Computing Skills Progression

Skill: Computing systems and network

EYFS: I can name different form of technology: phone, laptops,

iPad etc

Year 1

To identify and locate different types of technology in the classroom and how they help us.

To name and identify the main parts of a computer.

Year 2

To identify technology beyond school and how they help us.

To explain how technology can be used in different ways for different purposes.

Year 3

To explain how digital devices function.

To explain how a computer network can be used to share information.

To recognise the physical components of a network.

Skill: Data and information

EYFS: Physically sort and group objects
Identify similarities and differences

Year 1

To collect data on objects.

To compare objects

To answer questions about groups of objects.

Year 2

To create a pictogram.

To explain that we can present information using a computer.

Year 3

To create branching databases.

To compare the information shown in a pictogram with a branching database.

Skill: Programming

EYFS: Exploration using Beebots

Reception: Exploration time using scratch programme

Year 1

To explain what a command will do and how programs execute by following commands.

To understand what an algorithm is.

To use algorithms to create programs.

Year 2

To use logical reasoning to predict the outcome of algorithms.

To write and debug simple algorithms.

To create a program using my own design.

Year 3

To create a project from a task description.

To design and create a maze-based challenge using sequence.

To identify problems in a program and debug them.

Skill: Creating media

EYFS: Explore paint programmes and explore taking photos using the iPad. .

Year 1

To draw lines, make marks and use paint tools.

To create a picture on the computer.

Year 2

To capture digital photographs and recognise what devices can be used to take photographs.

To create music for purpose using technology.

Voor

To explain that animation is a sequence of pictures or photographs.

To plan, create, review and improve an animation.

To create a desktop publication and identify uses of this in the real world.

Computing Skills Progression

Year 4

To describe how networks physically connect to other networks.

To outline how websites can be shared via the World Wide Web.

Year 5

To explain that computers can be connected together to form systems.

To recognise how information is transferred over the internet.

Year 6

To explain how search results are ranked and why the order is important.

To recognise how we communication using technology.

Additional Enrichment

Whole school: Digital School
House

EYFS: Barefoot Computing Activities.

Every class: 2 Digital Leaders

Year 4

To use a data logger to collect data automatically over a period of time.

To use collected data to answer questions.

Year 5

To explain that tools can be used to select specific data and computer programs can be used to compare data visually.

To apply my knowledge of a database to ask and answer real-world questions.

Year 6

To explain that formulas can be used to produce calculated data and apply formulas to data.

To create a spreadsheet to plan an event.

Additional Enrichment

KS1: Cross curricular links to teach skills in context.

Every class: 2 Digital Leaders

Year 4

To design and create a project that includes repetition, including count-controlled loops and infinite loops.

To use logical reasoning to debug programs and develop it

Year 5

To explain that a loop can be used to repeatedly check whether a condition has been met.

To design and create a physical computing project which uses selection.

Year 6

To define a 'variable', explain why they are used in a program and improve a game by using them.

To design, create and evaluate a project that builds on a given example.

Additional Enrichment

KS2: Coding club

Years 4-6: Young Coders Competition.

Y5: Cross-curricular quiz.

Every class: 2 Digital Leaders

Year 4

To use digital devices to record sound and store as a file.

To explain that audio files can be edited, combined and played together.

To explain how images can be edited to appear different.

Year 5

To identify digital devices that record video and capture a video using a range of techniques.

To create a vector drawing by combining shapes and recognise that vector drawings consist of layers.

Year 6

To create a webpage, considering the implications of copyright and the need of navigation paths.

To design, develop and improve a digital 3D model.

Additional enrichment

Year 3 & 5:ChildNet Film Competition

Year 6: cross curricular unit with DT.

Year 3: Publish school blog.

Every class: 2 Digital Leaders

Self-image and Identity

Online Relationships

Online Reputation

Online Bullying

EYFS

To recognise that I can say 'no' / 'please stop' / 'I'll tell' / 'I'll ask' to somebody who asks me to do something that makes me feel sad, embarrassed or upset.

To explain how this could be either in real life or online.

EYFS

To talk about how family members use the internet to communicate.

Reception-To give examples of how I can use the internet to communicate.

EYFS-To understand the words 'online' and 'information'.

Reception-To identify ways information can be put on the internet.

Nursery—To know that sometimes people can be unkind and understand different ways they can be unkind.

Reception-To describe ways people can be unkind online and offer examples of how this might make others feel.

Year 1

To recognise that there may be people online who could make me feel sad, embarrassed or upset.

To give examples of when and how to speak to a trusted adult if something happens that makes me feel sad, worried, uncomfortable or frightened.

Year 1

To give examples of when I should ask permission to do something online and explain why it is important to do so.

To explain why it is important to be kind to others online.

Year 1

To recognise that information can stay online and be copied.

To describe what information should not be put online without asking a trusted adult first.

Year 1

To describe how to behave online in ways that do not upset others and give examples.

Year 2

To explain how people may act differently online and offline.

To give examples of issues online that might make someone feel sad, worries, uncomfortable or frightened and how they might get help.

Year 2

To give examples of how someone might use technology to communicate with people they don't know, and why this is not always safe.

Year 2

To explain how information put online about a person can last for a long time.

To describe how anyone's online information can be seen by others.

Year 2

To explain what bullying is, and how it can make people feel.

To talk about how anyone experiencing bullying can get help.

Year 3

To explain what is meant by the term 'identity'.

To explain why someone might change their identity depending on what they are doing online.

Year 3

To explain what it means to "know someone" online, and why this might be different to offline.

To explain the difference between "trusting someone online" and "liking someone online".

Year 3

To explain how to search for information about others online.

To give examples of what people may or may not be willing to share about themselves online.

Year 3

To describe appropriate ways to behave towards people online.

To give examples of how bullying behaviour might appear online.

Year 4

To explain how my online identity can be different to my offline identity.

To explain that others online can pretend to be someone else, including my friends, and suggest why they might do this.

Year 4

To give examples of how to be respectful to others online.

To explain how content online may feel unimportant to one person, but be important to another.

Year 4

To describe how to find out information by searching online.

To explain ways that some of the information about anyone online could have been created, copied or shared by others.

Year 4

To recognise when someone is upset, hurt or angry online.

To describe how people can be bullied through a range of media.

To explain why people need to think carefully about the content they post.

Year 5

To explain how identity can be copied, modified or altered.

To demonstrate how to make responsible choices about having an online identity.

Year 5

To give examples of technologyspecific forms of communication (e.g. emojis, memes)

To explain there are some people online who want to do harm to others.

Year 5

To search for information about an individual online and summarise that information.

To describe ways that information about anyone online can be used by others to make judgements.

Year 5

To explain how what one person perceives as playful, joking or 'banter' may be experienced by others as bullying.

To identify a range of ways to report concerns and access support both in school and at home about online bullying.

To explain how to block people online who are being unkind.

Year 6

To identify and critically evaluate online content relating to gender, race, religion etc. and explain why it is important to challenge and reject inappropriate representations online.

To explain the importance of asking for help.

Year 6

To explain how sharing something online can have positive and/or negative impacts.

To explain how taking inappropriate images of someone, even if they say it's okay, may have an impact for the sharer and others.

Year 6

I can explain how I am developing an online reputation which will allow other people to form an opinion of me.

I can describe some simple ways that help build a positive online reputation.

Year 6

To describe how to capture bullying content as evidence.

To explain how someone would report online bullying in different contexts.

Managing Online Information

Health, Wellbeing and Lifestyle Copyright and Ownership **Privacy and Security**

Nursery To know that information is on the internet.

Reception

To talk about how the internet can be a way of finding out information.

To identify devices you can use to do this.

<u>Nursery</u> To know what being safe means and understand what rules are.

Reception

To explain rules to keep us safe when we are using technology both in and beyond the home.

To give examples of some of these rules.

EYFS-To recognise that work belongs to the person who created it.

Reception

To name pieces of work so others know who it belongs to.

Nursery -To know my name ,and age

Reception

To give simple examples of personal name, age).

information (e.g.,

To identify people to trust with personal information.

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Year 1

To give examples of how to find information using digital technology.

To understand we come across a range of things online that we like and don't like, as well as things that are real and not real.

Year 1

To explain why certain rules around the internet keep us safe.

To have an emerging awareness of how these rules might change in different contexts.

Year 1

To explain why work created using technology belongs to the person who created it.

To understand that work created by others remains theirs, even if another copy is made.

Year 1

To explain how passwords are used to protect information, accounts and devices.

To recognise more detailed examples of personal information (e.g. family names, school name)

Year 2

To explain what voice activated searching is, and know it is not a real person (e.g. Alexa, Siri).

To explain why some information online may not be real or true.

Year 2

To explain simple rules for using technology in different environments and settings (e.g. public places, at home, at school).

Year 2

To recognise that content on the internet may belong to other people and explain why.

Year 2

To explain and give examples of what is meant by 'private'.

To describe and explain some rules for keeping personal information private.

Year 3

To explain the difference between a 'belief', 'opinion' and 'fact' and give examples of how and where they might be shared online.

Year 3

To explain why spending too much time on technology can sometimes have a negative impact on you.

To explain why some activities have age restrictions and why it is important to follow these.

Year 3

To explain why copying someone else's work from the internet without permission isn't fair and what problems this might cause.

Year 3

To describe simple strategies for creating and keeping passwords safe.

To describe how connected devices can collect and share information.

Year 4

To analyse information to make a judgement about probable accuracy.

To explain what is meant by fake news and why some people will create stories or alter photographs to pretend something is true.

Year 4

To explain how technology can be a distraction from other things.

To identify times or situations when someone may need to limit the amount of time they spend on technology.

Year 4

To explain why I need to consider who owns content and whether I have the right to reuse it.

To give examples of content which I must not use without permission from the owner.

Year 4

To describe strategies for keeping personal information private, depending on the content.

To explain that the internet is never fully private.

To know the digital age of consent.

Year 5

To explain what is meant by 'being sceptical' and why it is important to sometimes be sceptical of information online.

To evaluate digital content and explain how to make choices about what is trustworthy.

Year 5

To describe ways technology can affect health and well-being positively and negatively.

To describe some strategies, tips or promote health and wellbeing with regards to technology.

Year 5

To assess and justify when it is acceptable to use the work of others.

To give examples of content that is permitted to be reused.

Year 5

To explain what a strong password is and demonstrate how to create one.

To explain how many free apps or services may read and share private information with others (e.g. contacts, likes, images, voices, messages, location).

To explain what app permissions are and give examples.

Year 6

To define the terms 'influence', 'manipulation' and 'persuasion' and how someone might encounter these online (e.g. targeted ads, influencers).

To analyse and evaluate the validity of 'facts' and information online.

Year 6

To describe common systems that regulate age related content.

To assess and action different strategies to limit the impact of technology on health (e.g. night mode, regular screen breaks, correct posture etc.).

Year 6

To demonstrate the use of search tools to find and access online content created by others can that be reused.

To demonstrate how to make references to and acknowledge internet sources.

Year 6

To explain what to do if a password is lost, shared or stolen.

To describe ways in which some online content targets people to gain money or information illegally (scams, phishing) and describe strategies to help identify such content.

Additional Enrichment

Digital Leaders - Year 3 - 6. Safer Internet Day—Whole school. Online Safety Workshops—KS2 and parents. Online Safety Assemblies lead by Digital Leaders—KS1.