



Computing Curriculum



Rationale

Technology continues to evolve at a rapid pace and we want to provide our children with the best opportunity to be successful using a range of software and hardware. We have created a broad computing curriculum to cover the areas that we feel are key to enabling our children to do this. These range from essential office based skills such as word processing on Microsoft Word, to creative and inspirational projects such as creating a hit song using Garageband. If possible, we will link our computing curriculum to our creative topics to support children in understanding how these technologies can have a meaningful and useful purpose.

Our computing curriculum has been broken into 3 main strands

- Information technology (typing, data, presentations, animation, video and photography, virtual reality, sound)
- Computer science (computational thinking, coding, computer networks)
- Digital literacy / E-Safety

Children with SEND

We recognise that it is extremely important for children with SEND or disadvantage to have the same opportunities to access the computing curriculum. With this in mind, adjustments will be made. This may include:

- Enlarged screen by zooming in on ipads or laptops
- Voice activated controls such as using Siri on ipads
- Additional hardware such as external mouse, keyboard, headphones
- Using 'dictate' feature on ipads
- Adapting the task
- Opportunities for pre-learning and practise
- Varying support from an adult or peer

Updated EYFS Framework

| | | | |
|--------------------------|--|-------------------------|--|
| Three and Four year olds | Personal, social and emotional development | | Remember rules without needing an adult to remind them |
| | Physical development | | Match their developing physical skills to tasks and activities in the setting |
| | Understanding the world | | Explore how things work |
| Reception | Personal, social and emotional development | | Show resilience and perseverance in the face of a challenge Know and talk about the different factors that support their overall health and wellbeing: -sensible amounts of screen time |
| | Physical development | | Develop their small motor skills so that they can use a range of tools competently, safely, confidently |
| | Expressive arts and design | | Explore, use and refine a variety of artistic effects to express their ideas and feelings |
| ELG | Personal, social and emotional development | Managing self | Be confident to try new activities and show independence, resilience and perseverance in the face of challenge Explain the reasons for rules, know right from wrong and try to behave accordingly |
| | Expressive arts and design | Creating with materials | Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function |

Long Term Plan – Computing Strands

| Year 1/2 (A and B) | | | | | |
|---------------------------|---|--|-----------------|-------------------|-----------------|
| AUTUMN 1 | AUTUMN 2 | SPRING 1 | SPRING 2 | SUMMER 1 | SUMMER 2 |
| E safety Photo | VR and AR Coding (Computer week – AI) | Animation Typing (E-safety week) | Coding Data | E safety Sound | Presentations |

| Year 3/4 (A and B) | | | | | |
|---------------------------|---|---------------------------------------|-----------------------------|-------------------------|-----------------------|
| AUTUMN 1 | AUTUMN 2 | SPRING 1 | SPRING 2 | SUMMER 1 | SUMMER 2 |
| E safety Coding | Typing AR and VR (Computer week – AI) | Animation Sound (E-safety week) | Coding Computer networks | E safety Photo Video | Data Presentations |

| Year 5/6 (A and B) | | | | | |
|----------------------------------|---|--|-------------------------|-----------------|---------------------------|
| AUTUMN 1 | AUTUMN 2 | SPRING 1 | SPRING 2 | SUMMER 1 | SUMMER 2 |
| E safety Coding (Microbit) | VR and AR Coding (Computer week – AI) | Animation Coding (E-safety week) | Photo / video Typing | E safety | Data Computer networks |

Computing Curriculum – organised by objectives per term

Year 1/2 – year A

| Autumn 1 | Autumn 2 | Spring 1 | Spring 2 | Summer 1 | Summer 2 |
|--|--|--|---|--|---|
| <p>E-Safety Understand that personal information should be kept private and not put online I recognise that information online can be copied I can use the internet to find things I can recognise examples of information that is personal to me (where I live, family name, my school) I can explain how passwords can be used to protect information and devices</p> <p>Photo I can take photos and videos using a device I know where photos and videos are saved I can discuss which picture and videos look better than others I can use paint/drawing app to create a digital image (Ipad camera, cameral roll, Doodle)</p> | <p>VR / AR I can bring words from AR into my surroundings I can interact with an AR object (Catchy Words)</p> <p>Coding I understand what algorithms are I can write simple algorithms I understand the sequence of algorithms is important I can debug simple algorithms I understand that algorithms are implemented as programs on digital devices (Beebots, Beebot app)</p> <p>Ai Use Siri to answer a range of questions. (ipad)</p> | <p>Animation I can add filters and stickers to enhance an animation of a character. I can create an animation to tell a story with more than one scene. I can add my own pictures to my story animation. (Puppet pals, Chatterpix)</p> <p>Typing I can type words correctly on a digital device I can use space bar and delete key I can use enter/return to start a new line I can dictate sentences into a digital device (Word, Notes)</p> <p>E-Safety week activities</p> | <p>Coding I can create a simple program e.g. sequence of instructions for a Bee Bot I can use sequence in programs I can locate and fix bugs in my program (Loti Bot, Loti Bot app)</p> <p>Data I can sort images or text into two or more categories on a digital device. I can collect data on a topic. I can create a tally chart. I can record myself explaining what I have done and what it shows me. (Tally List Lite, Camera)</p> | <p>E-safety I can recognise that there may be people online that make me feel sad or upset I can explain why it is important to be considerate and kind to people online I can describe how to behave online in ways that does not upset others</p> <p>Sound I can create a sequence of sounds I can explore short and long sounds. I can record my voice and add different effects. (Garageband, voice notes)</p> | <p>Presentations I can add labels to an image. I can order images to create a simple storyboard. I can sequence a series of pictures to explain my understanding of a topic. (Piccolage)</p> |

Year 1/2 – year B

| Autumn 1 | Autumn 2 | Spring 1 | Spring 2 | Summer 1 | Summer 2 |
|---|--|--|--|--|--|
| <p>E-safety I can give examples of ways I could communicate with people over the internet I understand that information put online can last for a long time.</p> <p>I can use keywords in search engines I can describe why other people’s work belongs to them I can recognise that content on the internet may belong to other people (copyright)</p> <p>Photo I can take pictures and select certain ones to create a piccolage I can evaluate and explain why some pictures are better than others I can edit a photo (crop, edit. Markup) I can select and use tools to create a digital image by controlling the pen and using a range of colours and pen styles (Ipad camera, Ipad Camera roll, Piccolage, Doodle)</p> | <p>VR / AR (VR workshop in school)</p> <p>Coding I can write algorithms for everyday tasks I can use logical reasoning to predict the outcome of algorithms I understand decomposition is breaking objects/processes down I can implement simple algorithms on digital devices I can debug algorithms (Beebot, Beebot app)</p> | <p>Animation I can create multiple animations of an image and edit these together. I can create a simple stop motion animation. I can explain how an animation/flip book works (I Can Animate, Chatterpix, Imovie)</p> <p>Typing I can use space bar to make only one space between words and use touch/mouse to navigate to words to edit I can copy and paste text I can use cap locks for capital letters I can dictate longer passages into a digital device with punctuation (Word, Notes)</p> <p>E-Safety week activities</p> | <p>Coding 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</p> <p><u>(Espresso coding</u> Level 1 – on the move – as a class on IWB or individually</p> <ul style="list-style-type: none"> • Under the sea • Royal chase • Transport on the go • Another planet) <p>Data I can create range of charts such as bar, line I can orally record myself explaining what the data shows me. (Camera, onlinecharttool.com)</p> | <p>E-safety I can identify where to go for help if concern about the internet I can give examples of how things online might make me feel sad, worried, uncomfortable or frightened. I understand how online bullying can make someone feel</p> <p>I can describe ways in which people might make themselves look different online I can explain the difference between ‘made up’ things and ‘real things’</p> <p>Sound Create a musical composition using software I can record my own sound effects. I can record my voice over a composition to perform a song. (Garageband, voice notes)</p> | <p>Presentations I can add voice labels to an image. I can add a voice recording to a storyboard. I can add speech bubbles to an image to show what a character thinks. I can import images to a project from the web and camera roll (Book creator, piccolage)</p> |

Year 3/4 – year A

| Autumn 1 | Autumn 2 | Spring 1 | Spring 2 | Summer 1 | Summer 2 |
|---|--|--|---|--|--|
| <p>E-safety I can explain what is meant by the term identity I can explain ways in which I might change my identity online (avatar) I can explain the risks of communicating online with others I don't know well. I can recognise I need to be careful before I share anything about myself online I can explain what online bullying is and describe some examples</p> <p>Coding Program a sequence of actions that execute at different times Program a sequence of actions to create a simple animation Use the above to design, write and debug your own app</p> <p>(Espresso coding Level 3) <u>Sequence and animation</u></p> <ul style="list-style-type: none"> Stepping through space Snail v spider Alien space race Traffic lights) | <p>Typing I can use index fingers on keyboard home keys (f/j), use left fingers for a/s/d/f/g, and use right fingers for h/j/k/l I can edit the style and effect of my text and images to make my document more engaging and eye-catching. For example, borders and shadows. I can use cut, copy and paste to quickly duplicate and organise text. (Word, Notes)</p> <p>AR/VR I can bring objects into my surroundings using Augmented Reality. (AR Makr)</p> <p>Ai To use ai to create an image based on description. (ChatGPT)</p> | <p>Animation I can create animations of faces to speak in role with more life-like realistic outcomes. I can improve stop motion animation clips with techniques like onion skinning. I can use animation tools in presenting software to create simple animations. (I Can Animate, Chatterpix)</p> <p>Sound I can create and edit purposeful compositions using music software to create mood or a certain style I can experiment with live loops to create a song. (Error! Hyperlink reference not valid.)</p> <p>E-Safety week activities</p> | <p>Coding use 'if' statements to program a maze game use 'if-hit' statements to check if objects have collided Use the above skills to create own game</p> <p>(Espresso coding Level 3) <u>Conditional events</u></p> <ul style="list-style-type: none"> Space maze Self drive car Hungry snake Pufferfish pop Debugging) <p>(Loti Bot, Loti Bot app)</p> <p>Computer Networks I understand that computers in a school are connected together in a network I understand why computers are networked I understand the difference between the Internet and the World Wide Web</p> | <p>E-safety I can use key phrases in search engines I can explain the difference between 'belief', an 'opinion' and a 'fact'. I can give reasons why I should only share information with people I choose to, and can trust. I can describe simple strategies for creating and keeping passwords private</p> <p>Photo / Video I can sequence video clips in a timeline and record a voiceover I can trim and cut film clips and add titles and transitions I can create my own movie trailer. (Camera, Imovie)</p> | <p>Data I can start to input simple data into a spreadsheet to make a table. (Excel)</p> <p>Presentations I can create a simple comic with sounds, text and video (Book Creator)</p> <p>I can create a simple digital mind map (Bubble.us)</p> |

Year 3/4 – year B

| Autumn 1 | Autumn 2 | Spring 1 | Spring 2 | Summer 1 | Summer 2 |
|---|---|--|---|--|--|
| <p>E-safety I can explain how my online identity can be different to the identity I present in real life I can explain why I should be careful who I trust online and what information I share with them. I can give examples of how to be respectful online I can explain ways that information about me online could have been created, copied or shared by others</p> <p>Coding Use coding to add points to a game Add variable to a game Change the background to an app Add audio and music to an app</p> <p>(Espresso Coding Level 4 Intro to variables</p> <ul style="list-style-type: none"> • Pop game • Healthy eating • Debugging) | <p>Typing Align text – centre, left, right Use font sizes appropriately for audience and purpose Save a document and know where and how to retrieve it Confidently and regularly use text shortcuts such as cut, copy and paste and delete to organise text Use spell check and thesaurus including through Siri and other AI technology (Pupil Drive, Word, Notes)</p> <p>AR/VR (VR workshop in school)</p> | <p>Animation I can use software to create a 3D animated story. I can take multiple animations of a character I have created and edit them together for a longer video. (I Can Animate, Imovie)</p> <p>Sound Create a simple four chord song following the correct rhythm. (Keezy)</p> <p>I can record a radio broadcast or audiobook. (Voice Notes)</p> <p>E-Safety week activities</p> | <p>Coding (Scratch) Use co-ordinates for x and y in coding for positions Understand where a code has been entered incorrectly (debug) Use the above skills to create own app or game</p> <p>(Scratch PONG Use “scratch pong instructions” on one drive, or other Scratch instructions)</p> <p>Computer Networks I understand that servers on the Internet are located across the planet I understand how email is sent across the Internet I understand how the Internet enables us to collaborate</p> | <p>E-safety I can describe ways in which people can be bullied online (image, video, text) I can analyse information and differentiate between ‘beliefs’, ‘opinions’ and ‘facts’. I can explain that lots of people sharing the same opinion/belief online does not make it true. I can explain what a strong password is. I can explain that others online can pretend to be me or other people</p> <p>Photo / Video I can add music and sound effects to my films I can add animated titles and transitions I can add simple subtitles to a video clip. (Camera, Imovie)</p> | <p>Data I can create my own online multiple choice questionnaire. I can input data into a spreadsheet and export the data in a variety of ways: charts, bar charts, pie charts. I understand how data is collected. (Poll Junkie website, Excel)</p> <p>Presentations I can create an interactive ebook with text, images and sound. I can create a presentation to present information (Book Creator, Powerpoint)</p> |

Year 5/6 – year A

| Autumn 1 | Autumn 2 | Spring 1 | Spring 2 | Summer 1 | Summer 2 |
|---|---|---|--|--|--|
| <p>E-Safety I can demonstrate responsible choices about my online identity I can explain that there are some people online that might want to harm me or my friends. I can recognise when someone is upset, hurt or angry online. I can describe how to get help for someone that is being bullied online and assess when I need to do or say something or tell someone I can describe ways that information about people online can be used by others to make judgements about an individual.</p> <p>Coding – Microbit (Digital Flashcards) To write and sequence programs that create LED images To use delays in algorithms and programs (See instructions on onedrive)</p> | <p>VR and AR I can add multiple objects into my surroundings through AR to explain a concept. AR Makr</p> <p>Coding Use coding to add a score to a game Add more than multi variable to a game Add and code a range of sprites in one game Use the above skills to create own game</p> <p>(Espresso Coding Level 5) <u>Speed direction coordinates</u></p> <ul style="list-style-type: none"> • Faster and slower • Speedy simulation) <p>Ai To use ai to create an image based on description and continuously amend the instruction to improve and alter the image. (ChatGPT)</p> | <p>Animation I can record animations of different characters and edit them together to create an interview. I can add green screen effects to a stop motion animation. I can create flip book animation using digital drawings and export as a video (Chatterpix, I Can Animate, Flipper Clip)</p> <p>Coding Add code to use keys to move a sprite round the screen Explain what the code means and explain what will happen (e.g object will move 10 spaces etc) Understand where a code has been entered incorrectly (debug) Use the above skills to create own game</p> <p>(Scratch) AVOID THE CRAB DUCK SHOOT Use “crab game” and “duck shoot” on one drive)</p> | <p>Photo / Video I can use cutaway and split screen tools in iMovie. I can evaluate and improve the best video tools to best explain my understanding. I can further improve green screen clips using crop and resize and explore more creative ways to use the tool - wearing green clothes and the masking tool. (Imovie)</p> <p>Typing I can start to apply other useful effects to my documents such as hyperlinks. I can combine digital images and text to enhance my work I can organise and reorganise text on screen to suit a purpose (Word, Ipad Notes, Book Creator)</p> | <p>E-safety I can explain key concepts – data, information, fact, opinion, belief, true, false, valid, reliable, evidence I can explain why information that is on a large number of sites may still be inaccurate (people sharing) I can create and use strong and secure passwords I can explain how and why many apps or services may read and share my private information(friends, contacts, likes, images, videos etc)</p> <p>Sounds Add voice over and edit sound clips (volume, pitch, fade, effect) to create a podcast. Create a remix of a popular song. (Voice Notes, Keezy)</p> | <p>Data I can create and publish my own online questionnaire and analyse the results. I can use simple formulae to solve calculations such as autosum I can edit and format cells in a spreadsheet (borders, size, font, bold) (Poll Junkie website, Excel)</p> <p>Computer Networks I understand how we view web pages on the Internet I use search technologies effectively I appreciate how pages are ranked in a search engine</p> |

| | | | | | |
|--|--|--|--|--|--|
| To write and debug programs that meets design criteria | | | | | |
| To evaluate against design criteria | | | | | |

Year 5/6 – year B

| Autumn 1 | Autumn 2 | Spring 1 | Spring 2 | Summer 1 | Summer 2 |
|--|---|--|---|--|---|
| <p>E-Safety</p> <p>I can challenge and explain why it is important to reject and report inappropriate messages.</p> <p>I can describe issues online that might make me or others feel sad, worried, uncomfortable or frightened.</p> <p>I can describe how to capture bullying content as evidence (screen grab, URL, record)</p> <p>I can identify a range of ways to report concerns both in school and at home</p> <p>I understand my responsibilities for the well being of others in my online social group and can demonstrate how I would support others</p> <p>I can describe some simple ways that help to build a positive online reputation.</p> | <p>Coding</p> <p>Understand code to generate random elements (numbers, adjectives, colours, shapes)</p> <p>Understand code to generate a loop</p> <p>(Python (on Espresso) Level 6</p> <p>Random numbers and simulations</p> <ul style="list-style-type: none"> • Random numbers • Weather forecast • Robotic poetry) <p>AR/VR</p> <p>(VR workshop in school)</p> | <p>Animation</p> <p>I can mix animations and videos recordings of myself to create video interviews.</p> <p>I can plan, script and create a 3D animation to explain a concept or tell a story.</p> <p>I can choose and create different types of animations to best explain my Learning. (I Can Animate, Imovie, Chatter pix))</p> <p>Coding</p> <p>Use code to command the program to type things back to you</p> <p>Use script mode to code the program to type things back to you</p> <p>Use input statements to talk to the code decisions</p> | <p>Photo / video</p> <p>I can use the green screen masking tool with more than one character.</p> <p>I can use picture in picture tools in iMovie.</p> <p>I can add animated subtitles to my film to further enhance my creation.</p> <p>I can create videos using a range of media - green screen, animations, film and image. (Imovie)</p> <p>Typing</p> <p>I can type with increasing speed with accuracy</p> <p>I can protect a document with a password</p> <p>I can use word count feature</p> <p>I can add page numbers (Word, Ipad Notes, Book Creator)</p> | <p>E safety</p> <p>I can explain how search engines work and how results are selected and ranked.</p> <p>I can explain how and why some people present ‘opinions’ as ‘facts’ and can define the terms influence, manipulation, persuasion.</p> <p>I know what to do if my password is lost or stolen</p> <p>I can describe simple ways to increase privacy on apps and services.</p> <p>I can describe strategies to help me identify scams and phishing.</p> <p>Sounds</p> <p>Add voice over and edit sound clips (volume, pitch, fade, effect) to use in a film or radio broadcast (podcast)</p> | <p>Data</p> <p>I can edit and format cells in a spreadsheet (merge, columns width, align left)</p> <p>I can write spreadsheet formula to solve more challenging maths Problems (add and subtract cells etc)</p> <p>Sort data (A-Z, lowest to highest)</p> <p>Use filters (Excel)</p> <p>Computer networks</p> <p>I understand what HTML is and recognize HTML tags</p> <p>I know a range of HTML tags</p> |

| | | | | | |
|--|--|--|--|---|--|
| | | <p>(Python (on Espresso) Level 6 <u>Random numbers and simulations</u></p> <ul style="list-style-type: none"> • Once or twice upon a time • Random colours) <p>E-Safety week activities</p> | | <p>Compose a soundtrack that can be added to a film project. (Garageband, Keezy)</p> | |
|--|--|--|--|---|--|

Useful apps, websites and programs to use

| Name | Use |
|-----------------------------|---|
| Kahoot.com (kahoot.it) | Online quizzes |
| Quiver app | Making 2d pictures come to life |
| Alex app | Code a character to move |
| PicCollage app | Photo collage |
| I Can Animate app | Take still pictures to create a video |
| Microbit | Amini computer like a raspbrry pi |
| Catchy Words App | AR / VR app – add letters into surroundings |
| Loti Bot | A robot like a beebot that can be programmed |
| Timelapse feature on camera | Timelapse video when doing a DT project |
| Garageband app | Make sounds using instruments and layer together to make a song |
| Book creator app | Make an electronic book with text, sound and pictures |
| Imovie app | Combine videos |
| Youtube.com | Add VR 360 to a search for 3d videos |
| BBC supermovers website | Dances to maths and GPS questions |
| Topmarks website | Educational games |
| Cbeebies website | Educational games |
| Cosmic kids youtube channel | Yoga videos |
| Beebot app | Code the beebot to move |
| Unroll me app | Logical thinking puzzles |

| | |
|-------------------------|--|
| Kodable app | Coding app |
| Calculator app | Draw sums and it answers automatically |
| ABCYA app | Animation with pictures |
| Bubble.us website | Create spider diagrams electronically |
| Wordle.net | Create word clouds (paste chn's work) |
| Espresso coding website | Coding |

Computing Curriculum – organised by objectives per Computing Theme

(Showing progression)

Information Technology

| | Year 1 | Year 2 |
|---------------|--|---|
| | Objectives | Objectives |
| Typing | <p>I can type words correctly on a digital device</p> <p>I can use space bar and delete key</p> <p>I can use enter/return to start a new line</p> <p>I can dictate sentences into a digital device</p> | <p>I can use space bar to make only one space between words and use touch/mouse to navigate to words to edit</p> <p>I can copy and paste text</p> <p>I can use cap locks for capital letters</p> <p>I can dictate longer passages into a digital device with punctuation</p> |
| Data | <p>I can sort images or text into two or more categories on a digital device.</p> <p>I can collect data on a topic.</p> <p>I can create a tally chart. (TL)</p> <p>I can record myself explaining what I have done and what it shows me. (Cam)</p> | <p>I can create range of charts such as bar, line (OLCT).</p> <p>I can orally record myself explaining what the data shows me. (cam)</p> |
| Presentations | <p>I can add labels to an image (P)</p> <p>I can order images to create a simple storyboard. (P)</p> <p>I can sequence a series of pictures to explain my understanding of a topic. (P)</p> | <p>I can add voice labels to an image.</p> <p>I can add a voice recording to a storyboard.</p> <p>I can add speech bubbles to an image to show what a character thinks.</p> <p>I can import images to a project from the web and camera roll</p> |
| Animation | <p>I can add filters and stickers to enhance an animation of a character. (chatterpix)</p> <p>I can create an animation to tell a story with more than one scene. (PP)</p> <p>I can add my own pictures to my story animation. (PP – pay)</p> | <p>I can create multiple animations of an image and edit these together. (CP and imovie)</p> <p>I can create a simple stop motion animation. (ICA)</p> <p>I can explain how an animation/flip book works (ICA)</p> |
| Photo / Video | <p>I can take photos and videos using a device</p> <p>I know where photos and videos are saved</p> <p>I can discuss which picture and videos look better than others</p> <p>I can use paint/drawing app to create a digital image</p> | <p>I can take pictures and select certain ones to create a piccolage</p> <p>I can evaluate and explain why some pictures are better than others</p> <p>I can edit a photo (crop, edit. Markup)</p> <p>I can select and use tools to create a digital image by controlling the pen and using a range of colours and pen styles</p> |
| VR and AR | <p>I can explore an interactive 360 image (YT)</p> <p>I can scan a trigger image to begin an AR experience (Q)</p> | <p>I can draw my own 360 image and explore it in VR. (ARM)</p> <p>I can bring objects into my surroundings using Augmented Reality. (F)</p> |

| | | |
|-------|--|---|
| | I can pretend to interact with an AR object (Q) | |
| Sound | I can create a sequence of sounds (instruments, apps/software) I can explore short and long sounds. I can record my voice and add different effects. | Create a musical composition using software I can record my own sound effects. I can record my voice over a compositions to perform a song. |

| | Year 3 | Year 4 | Year 5 | Year 6 |
|------------------------------------|---|--|--|---|
| | Objectives | Objectives | Objectives | Objectives |
| Typing | I can use index fingers on keyboard home keys (f/j), use left fingers for a/s/ d/f/g, and use right fingers for h/j/k/l I can edit the style and effect of my text and images to make my document more engaging and eye-catching. For example, borders and shadows. I can use cut, copy and paste to quickly duplicate and organise text. | Align text – centre, left, right Use font sizes appropriately for audience and purpose Save a document and know where and how to retrieve it Confidently and regularly use text shortcuts such as cut, copy and paste and delete to organise text Use spell check and thesaurus including through Siri and other AI technology | I can start to apply other useful effects to my documents such as hyperlinks. I can combine digital images and text to enhance my work I can organise and reorganise text on screen to suit a purpose | I can type with increasing speed with accuracy I can protect a document with a password I can use word count feature I can add page numbers |
| Data | I can start to input simple data into a spreadsheet to make a table. | I can create my own online multiple choice questionnaire. I can input data into a spreadsheet and export the data in a variety of ways: charts, bar charts, pie charts. I understand how data is collected. | I can create and publish my own online questionnaire and analyse the results. I can use simple formulae to solve calculations such as autosum I can edit and format cells in a spreadsheet (borders, size, font, bold) | I can edit and format cells in a spreadsheet (merge, columns width, align left) I can write spreadsheet formula to solve more challenging maths Problems (add and subtract cells etc) Sort data (A-Z, lowest to highest) Use filters |
| Presentations /web design / ebooks | I can create a simple comic with sounds, text and video (BC) I can create a simple digital mind map (BU) | I can create an interactive ebook with text, images and sound. I can create a presentation to present information | I can collaborate with peers using online tools (JB) I can create presentation and include a variety of media, animations, transitions (PPT) | I can create a multipage website including a range of media and hyperlinks I can evaluate my content |

| | | | | |
|---------------|--|--|--|--|
| | | | I can create a webpage and include a hyperlink (PUB) | |
| Animation | <p>I can create animations of faces to speak in role with more life-like realistic outcomes. (CP)</p> <p>I can improve stop motion animation clips with techniques like onion skinning. (ICA)</p> <p>I can use animation tools in presenting software to create simple animations. (ICA)</p> | <p>I can use software to create a 3D animated story. (ICA)</p> <p>I can take multiple animations of a character I have created and edit them together for a longer video. (ICA and IM)</p> | <p>I can record animations of different characters and edit them together to create an interview. (CP)</p> <p>I can add green screen effects to a stop motion animation. (ICA)</p> <p>I can create flip book animation using digital drawings and export as a video (FC)</p> | <p>I can mix animations and videos recordings of myself to create video interviews. (CP)</p> <p>I can plan, script and create a 3D animation to explain a concept or tell a story. (CP)</p> <p>I can choose and create different types of animations to best explain my learning. (ICA and IM)</p> |
| Photo / Video | <p>I can sequence video clips in a timeline and record a voiceover</p> <p>I can trim and cut film clips and add titles and transitions</p> <p>I can create my own movie trailer.</p> | <p>I can add music and sound effects to my films</p> <p>I can add animated titles and transitions</p> <p>I can add simple subtitles to a video clip.</p> | <p>I can use cutaway and split screen tools in iMovie.</p> <p>I can evaluate and improve the best video tools to best explain my understanding.</p> <p>I can further improve green screen clips using crop and resize and explore more creative ways to use the tool - wearing green clothes and the masking tool.</p> | <p>I can use the green screen masking tool with more than one character.</p> <p>I can use picture in picture tools in iMovie.</p> <p>I can add animated subtitles to my film to further enhance my creation.</p> <p>I can create videos using a range of media - green screen, animations, film and image.</p> |
| VR and AR | <p>I can create my own digital 360 image and explore it in VR (ARM)</p> <p>I can create my own images and bring it into my surroundings through AR. (ARM)</p> | <p>I can create my own 360 video. (ARM)</p> <p>I can add multiple objects into my surroundings through AR to explain a concept. (ARM)</p> | <p>I can create an interactive VR experience.</p> <p>I can create an animated object and bring it into my surroundings through AR</p> <p>I can create an AR experience using objects I have created to explain a concept.</p> | <p>I can create an interactive poster using AR</p> <p>I can explain how VR and AR works.</p> |
| Sound | <p>I can create and edit purposeful compositions using music software to create mood or a certain style</p> | <p>Create a simple four chord song following the correct rhythm. (K)</p> | <p>Add voice over and edit sound clips (volume, pitch, fade, effect) to create a podcast.</p> | <p>Add voice over and edit sound clips (volume, pitch, fade, effect) to use in a film or radio broadcast (podcast) (GB)</p> |

| | | | | |
|--|--|---|---------------------------------------|---|
| | I can experiment with live loops to create a song. | I can record a radio broadcast or audiobook. (VN) | Create a remix of a popular song. (K) | Compose a soundtrack that can be added to a film project. (K) |
|--|--|---|---------------------------------------|---|

Computer Science

| | Year 1 | Year 2 |
|-----------------------------------|--|--|
| | Objectives | Objectives |
| Computational thinking and coding | <p>I understand what algorithms are I can write simple algorithms I understand the sequence of algorithms is important I can debug simple algorithms I understand that algorithms are implemented as programs on digital devices</p> <p>I can create a simple program e.g. sequence of instructions for a Bee Bot I can use sequence in programs I can locate and fix bugs in my program</p> | <p>I can write algorithms for everyday tasks I can use logical reasoning to predict the outcome of algorithms I understand decomposition is breaking objects/processes down I can implement simple algorithms on digital devices I can debug algorithms</p> <p>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</p> |
| Computer networks | N/A | N/A |

| | Year 3 | Year 4 | Year 5 | Year 6 |
|-----------------------------------|---|---|---|--|
| | Objectives | Objectives | Objectives | Objectives |
| Computational thinking and coding | <p>Program a sequence of actions that execute at different times</p> <p>program a sequence of actions to create a simple animation</p> <p>use the above to design, write and debug your own app</p> | <p>Use coding to add points to a game</p> <p>Add variable to a game</p> <p>Change the background to an app</p> <p>Add audio and music to an app</p> | <p>Use coding to add a score to a game</p> <p>Add more than multi variable to a game</p> <p>Add and code a range of sprites in one game</p> | <p>Understand code to generate random elements (numbers, adjectives, colours, shapes)</p> <p>Understand code to generate a loop</p> <p>Understand code to generate</p> |

| | | | | |
|-------------------|---|---|---|---|
| | <p>use 'if' statements to program a maze game</p> <p>use 'if-hit' statements to check if objects have collided</p> <p>Use the above skills to create own game</p> | <p>Use co-ordinates for x and y in coding for positions</p> <p>Understand where a code has been entered incorrectly (debug)</p> <p>Use the above skills to create own app or game</p> | <p>Add code to use keys to move a sprite round the screen</p> <p>Explain what the code means and explain what will happen (e.g object will move 10 spaces etc)</p> <p>Understand where a code has been entered incorrectly (debug)</p> <p>Use the above skills to create own game</p> | <p>Use code to command the program to type things back to you</p> <p>Use script mode to code the program to type things back to you</p> <p>Use input statements to talk to the code decisions</p> |
| Computer networks | <p>I understand that computers in a school are connected together in a network</p> <p>I understand why computers are networked</p> <p>I understand the difference between the Internet and the World Wide Web (WWW)</p> | <p>I understand that servers on the Internet are located across the planet</p> <p>I understand how email is sent across the Internet</p> <p>I understand how the Internet enables us to collaborate</p> | <p>I understand how we view web pages on the Internet</p> <p>I use search technologies effectively</p> <p>I appreciate how pages are ranked in a search engine</p> | <p>I understand what HTML is and recognize HTML tags</p> <p>I know a range of HTML tags</p> |

Digital Literacy / E-Safety

| | Year 1 | Year 2 |
|-----------------------------|---|--|
| | Objectives | Objectives |
| Digital Literacy / E-Safety | <p>Understand that personal information should be kept private and not put online</p> <p>I can recognise that there may be people online that make me feel sad or upset</p> <p>I can explain why it is important to be considerate and kind to people online</p> <p>I can describe how to behave online in ways that does not upset others</p> <p>I recognise that information online can be copied</p> <p>I can use the internet to find things</p> <p>I can recognise examples of information that is personal to me (where I live, family name, my school)</p> <p>I can explain how passwords can be used to protect information and devices</p> | <p>Can identify where to go for help if concern about the internet</p> <p>I can describe ways in which people might make themselves look different online</p> <p>I can give examples of how things online might make me feel sad, worried, uncomfortable or frightened.</p> <p>I understand how online bullying can make someone feel</p> <p>I can give examples of ways I could communicate with people over the internet</p> <p>I understand that information put online can last for a long time.</p> <p>I can use keywords in search engines</p> <p>I can explain the difference between 'made up' things and 'real things'</p> <p>I can describe why other people's work belongs to them</p> <p>I can recognise that content on the internet may belong to other people (copyright)</p> |

| | Year 3 | Year 4 | Year 5 | Year 6 |
|-----------------------------|--|--|--|--|
| | Objectives | Objectives | Objectives | Objectives |
| Digital Literacy / E-Safety | I can explain what is meant by the term identity | I can explain how my online identity can be different to the identity I present in real life | I can demonstrate responsible choices about my online identity | I can challenge and explain why it is important to reject and report inappropriate messages. |

| | | | |
|--|--|--|---|
| <p>I can explain ways in which I might change my identity online (avatar)</p> <p>I can explain the risks of communicating online with others I don't know well.</p> <p>I can recognise I need to be careful before I share anything about myself online</p> <p>I can explain what online bullying is and describe some examples</p> <p>I can use key phrases in search engines</p> <p>I can explain the difference between 'belief', an 'opinion' and a 'fact'.</p> <p>I can give reasons why I should only share information with people I choose to, and can trust.</p> <p>I can describe simple strategies for creating and keeping passwords private</p> | <p>I can explain why I should be careful who I trust online and what information I share with them.</p> <p>I can give examples of how to be respectful online</p> <p>I can explain ways that information about me online could have been created, copied or shared by others</p> <p>I can describe ways in which people can be bullied online (image, video, text)</p> <p>I can analyse information and differentiate between 'beliefs', 'opinions' and 'facts'.</p> <p>I can explain that lots of people sharing the same opinion/belief online does not make it true.</p> <p>I can explain what a strong password is.</p> <p>I can explain that others online can pretend to be me or other people</p> | <p>I can explain that there are some people online that might want to harm me or my friends.</p> <p>I can recognise when someone is upset, hurt or angry online.</p> <p>I can describe how to get help for someone that is being bullied online and assess when I need to do or say something or tell someone</p> <p>I can describe ways that information about people online can be used by others to make judgements about an individual.</p> <p>I can explain key concepts – data, information, fact, opinion, belief, true, false, valid, reliable, evidence</p> <p>I can explain why information that is on a large number of sites may still be inaccurate (people sharing)</p> <p>I can create and use strong and secure passwords</p> <p>I can explain how and why many apps or services may read and share my private information(friends, contacts, likes, images, videos etc)</p> | <p>I can describe issues online that might make me or others feel sad, worried, uncomfortable or frightened.</p> <p>I can describe how to capture bullying content as evidence (screen grab, URL, record)</p> <p>I can identify a range of ways to report concerns both in school and at home</p> <p>I understand my responsibilities for the well being of others in my online social group and can demonstrate how I would support others</p> <p>I can describe some simple ways that help to build a positive online reputation.</p> <p>I can explain how search engines work and how results are selected and ranked.</p> <p>I can explain how and why some people present 'opinions' as 'facts' and can define the terms influence, manipulation, persuasion.</p> <p>I know what to do if my password is lost or stolen</p> <p>I can describe simple ways to increase privacy on apps and services.</p> <p>I can describe strategies to help me identify scams and phishing.</p> |
|--|--|--|---|