'.	**Work collaboratively to create content and solutions.** Do now – what does collaboratively mean?	**Have a good understanding of the online safety rules we learn at school.** Do now – Write 3 online safety rules we follow.	**Know and understand why some applications have age restrictions.** Do now – List one age restriction you know.
Use variables within my program and know how to change the value of variables. Do now – What is a variable?	**Share digital content using a variety of applications such as: 2Blog, 2Email and Display Boards.** Do now – Give 2 examples of applications we can share digital content.	**Demonstrate how to use different online technologies safely.** Do now –List ways to stay safe using different technology.	**Identify ways to keep yourself and others safe in a range of situations online and offline.** Do now – How can we keep others safe online?
Use the user inputs and output features within a program, such as 'Print to screen'. Do now – Name 2 user inputs and outputs.	**Search precisely when using a search engine. For example, I know I can add additional words or remove words to help find better results.** Do now – Write a precise search.	**Know that everyone has a right to privacy both on and offline.** Do now – What does privacy mean?	**Recognise that people may not always be who they say they are online.** Do now – Give a reason why someone my pretend to be someone you know online.
Read programs that contain several steps and predict the outcomes with increasing accuracy. Do now – Predict what will happen on multi-step programs.	**Explain in detail how accurate, safe and reliable the content is on a webpage.** Do now – Look at the given information and decide how accurate, reliable and safe it is.	**Recognise that wellbeing can be affected by how technology is used.** Do now – How can wellbeing be affected if technology is used?	

Recognise the main component parts of hardware which allow computers to join and form a network. Do now –Label the component parts of hardware.	**Make appropriate improvements to digital work I have created.** Do now – How could I improve my work?	**Report with ease any concerns with content and contact online and know immediate strategies to keep safe.** Do now –Name 2 strategies to keep safe online.	
Understand that network and communication components can be found in many different devices which allow them to join the internet. Do now – Label the communication components on different devices.	**Know how successful a digital solution is that I have created.** Do now – How do I know how successful something is?	**Have a secure knowledge of online safety rules taught at school.** Do now – List all of the online safety rules in school.	
Test and debug my programs as I work. Do now – what is debugging?	**Use collaborative modes such as within 2Connect to work with others and share it.** Do now – Why is working collaboratively important?	**Demonstrate the safe and respectful use of different online technologies and online services.** Do now – how can we be safe and respectful?	
Convert (translate) algorithms that contain sequence, selection and repetition into code that works. Do now – What does convert mean?	**Use filters when searching for digital content.** Do now – What is a filter?	**Know how to not let my mental wellbeing or others be affected by use of online technologies and services.** Do now – Write ways I can look after my wellbeing.	
Organise my code carefully for example, naming variables and using tabs. Do now – which one is carefully organised? Multiple choice.	**Compare a range of digital content sources and rate them in terms of content quality and accuracy.** Do now – look at the digital content sources and rate them.	**Identify more discrete inappropriate behaviours online. For example, someone who may be trying to groom me or someone else.** Do now – List an inappropriate behaviour online.	

Use logical methods to identify the cause of any bug with support to identify the specific line of code. Do now – what does logical mean?	**Consider the intended audience carefully when I design and make digital content.** Do now – what is an intended audience?	**Use critical thinking to help me stay safe online.** Do now – What is critical thinking?	
Know the importance of computer networks and how they help solve problems and enhance communication. Do now – why are computer networks important?	**Design and create my own online blogs.** Do now – what is a blog?	**Know the value of protecting my privacy and others online.** Do now – Why is protecting my privacy valuable?	
Recognise the main dangers that can be perpetuated via computer networks. Do now – list dangers that can occur via computer networks.	**Use criteria to evaluate the quality of my own and others digital solutions, suggesting refinements.** Do now – what refinements could you suggest when evaluating work?		
Explain what personal information is and know strategies for keeping this safe. Do now – List 3 types of personal information.			
Use the most appropriate form of online communication according to the digital content. For example, use 2Email, 2Blog and Display Boards. Do now – What is the most appropriate form of online communication for sending a file to one person?			

Identify the important aspects of a programming task. Do now – List 2 important aspects of programming.			
Decompose important aspects of a programming task in a logical way, identifying appropriate coding structures that would work. Do now – list appropriate coding structures to use.			
Identify a specific line of code that is causing a problem in my program and attempt a fix. Do now – Look at the program and identify the problem. How could you fix it?			
Use inputs and outputs within my coded programs such as sound, movement and buttons and represent the state of an object. Do now – What are inputs and outputs?			
Interpret (understand) a program in parts and make logical attempts to put the separate parts together in an algorithm to explain the program.			

Do now – Piece the separate parts together to make a program.

Explain the difference between the internet and the World Wide Web.

Do now – what is the internet? What is the world wide web?

Explain what a WAN and LAN is and describe the process of how access to the internet in school is possible.

Do now – What does WAN stand for? What does LAN stand for?