

# **Computing Curriculum**

2020/2021

# Nursery

# **E-Safety**

#### Health, Well-being and Lifestyle

I can identify rules that help keep us safe and healthy in and beyond the home when using technology.

I can give some examples.

#### **Managing Online Information**

I can talk about how I can use the internet to find things out.

I can identify devices I could use to access information on the internet.

### **Privacy and Security**

I can identify some simple examples of my personal information (e.g. name, address, birthday, age, location)

I can describe the people I can trust and can share this with; I can explain why I can trust them.

#### **Self-image and Identity**

I can 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.

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

#### **Online Relationships**

I can recognise some ways in which the internet can be used to communicate.

I can give examples of how I (might) use technology to communicate with people I know.

### Online Reputation

I can identify ways that I can put information on the internet.

#### **Online Bullying**

I can describe ways that some people can be unkind online.

I can offer examples of how this can make others feel.

# **Information Technology**

I know how to turn on an iPad and can lock/unlock it with adult support.

#### **Word Processing and typing**

I can use computers/keyboards/mouse in role play.

I can play on a touch screen game.

### Photography and digital art

I can take a photograph using a digital device.

#### **Video Creation**

I know the difference between a photograph and a video.

I can watch films back on a digital device.

#### **Animation**

I know that an image can be animated to speak.

#### **Augmented Reality and Virtual Reality**

I understand that AR objects (Augmented Reality) can be used on digital devices.

I know that a QR (Quick Response) code can be used on a digital device to get more information.

# **Computer Science**

#### **Computational Thinking**

I understand what an instruction is.

I can give an example of an instruction.

I can follow a simple instruction.

#### **Coding and Programming**

I can use a mouse, touch screen to target and select options on screen.

I can talk about how I can select an option on a digital device.

I can use controls to move a digital toy.

# Reception

# **E-Safety**

#### Health, Well-being and Lifestyle

I can identify rules that help keep us safe and healthy in and beyond the home when using technology.

I can give some examples.

#### **Managing Online Information**

I can talk about how I can use the internet to find things out.

I can identify devices I could use to access information on the internet.

I can give simple examples of how to find information (e.g. search engine, voice activated searching).

#### **Privacy and Security**

I can identify some simple examples of my personal information (e.g. name, address, birthday, age, location)

I can describe the people I can trust and can share this with; I can explain why I can trust them.

I understand that passwords can be used to protect information and devices.

#### **Online Reputation**

I can identify ways that I can put information on the internet.

#### **Self-image and Identity**

I can 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.

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

### **Online Relationships**

I can recognise some ways in which the internet can be used to communicate.

I can give examples of how I (might) use technology to communicate with people I know.

#### **Online Bullying**

I can describe ways that some people can be unkind online.

I can offer examples of how this can make others feel.

# **Copyright and Ownership**

I know that work I create belongs to me.

I can name my work so that others know it belongs to me.

# **Information Technology**

I know how to turn on an iPad, lock the screen and can do this with the support of an adult.

I know how to turn on a laptop, login using a username and password and can do this with the support of an adult.

#### **Word Processing and Typing**

I can dictate short, clear sentences into a digital device.

I can type letters/simple words with increasing confidence using a keyboard and tablet.

### **Photography and Digital Art**

I can take a photograph using a digital device and use it in an app.

I can use a painting app and explore the paint and brush tools.

#### **Video Creation and Sound**

I can record a short film using the camera.

I can record sounds/voices in storytelling and explanations.

#### **Animation**

I can animate a simple image to speak.

I can create a simple animation to tell a story including more than one character.

### **Augmented Reality and Virtual Reality**

I understand how I can interact with an AR object (Augmented Reality) when using a digital device.

I can explore a 360 image with the support of an adult.

I know how to scan a QR code.

### **Data Handling**

I can sort physical objects, take a photo and discuss what I have done.

I can present simple data on a digital device.

### Presentations, web design and eBook Creation

I can record my voice over a picture.

I can create a simple digital collage.

I can move and resize images with my fingers or a mouse.

# **Computer Science**

### **Computational Thinking**

I understand that an algorithm is a set of instructions and can follow simple oral algorithms.

I can sequence familiar tasks.

I can spot patterns.

#### **Coding and Programming**

I can input a simple sequence of commands to control a digital device with adult support.

I understand that mistakes or errors are called 'bugs' and can talk about how to fix them.

## Year 1

# E-Safety

#### Health, Well-being and Lifestyle

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

I can give examples of some of these rules.

#### **Managing Online Information**

I can use the internet to find things out.

I can use simple keywords in search engines.

I can describe and demonstrate how to get help from a trusted adult or helpline if I find content that makes me feel sad, uncomfortable worried or frightened.

#### **Privacy and Security**

I can recognise more detailed examples of information that is personal to me (e.g. where I live, my family's names, where I go to school).

I can explain why I should always ask a trusted adult before I share any information about myself online.

I can explain how passwords can be used to protect information and devices.

#### **Self-image and Identity**

If something happens that makes me feel sad, worried, uncomfortable or frightened I can give examples of when and how to speak to an adult I can trust.

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

#### **Online Relationships**

I can use the internet with adult support to communicate with people I know.

I can explain why it is important to be considerate and kind to people online.

#### **Online Reputation**

I can recognise that information can stay online and could be copied.

I can describe what information I should not put online without asking a trusted adult first.

#### **Online Bullying**

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

#### **Copyright and Ownership**

I can explain why work I create using technology belongs to me.

I can say why it belongs to me (e.g. 'it is my idea' or 'I designed it')

I can save my work so that others know it belongs to me (e.g. filename, name on content).

# **Information Technology**

#### **Word Processing and Typing**

I can dictate into a digital device more accurately and with punctuation.

I can confidently type words on a digital device.

I can use the 'space bar' to create a space between words and 'delete' to delete letters or words.

I can make a new line using the 'enter/return' key.

#### **Photography and Digital Art**

I can edit a photo with simple tools.

I can use a paint or drawing app to create a digital image.

#### **Video Creation and Sound**

I can record a film using the camera app

I can select images and record a voiceover.

I can highlight and zoom into images as I record.

#### **Animation**

I can add filters or stickers to enhance an animation of a character.

I can create a simple animation to tell a story including more than one scene.

#### **Augmented Reality and Virtual Reality**

I can explore an interactive 360 image.

I can pretend to interact with AR objects (Augmented Reality)

### **Data Handling**

I can collect data on a topic.

I can sort images or text into two or more categories on a digital device.

I can create a tally chart or pictogram.

I can record myself explaining what I have done and what I have found out.

#### Presentations, web design and eBook Creation

I can add labels to an image.

I can order images to create a simple storyboard.

I can create a simple spider diagram.

# **Computer Science**

### **Computational Thinking**

I understand what algorithms are.

I understand that the sequence of algorithms is important.

I can write simple algorithms.

I can debug simple algorithms.

I understand that algorithms are implemented as programs on digital devices.

### **Coding and Programming**

I can create a simple program (algorithm, sequence of instructions) using a digital device.

I can use sequence in programs.

I can locate and fix 'bugs' in my program.

## Year 2

# **E-Safety**

#### Health, Well-being and Lifestyle

I can explain simple guidance for using technology in different environments and settings.

I can say how those rules/guides can help me.

#### **Managing Online Information**

I can use keywords in search engines.

I can demonstrate how to navigate a simple webpage to get to information I need (e.g. home, forward, back buttons; links, tabs and sections).

I can explain what voice activated searching is and how it might be used (e.g. Alexa, Google Now, Siri).

I can explain the difference between things that are imaginary, 'made up' or 'make believe' and things that are 'true' or 'real'.

I can explain why some information I find online may not be true.

#### **Privacy and Security**

I can describe how online information about me could be seen by others.

I can describe and explain some rules for keeping my information private.

I can explain what passwords are and can use passwords for my accounts and devices.

I can explain how many devices in my home could be connected to the internet and can list some of those devices.

#### Self-image and Identity

I can give examples of issues online that might make me feel sad, worried, uncomfortable or frightened; I can give examples of how I might get help.

I can explain how other people's identity online can be different to their identity in real life.

I can describe ways in which people might make themselves look different online.

#### **Online Relationships**

I can use the internet to communicate with people I don't know well (e.g. email a penpal in another school/ country).

I can give examples of how I might use technology to communicate with others I don't know well.

#### **Online Reputation**

I can explain how information put online about me can last for a long time.

I know who to talk to if I think someone has made a mistake about putting something online.

#### **Online Bullying**

I can give examples of bullying behaviour and how it could look online.

I understand how bullying can make someone feel.

I can talk about how someone can/would get help about being bullied online or offline.

#### **Copyright and Ownership**

I can describe why other people's work belongs to them.

I can recognise that content on the internet may belong to other people.

# <u>Information Technology</u>

#### **Word Processing and Typing**

I can dictate longer passages into a digital device with accurate punctuation.

I can confidently type short sentences using a keyboard or tablet and use the 'space bar' only once between words.

I can use touch to navigate to words or letters to delete or edit.

I can use 'caps lock' for capital letters.

I can use 'insert' or 'copy and paste' tools to add images alongside text in a word-processed document. E.g. Word or PowerPoint

#### **Photography and Digital Art**

I can edit a photo using different tools.

I can select ad use tools to create digital imagery – pen control/fill tool.

#### **Video Creation and Sound**

I can write and record a script using a teleprompter tool.

I can use tools to add effects to a video.

#### **Animation**

I can create multiple animations of an image and edit these together.

I can create a simple stop motion animation.

#### **Augmented Reality and Virtual Reality**

I can bring objects into my surroundings using AR (Augmented Reality)

I can create my own QR (quick response) code.

#### **Data Handling**

I can sort digital objects into a range of charts such as Venn diagrams, Carroll diagrams and bar charts.

I can record myself explaining what the data shows me.

#### Presentations, web design and eBook Creation

I can add voice labels to an image.

I can add voice recording to a storyboard.

I can import/upload images to projects from the web or cameral roll.

# **Computer Science**

### **Computational Thinking**

I can write algorithms for everyday tasks.

I can use logical reasoning to predict the outcome of algorithms.

I understand that decomposition is breaking objects/processes down.

I can implement simple algorithms on digital devices.

I can debug algorithms.

#### **Coding and Programming**

I understand programs execute by following precise and unambiguous instructions.

I can create programs on a variety of digital devices.

I can debug programs of increasing complexity.

I can use logical reasoning to predict the outcome of simple programs.