



Curriculum Class 2

Year A

Computer Art Online Safety

Autumn 1

- Switch between program tools to produce different techniques.
 - Alter the formatting of a tool to adjust the colour or size.
 - Recreate a piece of art using a computer program.
 - Manipulate shapes and objects to recreate an art style.
 - Select appropriate tools with confidence and independence.
-
- access an appropriate program for achieving a specific task;
 - switch between program tools to produce different techniques;
 - alter the formatting of a tool to adjust the colour or size
 - recreate a piece of art using a computer program;
 - manipulate shapes and objects to recreate an art style.
 - select appropriate tools with confidence and independence.

Computer Skills Online Safety

Autumn 2

- Click and drag with a mouse or trackpad.
 - Switch on and shutdown a computer independently.
 - Launch an application by double clicking it. Log on and log off on a computer independently.
 - Manipulate an application window by moving and resizing it.
 - Confidently double click with a mouse or trackpad.
 - Save their work in their folder independently
-
- Click and drag with a mouse or trackpad.
 - Switch on and shutdown a computer independently.
 - Launch an application by double clicking it. Log on and log off on a computer independently.
 - Manipulate an application window by moving and resizing it.
 - Confidently double click with a mouse or trackpad.
 - Save their work in their folder independently

Programming Toys Online Safety

Spring 1

- create step-by-step instructions using pictures;
- write and follow detailed step-by-step instructions;
- direct a Bee-Bot (or similar programmable toy) to a toy;

- program a Bee-Bot (or similar programmable toy), one instruction at a time, using the arrow buttons. say what an algorithm is;
 - say why it is important to be precise when writing an algorithm;
 - check their work for mistakes (debug);
 - program a Bee-Bot (or similar programmable toy) using the arrow buttons; start their programming sequence again if they need to;
 - check their work for mistakes to debug a program;
 - plan and check an algorithm, see how a product changes when they change the instructions;
 - evaluate and improve their sequence (debug)
-
- Write detailed instructions to direct the Bee-bot from one place to another on a Bee-bot mat
 - check their work for mistakes to debug a program;
 - evaluate and improve their sequence (debug)

Programming with ScratchJnr Online Safety

Spring 2

- open the ScratchJr app and start a new project;
 - add new characters and backgrounds;
 - use blocks for movement in different directions;
 - create short sets of sequenced instructions.
 - use different end blocks, including repeat forever;
 - change the size of characters to grow or shrink;
 - hide and show characters with an instruction block;
 - program two or more characters with instructions at the same time.
 - use a repeat block for a section of instructions and specified number of times;
 - predict the behaviour of a character, based on a sequence of instructions;
 - edit the colours and other features of characters or sprites;
 - create longer sequences of more complex instructions.
-
- Draw lines of different lengths using the fd command.
 - Move blocks into the Scripts Area.
 - Snap blocks together to combine commands.
 - Turn the turtle using rt 90 and lt 90.
 - Draw squares and rectangles.
 - Create simple algorithms using a number of different blocks.
 - Use the repeat and green flag blocks to control algorithms.

Word Processing Online Safety

Summer 1

- Type with two hands.
- Use shift, space and enter correctly.
- Use undo and redo.
- Make text bold, italic or underline
- Save their work in their folder.
- Edit text using backspace, delete and the arrow keys.
- Format the font.

- Select single words.
- Have some knowledge of the location of letters and symbols on the keyboard.
- Select text in different ways.
- Type with two hands.
- Use shift, space and enter correctly.
- Use undo and redo.
- Make text bold, italic or underline
- Save their work in their folder.
- Edit text using backspace, delete and the arrow keys.
- Format the font.
- Select single words.
- Have some knowledge of the location of letters and symbols on the keyboard.
- Select text in different ways.

Using and applying computing Online Safety

Summer 2

- type letters and symbols, including use of the shift key;
- format text in different ways (bold, italic, underline);
- draw different shapes using paint software;
- use a brush in a paint application and change the size and colour.
- click, double-click and drag objects;
- save and open files;
- make shapes [in Paint software] the size they desire;
- position shapes correctly;
- select and compare different brush types. move, resize, minimise and restore windows;
- select text and change the size, type or colour;
- use Undo and Redo effectively; edit text using the arrow keys and delete or backspace buttons;
- create a particular image using shapes or brush tools;
- choose the best brush style for a purpose.
- find and open software for creating computer art; add text and images to a presentation; retrieve/open a file from a saved location;
- select a relevant backdrop and character within Scratch;
- add a second character and position on the backdrop within Scratch.
- control the mouse to produce different effects (dots/lines);
- use computer paint skills in a new context;
- add new slides to a presentation with a main idea on each slide;
- insert and reorder slides;
- make a character move within Scratch.
- reproduce an image using a particular artistic style;
- compare different styles of computer art;
- review and edit a presentation;
- link actions and text to a theme within Scratch;

- add code for a pair or series of speech bubbles within Scratch.

Year B

Online Safety

Autumn 1

- Switch between program tools to produce different techniques.
 - Alter the formatting of a tool to adjust the colour or size.
 - Recreate a piece of art using a computer program.
 - Manipulate shapes and objects to recreate an art style.
 - Select appropriate tools with confidence and independence.
-
- access an appropriate program for achieving a specific task;
 - switch between program tools to produce different techniques;
 - alter the formatting of a tool to adjust the colour or size
 - recreate a piece of art using a computer program;
 - manipulate shapes and objects to recreate an art style.
 - select appropriate tools with confidence and independence.

Using the Internet

Autumn 2

- search using the words "for kids";
 - follow a weblink;
 - locate their own blog;
 - understand how to blog safely and responsibly.
-
- search using the words "for kids";
 - follow a weblink;
 - locate their own blog;
 - understand how to blog safely and responsibly.
 - identify search results that will give some useful information;
 - know where to find the address of a link;
 - log in and post a blog or comments.
 - recognise common websites to which search results are linked;
 - upload photos to a blog.

Preparing for Turtle Logo

Spring 1

- give clear accurate instructions.
 - give instructions in order. write an algorithm.
 - check an algorithm.
 - turn right 90 and left 90
-
- give clear accurate instructions.
 - give instructions in order. write an algorithm.
 - check an algorithm.
 - turn right 90 and left 90

Programming Turtle Logo and Scratch

Spring 2

- Draw lines of different lengths using the fd command.

- Move blocks into the Scripts Area.
- Snap blocks together to combine commands.
- Turn the turtle using rt 90 and lt 90.
- Draw squares and rectangles.
- Create simple algorithms using a number of different blocks.

- Draw lines of different lengths using the fd command.
- Move blocks into the Scripts Area.
- Snap blocks together to combine commands.
- Turn the turtle using rt 90 and lt 90.
- Draw squares and rectangles.
- Create simple algorithms using a number of different blocks.
- Use the repeat and green flag blocks to control algorithms.
- Write an algorithm for a shape.
- Use the repeat command.
- Combine a range of blocks to achieve a purpose.
- Use more than one sprite and combine algorithms.

Presentation Skills

Summer 1

- Insert slides, add and type in a text box
- Create folders.
- Print files.
- Add images.
- Format text and text boxes.
- Save files in an organised folder structure.
- Search for files on the computer.
- Set windows side by side.
- Format text boxes and images.
- Reorder slides and present their presentation.

- Insert slides, add and type in a text box
- Create folders.
- Print files.
- Add images.
- Format text and text boxes.
- Save files in an organised folder structure.
- Search for files on the computer.
- Set windows side by side.
- Format text boxes and images.
- Reorder slides and present their presentation.

Using and Applying

Summer 2

- find and open software for creating computer art; add text and images to a presentation; retrieve/open a file from a saved location;
- select a relevant backdrop and character within Scratch;

- add a second character and position on the backdrop within Scratch.
 - control the mouse to produce different effects (dots/lines);
 - use computer paint skills in a new context;
 - add new slides to a presentation with a main idea on each slide;
 - insert and reorder slides;
 - make a character move within Scratch.
 - reproduce an image using a particular artistic style;
 - compare different styles of computer art;
 - review and edit a presentation;
 - link actions and text to a theme within Scratch;
 - add code for a pair or series of speech bubbles within Scratch.
-
- find and open software for creating computer art; add text and images to a presentation; retrieve/open a file from a saved location;
 - select a relevant backdrop and character within Scratch;
 - add a second character and position on the backdrop within Scratch.
 - control the mouse to produce different effects (dots/lines);
 - use computer paint skills in a new context;
 - add new slides to a presentation with a main idea on each slide;
 - insert and reorder slides;
 - make a character move within Scratch.
 - reproduce an image using a particular artistic style;
 - compare different styles of computer art;
 - review and edit a presentation;
 - link actions and text to a theme within Scratch;
 - add code for a pair or series of speech bubbles within Scratch.



Curriculum Class 3

Year A

Online Safety

Autumn 1

- recognise cyberbullying;
- identify a safe person to tell if they encounter cyberbullying;
- know that cyberbullying can happen via a range of devices;
- identify adverts online;
- identify a targeted advert;
- explore how companies use websites to promote products;
- create a strong password;
- explain why a strong password is important;
- explain what privacy settings are;
- discuss email as a form of communication;
- identify an email that they should not open;
- write an email with an address and subject;
- know how to safely send an email;
- know how to safely receive an email;
- identify online
- recognise and define cyberbullying and the affect it has;
- give examples of people they can report cyberbullying to and explain why they are good choices;
- give examples of how cyberbullying can happen via a range of devices;
- identify a range of targeted online adverts and how they are used;
- explain how companies use websites and other online methods to promote products;
- create a strong password, explaining why it is important and giving tips to help others create a strong password;
- explain what privacy settings are, why they are important and how they can be used safely;
- discuss the benefits and disadvantages of email as a form of communication;
- explain how to identify an email that may be unsafe to open;
- write a clear email, explaining why an address and subject is important, and know how to send it;
- explain what an online community is and how people belong to them;
- identify and explain different forms of online communication;
- share and explain what they have learnt about online safety, recalling key facts;

- define cyberbullying;
- know how to respond to a hurtful message or comment online;
- access a trusted search engine;
- understand that different search terms give different results;

- know what plagiarism is;
- identify which information to keep private online;
- explain what digital citizenship is;
- tell someone else at least one way to stay safe online.
- identify comments or messages that may be hurtful to others;
- edit their own messages and comments to make sure they are kind;
- understand that search results are ranked;
- choose an appropriate number of words for a search term;
- explain how to use other people's work respectfully;
- explain why it may be dangerous to share private information;
- explain how to be a good digital citizen;
- tell someone else more than one way to stay safe online
- understand why other people may be hurt by messages or comments;
- consider the differences and similarities between online and real-life communication;
- identify factors that affect the ranking of search results;
- use strategies which improve results when searching online;
- look for citations online;
- write a citation;
- understand why some websites ask for registration information;
- explain how being a good digital citizen is linked to being a good citizen in real life;
- advise others on the key ways to stay safe online.

Internet research and communication

Autumn 2

- know what the Internet is and how it can be used.
- show some understanding that the Internet travels from an original place to a web server and back again.
- identify what the Internet is and how it works, including how packets of data move along routes and the different connections that can be used.
- use a search engine to find information and implement strategies to improve results when searching online, including using keywords.
- are confident in explaining the difference between the Internet and the World Wide Web, how the Internet works and the different connections that can be used.
- independently explain the concept of packet switching when routes are obstructed.
- use search tools to find and use an appropriate website and its content; refining their search terms by using keywords and filters.
- Children can recognise different methods of online communication and begin to think about the positives and negatives of communicating online. Children will be able to understand features of email and recognise warning signs of spam emails.
- Children understand how to send and receive emails.
- Children are confident in recognising different methods of online communication and can identify the positives and negatives of communicating online.
- Children can identify and recognise features of email and demonstrate an understanding of spam emails and phishing.
- Children will be able to send emails using the CC feature.
- Children are confident in identifying different methods of online communication and can explain the positives and negatives of communicating online in detail, giving examples.
- Children are confident in identifying features of email and explain the warning signs of spam and phishing emails.
- Children will be able to confidently send emails using the CC and BCC features.

Word Processing

Spring 1

- Use undo and redo.
 - Make text bold, italic or underline.
 - Select text in different ways.
 - Change case.
 - Align text.
 - Select single words.
 - Cut, copy and paste text.
 - Format the font.
 - Insert images.
 - Copy a screenshot into another application.
 - Use a secure password.
 - Use keyboard shortcuts.
 - Select text in different ways.
 - Format images.
 - Use an effective layout.
 - Use the Snipping Tool.
 - Use bullets and numbering effectively.
 - Insert and format text boxes effectively.
-
- select, edit and manipulate text in different ways;
 - insert an image into a document;
 - format an image;
 - use formatting tools to improve the layout;
 - use the spellcheck tool;
 - insert a simple table;
 - change the size of the page.
 - change the layout by using the column tool;
 - change the orientation of the page;
 - copy the URL that they need.
 - use some of the main keyboard shortcuts;
 - suggest ways to improve a layout;
 - apply specific effects to an image;
 - add a spelling to the spelling dictionary;
 - add or delete rows or columns in a table;
 - suggest ways to change a table;
 - type at an appropriate speed;
 - choose a relevant website to link a document to;
 - create a hyperlink.
 - change a homophone that is in the incorrect form;
 - format the borders of the cells within a table;
 - apply their knowledge of tools and techniques to improve the layout of a document;

- change the background colour of the page;
- format a hyperlink and find an appropriate place to insert it.

Animation

Spring 2

- Explain what is meant by animation.
 - Create a series of linked frames that can be played as a short animation.
 - Control and adjust a time slider to locate a different point in a film clip.
 - Insert images to create a simple stop motion animation short film clip.
 - Evaluate the advantages and disadvantages of some animation software.
-
- Explain what is meant by animation.
 - Create a series of linked frames that can be played as a short animation.
 - Control and adjust a time slider to locate a different point in a film clip.
 - Insert images to create a simple stop motion animation short film clip.
 - Evaluate the advantages and disadvantages of some animation software.
 - Explain how computer software has improved animation techniques. Edit and refine still images with multiple layers of onion skins. Make extensive use of a time slider to animate multiple objects simultaneously.
 - Use a webcam or digital camera to create their own images for a stop motion animation short film clip.
 - Recognise limitations of animation software and suggest improvements. Describe one or more traditional methods of animation.
 - Make slight changes to an image using onion skinning, understanding the term.
 - Use a time slider to find a specific point in a film clip to insert or edit an object.
 - Edit and refine images in a stop motion animation short film clip.
 - Compare different animation software by looking at its advantages and disadvantages.

Turtle Logo Scratch

Summer 1

- Create and debug algorithms to
 - draw regular polygons using the repeat command/ block (Turtle Logo and Scratch)
 - Draw shapes with spaces between using penup and pendown (Turtle Logo)
 - Change and alter the pen settings (Scratch)
 - Draw regular polygons using Logo to calculate the angle (Turtle Logo)
 - Create and debug algorithms to draw patterns by repeating regular polygons (Scratch)
-
- Write procedures using simple algorithms.
 - Change the colour of the pen.
 - Write text using the label command.
 - Draw shapes using setpos or setxy.
 - Fill shapes in different colours.
 - Draw arcs of different sizes as required.
 - Create sophisticated algorithms and procedures.
 - Include procedures with variables.

Scratch Questions and Quizzes

Summer 2

- Create and debug algorithms to
- draw regular polygons using the repeat command/ block (Turtle Logo and Scratch)
- Draw shapes with spaces between using penup and pendown (Turtle Logo)

- Change and alter the pen settings (Scratch)
- Draw regular polygons using Logo to calculate the angle (Turtle Logo)
- Create and debug algorithms to draw patterns by repeating regular polygons (Scratch)
- Write a program which accomplishes a specific goal.
- Create a program that includes a logical sequence. Debug a program they have written.
- Use repetition and selection.
- Work with variables and adjust these depending on the effect they wish to create. • Understand and use the duplicate function. • Demonstrate that they understand how to combine a range of different effects to create their own quiz.
- Design a program.
- Successfully decompose a problem into its smaller parts.
- Analyse the software to check it is fit for purpose.
- Build on their existing knowledge to experiment and innovate when programming.

Year B

Online Safety

Autumn 1

- recognise cyberbullying;
- identify a safe person to tell if they encounter cyberbullying;
- know that cyberbullying can happen via a range of devices;
- identify adverts online;
- identify a targeted advert;
- explore how companies use websites to promote products;
- create a strong password;
- explain why a strong password is important;
- explain what privacy settings are;
- discuss email as a form of communication;
- identify an email that they should not open;
- write an email with an address and subject;
- know how to safely send an email;
- know how to safely receive an email;
- identify online
- recognise and define cyberbullying and the affect it has;
- give examples of people they can report cyberbullying to and explain why they are good choices;
- give examples of how cyberbullying can happen via a range of devices;
- identify a range of targeted online adverts and how they are used;
- explain how companies use websites and other online methods to promote products;
- create a strong password, explaining why it is important and giving tips to help others create a strong password;
- explain what privacy settings are, why they are important and how they can be used safely;
- discuss the benefits and disadvantages of email as a form of communication;
- explain how to identify an email that may be unsafe to open;
- write a clear email, explaining why an address and subject is important, and know how to send it;

- explain what an online community is and how people belong to them;
- identify and explain different forms of online communication;
- share and explain what they have learnt about online safety, recalling key facts;
- define cyberbullying;
- know how to respond to a hurtful message or comment online;
- access a trusted search engine;
- understand that different search terms give different results;
- know what plagiarism is;
- identify which information to keep private online;
- explain what digital citizenship is;
- tell someone else at least one way to stay safe online.
- identify comments or messages that may be hurtful to others;
- edit their own messages and comments to make sure they are kind;
- understand that search results are ranked;
- choose an appropriate number of words for a search term;
- explain how to use other people's work respectfully;
- explain why it may be dangerous to share private information;
- explain how to be a good digital citizen;
- tell someone else more than one way to stay safe online
- understand why other people may be hurt by messages or comments;
- consider the differences and similarities between online and real-life communication;
- identify factors that affect the ranking of search results;
- use strategies which improve results when searching online;
- look for citations online;
- write a citation;
- understand why some websites ask for registration information;
- explain how being a good digital citizen is linked to being a good citizen in real life;
- advise others on the key ways to stay safe online.

Word processing

Autumn 2

- Use undo and redo.
- Make text bold, italic or underline.
- Select text in different ways.
- Change case.
- Align text.
- Select single words.
- Cut, copy and paste text.
- Format the font.
- Insert images.
- Copy a screenshot into another application.
- Use a secure password.
- Use keyboard shortcuts.

- Select text in different ways.
 - Format images.
 - Use an effective layout.
 - Use the Snipping Tool.
 - Use bullets and numbering effectively.
 - Insert and format text boxes effectively.
-
- select, edit and manipulate text in different ways;
 - insert an image into a document;
 - format an image;
 - use formatting tools to improve the layout;
 - use the spellcheck tool;
 - insert a simple table;
 - change the size of the page.
 - change the layout by using the column tool;
 - change the orientation of the page;
 - copy the URL that they need.
 - use some of the main keyboard shortcuts;
 - suggest ways to improve a layout;
 - apply specific effects to an image;
 - add a spelling to the spelling dictionary;
 - add or delete rows or columns in a table;
 - suggest ways to change a table;
 - type at an appropriate speed;
 - choose a relevant website to link a document to;
 - create a hyperlink.
 - change a homophone that is in the incorrect form;
 - format the borders of the cells within a table;
 - apply their knowledge of tools and techniques to improve the layout of a document;
 - change the background colour of the page;
 - format a hyperlink and find an appropriate place to insert it.

Internet research and communication

Spring 1

- know what the Internet is and how it can be used.
 - show some understanding that the Internet travels from an original place to a web server and back again.
 - identify what the Internet is and how it works, including how packets of data move along routes and the different connections that can be used.
 - use a search engine to find information and implement strategies to improve results when searching online, including using keywords.
 - are confident in explaining the difference between the Internet and the World Wide Web, how the Internet works and the different connections that can be used.
 - independently explain the concept of packet switching when routes are obstructed.
 - use search tools to find and use an appropriate website and its content; refining their search terms by using keywords and filters.
-
- explore the different ways we can communicate online.

- identify different forms of online communication.
- discuss the differences between online and offline communication.
- understand the positives and negatives of communicating online.
- explain the positive and negative aspects of online communication.

Drawing and desktop publishing.

Spring 2

- Draw objects.
- Insert text boxes and images.
- Order and group objects.
- Move, resize and arrange text boxes and images effectively.
- Manipulate objects.
- Create a layout of objects with no unnecessary space using colour and font effectively.

Presentation skills

Summer 1

- create a simple presentation
 - create shapes
 - create a hyperlink to another slide
 - use slide transitions
 - insert audio and video files (where possible)
 - record audio onto a slide
 - plan a branching story
 - create simple slide templates
 - copy and organise slides as required
 - use animations to introduce objects to a slide
 - find out which audio and video formats work in a particular presentation application • can set when the audio or video plays • can evaluate the layout of presentation slides effectively
-
- create a presentation
 - create a hyperlink to another slide
 - use slide transitions
 - insert audio and video files
 - record audio onto a slide
 - plan a branching story
 - create simple slide templates
 - copy and organise slides as required
 - use animations to introduce objects to a slide
 - find out which audio and video formats work in a particular presentation application
 - can set when the audio or video plays evaluate the layout of presentation slides effectively

Turtle Logo and Scratch.

Summer 2

- Create and debug algorithms to
- draw regular polygons using the repeat command/ block (Turtle Logo and Scratch)
- Draw shapes with spaces between using penup and pendown (Turtle Logo)
- Change and alter the pen settings (Scratch)

- Draw regular polygons using Logo to calculate the angle (Turtle Logo) • Create and debug algorithms to draw patterns by repeating regular polygons (Scratch)
- Write procedures using simple algorithms.
- Change the colour of the pen.
- Write text using the label command.
- Draw shapes using setpos or setxy. Fill shapes in different colours.
- Draw arcs of different sizes as required.
- Create sophisticated algorithms and procedures.
- Include procedures with variables.



Curriculum Class 4

Year A

Spreadsheets

Autumn 1

- Enter text and numbers into a spreadsheet.
- Identify and refer to cells by row and column.
- Begin to enter formulae with the SUM function.
- Enter and edit text.
- Numbers and formulae purposefully and independently.
- Understand the advantages of spreadsheets over comparative manual methods.
- Explore further functions.
- Select data and create graphs with appropriate formatting.
- Design their own spreadsheet for a specific purpose and present it appropriately
- Be able to enter formulae into cells.
- Edit data and discuss the effect on results.
- Use further functions including AVERAGE, MIN and MAX.
- Create graphs.
- Design their own spreadsheet for a specific purpose.

Kodu Programming

Autumn 2

- Add objects to a world and program them using When and Do instructions.
- Plan and design the features of an original virtual environment.
- Program a character to move around a track.
- Create a path for a character to follow.
- Follow instructions given in the Kodu programming environment.
- Describe the actions of a sequence of Kodu commands.
- Use tools to change the size of the ground and raise or lower the landscape.
- Decompose code into smaller parts and explain it in their own words.
- Create a race track with an end goal for a game.
- Program a character to follow a path.
- View existing code and explain how it works.
- Create unique worlds with particular attention to detail in the addition of appropriate objects.
- Use ideas from existing codes to adapt and write their own programs.
- Edit and refine a race track design to improve playability.
- Adjust character and path settings to create an appealing game.

Film Making

Spring 1

- plan and write a script using appropriate software;
- search for relevant information using appropriate websites;

- use a digital video camera (or similar device) to record;
- plan suitable questions to ask an interviewee; • import video files into video editing software. plan additional elements for film-making such as locations and props;
- evaluate whether information is reliable or not;
- speak clearly into the camera when being recorded;
- frame an appropriate filming shot when interviewing;
- arrange video files to form a complete film.
- structure the timing of sections to meet a given running time;
- cross-check information using different sources;
- use a variety of camera angles and shots to record;
- improvise and react to responses by an interviewee;
- preview a movie project using software and refine, based on the preview;

Online Safety

Spring 2

- identify a spam email;
- explain what to do with spam email;
- understand why they should cite a source;
- explain the rules for creating a strong password;
- create a strong password using a set of rules;
- know that not everything they see online is true;
- explain how to stay safe online;
- identify unsafe online behaviour.
- explain the steps to take to avoid receiving spam;
- cite a website;
- explain why having a strong password is important;
- understand how false photographs can make people feel bad about themselves.
- identify a dangerous spam email;
- create multiple strong passwords for use across different platforms;
- spot citations online;
- alter a photograph.
- say what bullying and cyberbullying are;
- say how people should deal with cyberbullying;
- understand why I should ask an adult if I am unsure;
- identify warning signs that a website might not be secure;
- identify personal information;
- explain what to do if I am asked or told something online which makes me uncomfortable;
- explain some of the dangers of revealing personal information to an online friend;
- choose an appropriate action online to stay safe;
- understand how a stereotype can be harmful.
- explain why cyberbullying can be as harmful as in-person bullying;
- find a link to a privacy policy;
- identify a gender stereotype in a media message

- look in the address bar of a website so check for security;
- identify the lock symbol in an address bar;
- explain why someone might have an online friendship;
- explain what the SMART acronym means;
- explain what a stereotype is; • compare gender stereotypes

Animated Stories

Summer 1

- move and edit blocks as part of an algorithm.
- program an algorithm as a sequence of game instructions with actions and consequences.
- add additional effects and features, such as sound or point scoring, to enhance the appeal of a game.
- select appropriate sprites to fit within a scene and use costume changes for motion effect.
- use the broadcast message and receive block to structure and control the timing of events.
- insert the show and hide block into an algorithm and locate the correct place to make a sprite appear visible
- select appropriate sprites and backdrops and plan a sequence of an animated story using timings
- order a series of backdrops to create a story narrative and narrate events with required timings.
- record a sound to enhance an animated story and insert blocks to play the recorded sounds,
- select appropriate sprites to fit within a scene, use costume changes for motion effects and use a succession of glide commands
- use the broadcast message and receive block to structure and control the timing of events and combine these broadcasts into a sequence of actions.
- insert the show and hide block into an algorithm , locate the correct place to make a sprite appear visible and make a sprite invisible when it is not active in the code.
- select appropriate sprites and backdrops, plan a sequence of an animated story using timings and plan an algorithm to make sprites and backdrops work in a sequence.
- order a series of backdrops to create a story narrative, narrate events with required timings and use algorithms on sprites and backdrops to create a story.
- record a sound to enhance an animated story, insert blocks to play the recorded sounds and match the timings of sounds with speech bubbles.

Applying and Using Skills

Summer 2

- SketchUp (3D Modelling)
- Internet Research
- Radio Station
- Flowol (controlling devices)
- Scratch
- Spreadsheet
- Kodu Programming
- Film-Making
- Webpage Design

Year B

Flowol Controlling Devices

Autumn 1

- Follow written instructions to draw a simple flowchart.
- Insert symbols into a flowchart.
- Add inputs into a flowchart.
- Identify conventional symbols, understanding the process of each stage.
- Create a program to control a simple sequence.
- Modify symbols in a flowchart for effect.
- Create flowcharts for multiple inputs and outputs.
- Use decisions and subroutines.
- Program inputs and outputs.
- Solve a given problem independently with a flowchart solution, organized into multiple subroutines.
- Create a program to control a sequence with variables.

Radio Station

Autumn 2

- Record and play their own sounds in recording software
- Import an existing sound file into recording software to play
- Choose appropriate software for sound recording
- Plan and record a radio advert Listen to and improve on their own recordings by re-recording
- Locate and download existing sound files to be imported into recording software
- Combine two or more tracks to make a new, original recording
- Plan and record appropriate audio content for a podcast
- Evaluate what features makes good quality audio content Enhance sound recordings using software effects
- Be discerning about the digital content of existing sound files and their suitability
- Rehearse and improve script ideas based on their own evaluation
- Present audio information confidently and clearly

Internet Research and Webpage Design

Spring 1

- search for information using appropriate search engines.
- refine their searches using appropriate keywords.
- begin to use strategies to check the reliability of information on web pages.
- begin to explain how search engines work using some key vocabulary.
- talk about the way search results are selected and ranked.
- explain what search engine optimisation (SEO) is.
- search for information using appropriate search engines and can refine their search terms by using keywords.
- refine their searches using Boolean operators with some guidance.
- use strategies to check the reliability of information on web pages.
- explain how search engines work using key vocabulary, such as web indexing and web crawlers
- understand that search results are ranked and can explain how page ranking works

- explain what search engine optimisation (SEO) is and can suggest some SEO improvements for a web page.
- search for information using appropriate search engines and can refine their search terms by using keywords and Boolean operators
- confidently use strategies to check the reliability of information on web pages
- explain, with confidence, how search engines work using correct terminology and key vocabulary,
- understand that search results are ranked and can confidently explain how page ranking works.
- explain what search engine optimisation (SEO) is and can confidently suggest some SEO improvements for a web page.

3D Modelling

Spring 2

- Draw 2D shapes or lines.
- Draw simple 3D models.
- Manipulate 2D shapes into 3D shapes.
- Import 3D models from the 3D warehouse.
- Use a range of SketchUp tools including: shape, push, pull, orbit, pan, zoom, erase and fill.
- Draw and manipulate 3D models independently.
- Use inference points to draw lines and shapes.
- Use a wide range of SketchUp tools and concepts including: the dimensions toolbar and guides, tape measure, zoom extents and the 3D warehouse.
- Draw and manipulate scale 3D models.
- Select the correct tools for different features.
- Independently use a wide range of SketchUp tools and concepts including: making groups and components, offset, inference, arc, scale and follow me (only on the large toolbar).

Online Safety

Summer 1

- identify a spam email;
 - explain what to do with spam email;
 - understand why they should cite a source;
 - explain the rules for creating a strong password;
 - create a strong password using a set of rules;
 - know that not everything they see online is true;
 - explain how to stay safe online;
 - identify unsafe online behaviour.
 - explain the steps to take to avoid receiving spam;
 - cite a website;
 - explain why having a strong password is important;
 - understand how false photographs can make people feel bad about themselves.
 - identify a dangerous spam email;
 - create multiple strong passwords for use across different platforms;
 - spot citations online;
 - alter a photograph.
-
- say what bullying and cyberbullying are;
 - say how people should deal with cyberbullying;
 - understand why I should ask an adult if I am unsure;

- identify warning signs that a website might not be secure;
- identify personal information;
- explain what to do if I am asked or told something online which makes me uncomfortable;
- explain some of the dangers of revealing personal information to an online friend;
- choose an appropriate action online to stay safe;
- understand how a stereotype can be harmful.
- explain why cyberbullying can be as harmful as in-person bullying;
- find a link to a privacy policy;
- identify a gender stereotype in a media message
- look in the address bar of a website so check for security;
- identify the lock symbol in an address bar;
- explain why someone might have an online friendship;
- explain what the SMART acronym means;
- explain what a stereotype is;
- compare gender stereotypes

Developing Games

Summer 2

- move and edit blocks as part of an algorithm.
- program an algorithm as a sequence of game instructions with actions and consequences.
- add additional effects and features, such as sound or point scoring, to enhance the appeal of a game.
- Children can insert the show and hide block into an algorithm, locate the correct place to make a sprite appear visible and make a sprite invisible when it is not active in the code.
- Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts.
- Use sequence, selection, and repetition in programs; work with variables and various forms of input and output.
- Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs.