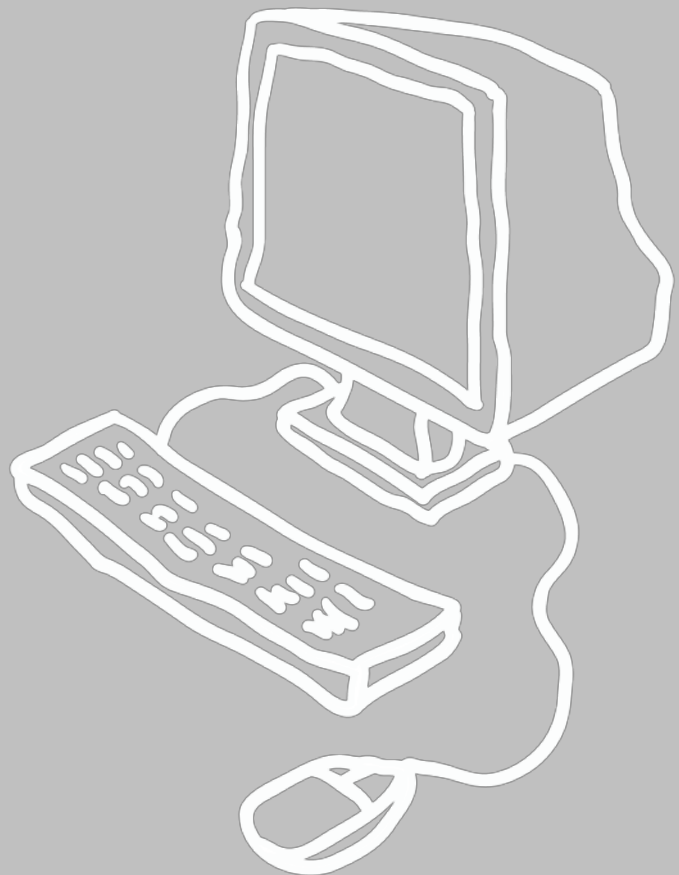


All Saints C of E Primary School

Continuing the
**Computing
Journey**





First, solve the problem.
Then, write the code.



Computing

Strands

1. E-Safety
2. Typing Skills
3. Multimedia
4. Programming
5. Online
6. Data

E-Safety and Typing Skills to be taught in every unit of learning.

Unit Frame

Problem to Solve

Giving the unit a context and an end outcome.



Exploration of the software / app and Experimentation

Allowing the children to explore the software before modelling particular features.



Selecting and Applying

Children selecting the skills and knowledge learned and applying them in order to solve the original problem.



Evaluation and adaptation

Children presenting their completed outcome to others and evaluating. Refinements and improvements to be made to improve the final outcome.

Typing Skills

Stage 1

- Home row.
- e and i
- r and u
- Return and backspace

Stage 2

- t and y
- w and o
- q and p

Stage 3

- v and m
- b and n
- c and ,

Stage 4

- x and z
- / and .
- Shift keys

Stage 5

- Numbers
- Symbols
- Shortcuts

P.S.H.E.

LANGUAGE

MATHEMATICS

RESOURCE

Home keys
Return
Enter
Space
Delete
Backspace

Language of
direction and
position.
Counting.

Ghost Type



Home keys
Return
Enter
Space
Delete
Backspace

Language of
direction and
position.
Counting.

See above

Home keys
Return
Enter
Space
Delete
Backspace
Comma

Language of
direction and
position.
Counting.

See above

Shift
Capital
Full stop
Forwardslash
Backslash
Caps lock

Language of
direction and
position.
Counting.

See above

Number lock
@
Shift+Command...

Language of
direction and
position.
Counting.

See above

Multimedia

Year 1

- Imaging
 - Use technology to generate ideas for their work.
 - Use various tools inc. brushes, pens, lines, fill, spray and stamps.
 - Use save, retrieve, amend and print.
- Book Creation
 - Use the spacebar, back space, enter, shift and arrow keys.
 - Start to type using two hands.
 - Word process short texts, rather than copying up written work.

Year 2

- Sound
 - Use sound recorders, at and away from, a computer to capture and playback sound.
 - Use software to record music and sounds.
 - Change sounds they have recorded.
 - Save, retrieve and edit sounds.
- Video
 - Capture video.
 - Discuss which videos to keep and why.
 - Arrange clips to make a short film that conveys meaning.
 - Add simple titles and credits.
 - Select text and make simple changes including bold, italic and underlined.

Year 3

- Imaging
 - Acquire, store and combine images from cameras or the internet for a purpose.
 - Use the screen capture function to capture an image.
 - Select certain areas of an image and resize, rotate an image.
 - Edit pictures using various tools in paint or photo-manipulation software.
- Book Creation
 - Create a new eBook with a front cover and add or remove pages.
 - Combine text and images within each page and emded sound clips.
 - Add information about the author and title for publishing,
 - Improve the speed and accuracy of typing using both hands.
 - Use different font sizes, colours and effects to communicate meaning.
 - Align text left, right and centre.

E-SAFETY

LANGUAGE

MATHEMATICS

RESOURCE

- When printing work think about who will see it..
- Who are the children writing for?
- Is it clear what the purpose of the text is?

Description
Colours, sizes, shapes etc.
Tools, spray, stamps etc.
Save
Print

Explanation
Names of keys on keyboard.
Type
Delete

Making 2D shapes.
Tessellation.

Language of position.

Doodle Buddy



Book Creator



- Ask people's permission before changing the sounds they produce.
- Make it clear that the sounds have been altered before publishing.

Opinion
Capture
Playback
Record
Retrieve
Edit

Recognise numbers on timeline.
Add/subtract amounts of time.

Garageband



- Credit the people involved in making the film.
- Do not add private information in credits.

Evaluation
Capture
Arrange
Titles, credit etc.
Amend

Ordinal numbers.

iMovie



- Know what to do if they encounter inappropriate content on the internet.
- Awareness of protected/copyright or manipulated content on internet.
- Make it clear that the images have been manipulated before publishing them.
- Check copyright of videos and images before including in eBook.
- Do not add private information in author information.

Comparison
Acquire
Combine
Screen capture
Resize
Rotate
Manipulate

Explanation
Remove
Combine
Embed
Publish
Communicate
Align

Rotating shapes.
Quarter and half turns.
Clockwise/anti-clockwise.

Ordinal numbers.

Preview



Book Creator



Year 4

- Animation
 - Plan what they would like to happen in their animation.
 - Take a series of pictures to form an animation.
 - Move items within their animation to create movement on playback.
 - Edit/improve their animation.
- Video
 - Capture video for a purpose.
 - Discuss the quality of videos and chose which to keep and which to re-shoot.
 - Trim and arrange clips to convey meaning.
 - Add titles, credits, slide transitions, special effects and talk about the effect these have on the

Year 5

- Book Creation
 - Create a new eBook with a front cover and add/remove and swap pages.
 - Produce a multimedia eBook combining video, pictures, text and audio.
 - Attach author data for publishing and publish book.
- Audio
 - Collect audio from a variety of sources including own recordings and internet clips.
 - Create a multi-track recording using effects.
 - Edit and refine their work to improve outcomes.

Year 6

- Animation
 - Plan a multi-scene animation including characters, scenes, camera angles and special effects.
 - Use stop-go animation software with an external camera to shoot the animation frames.
 - Adjust the number of photographs taken and the playback rate to Improve the quality of the animation.
 - Publish their animation and use a movie editing package to edit/refine and add titles.
- Video
 - Storyboard and capture videos for a purpose.
 - Plan for the use of special effects/transitions to enhance their videos.
 - Transfer footage to device for editing.
 - Trim, arrange and edit audio levels of video to improve the quality of their outcome.
 - Add titles, credits, transitions, special effects.
 - Export their video in different formats for different purposes.

E-SAFETY

LANGUAGE

MATHEMATICS

RESOURCE

- Consider who will view their animation and how it will be shared.
- While thinking of the purpose and audience consider what is being captured and shared. What should be broadcast?

Sequencing
 Animate
 Series
 Playback

Evaluation
 Capture
 Quality
 Trim
 Arrange
 Titles & Credits
 Transition
 Effect

Ordinal numbers.
 Language related to time.

Language related to time.
 Add/subtract amounts of time.

I Can Animate



iMovie



- Are the images and videos collected allowed to be published?
- Ensure that no private information is shared in author details.
- Are the images and video collected allowed to be published?

Explanation
 Multimedia
 Combine
 Publish

Evaluation
 Source
 Multi-track
 Edit
 Refine

Ordinal Numbers.
 Language related to time.

Language related to time.

Book Creator



Garageband



- While thinking of the purpose and audience consider what is being captured and shared. What should be broadcast?
- While thinking of the purpose and audience consider what is being captured and shared. What should be broadcast?
- Ensure that no private information is shared in credits.

Sequencing
 Animate
 Frames
 Adjust
 Playback
 Evaluate

Explanation
 Remove
 Combine
 Embed
 Publish
 Communicate
 Align

Language related to angle / turn.
 Language related to time.
 Ratio.

Ordinal numbers.

I Can Animate



iMovie



Programming

Year 1

- Give and follow instructions, which include straight and turning commands, one at a time.
- Explore outcomes when instructions are given in sequence.
- Give a simple sequence of instructions.

- Discuss/explore what will happen when instructions are given in a sequence.
- Give a sequence of instructions to complete a simple task.
- Instructions use both movement commands and additional commands.

Year 2

- Use the repeat command within a series of instructions.
- Plan a short story for a sprite and write the commands for this.
- Edit/refine a sequence of commands.

- Generate a sequence of instructions including 'right angle' turns.
- Create a sequence of instructions to generate simple geometric shapes.
- Discuss how to improve/change their sequence of commands.

Year 3

- Use the 'if...then' command and predict the result.
- Talk about the similarities and difference between different coding applications.

- Write a simple program in Logo to produce a line drawing.
- Use more advanced Logo programming including pen up, pen down etc.
- Write a program to reproduce a defined problem, e.g. geometric shape/pattern.

Sequencing

Straight
Turns
Sequence
Instructions
Sequence
Command
Language related to movement

Language related to movement and turns.
Counting to 20.

Bee Bot**Daisy the Dino**

- Know that errors in programs could lead to others finding information or changing the code.

Sequencing

Sequence
Command
Check
Improve
Right-angle
Language related to the properties of 2D shapes.
Improve

Language related to movement and turns.
Counting to 20.
Language related to right angles.
2D shapes and their properties.

Daisy the Dino**Move the Turtle**

- Know that errors in programs could lead to others finding information or changing the code.

Sequencing

Predict
Similarities/differences
Code
Algorithm
Program
Input
Output

Language related to movement, direction and angle.
2D shapes and their properties.
Estimating.

Cargo Bot**Move the Turtle**

Programming

Year 4

- Navigate the Scratch programming environment.
- Create a background and sprite for a game.
- Add inputs to control the sprite.
- Use conditional statements (if...then) within their game.

- Create a 3D world for a game.
- Add a sprite to their world.
- Program their sprite to navigate their 3D world with an input.
- Use conditional statements (if...then) to create a range of items in their world.

Year 5

- Use external triggers and infinite loops to control sprites.
- Create and edit variables.
- Use conditional statements.

- Design a 3D world with items to be collected and those to be avoided.
- Add and program a sprite to navigate their world to collect items and avoid danger.
- Add a scoring system to their world and signal to the player when they win or lose the game.

Year 6

- Design their own game including sprites, backgrounds, scoring and/or timers.
- Their game uses conditional statements, loops, variables and broadcast messages.
- Their game finishes if the player wins or loses and the player knows if they have won or lost.
- Evaluate the effectiveness of their game and debug if required.

- Design a 2-player combat game within a 3D world.
- Use a keyboard or external game and controllers to control the sprites' behaviours.
- Use the 'page of code' function to change sprite behaviour depending on score/condition within the game.
- Their game finishes if the player wins or loses and the player knows if they have won or lost.
- Evaluate the effectiveness of their game and debug if required.

E-SAFETY

LANGUAGE

MATHEMATICS

RESOURCE

- Know that errors in programs could lead to others finding information or changing the code.

Sequencing

Navigate
Control
Sprite
Conditional
3D
Digital
Input/output

Language related to movement, direction and angle.
Language related to 2D and 3D shapes.

Scratch



Swift Playgrounds



Tynker



Minecraft



- Know that errors in programs could lead to others finding information .
- That other people can use code to corrupt programs.

Sequencing

External
Trigger
Infinite
Variables
Program
Conditional
Sprite

Language related to number, movement, direction and angle.

Scratch



Swift Playgrounds



Tynker



Minecraft



- Know that errors in programs could lead to others finding information .
- That other people can use code to corrupt programs.

Sequencing

Sprite
Conditional
Loops
Variables
Debug
Page of code
External
Controller
Evaluate
Function
Debug

Language related to number, movement, direction and angle.
Language related to time.

Scratch



Swift Playgrounds



Tynker



Minecraft



Year 1

- Internet
 - Talk about websites they have been on.
 - Explore a website by clicking on buttons, arrows, menus and hyperlinks.
 - Navigate 'back' by clicking on the 'back' button.
 - Complete a search under the supervision of adults.

Year 2

- Email
 - Recognise an email address.
 - Find the @ key on a keyboard.
 - Contribute to a class email.
 - Open and select to reply to an email as a class.

Year 3

- Blogging
 - Navigate to view their class/school blog.
 - Understand that their class/school blog can be updated from a range of devices.
 - Comment on their class/school blog.
 - Subscribe with an adult's email to receive updates about their class/school blog.
- Internet
 - Type in a URL to find a website.
 - Add websites to favourites.
 - Use search engine to find a range of media, e.g. images, text etc.
 - Think of search terms to use linked to questions they are finding the answers for.
 - Talk about the reliability of information on the internet, e.g. the difference between fact and opinion (link to E-Safety).

Year 4

- Email
 - Log in to an email, open emails, create and send replies.
 - Attach files to an email.
 - Download and save files from an email.
 - Email more than one person and participate in group emails by 'replying to all'.

Video Calling

- Load and add a contact to Skype.
- Make/receive and voice and video call.
- Adjust the audio/video settings to ensure good quality of the call.

E-SAFETY

LANGUAGE

MATHEMATICS

RESOURCE

- Know who to tell if they encounter something inappropriate.

Description
 Search
 Website
 Internet
 World Wide Web
 Back and forward

Directional language.
 Ordinal numbers.



- Only open emails from people they know.
- Know who to tell if they are contacted by a stranger.
- Keep email password a secret.

Explanation
 Subject
 Reply
 Address

Language related to time.



- Know how to report inappropriate content to an adult.
- Do not post personal information on a blog.

Argument
 Update
 Respond
 Reply
 Subject
 Address

Language related to time.



- Know how to report inappropriate content to an adult.
- Use Safe Search options in search engine.
- Evaluate the reliability of the source they are using.

Opinion
 Favourite
 Bookmark
 Selective search
 Reliable

Directional language.
 Sequential language.

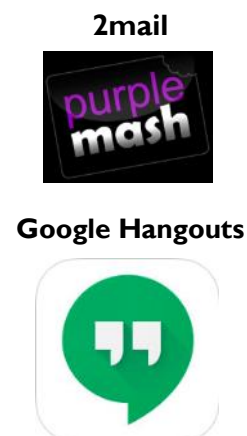


- Only open emails from people they know.
- Know who to tell if they are contacted by a stranger.
- Keep password a secret.
- Only download files from trusted contacts.
- Don't upload confidential information to an attachment.
- Be aware of what can be seen in the video call.

Explanation
 Attachment
 Reply
 Download
 Upload

Opinion
 Connect
 Receive
 Adjust
 Quality

Number recognition and place value (attachment size).
 Number recognition.
 More/less or add/sub.



Year 5

● Internet

- Use advance search functions in Google, e.g. quotations.
- Understand websites such as Wikipedia are made by users (link to E-Safety).
- Use strategies to check the reliability of information, e.g. cross checking with books.
- Use their knowledge of domain names to aid their judgment of the validity of websites.

Cloud Storage

- Understand files may be saved off their device in clouds/servers.
- Upload / download a file to the cloud on different devices.
- Understand about syncing files using cloud computing folders.

Year 6

● Blogging

- Register for a blog: selecting a URL and navigate to their blog once it is created.
- Alter the theme and appearance of their blog, adding background images etc.
- Create a new post, save it as a draft and publish it.
- Embed photos, hyperlinks and videos into posts.
- Reorganise posts and remove posts they no longer want.
- Like / follow other blogs and build up their blog content over the year.

E-SAFETY

LANGUAGE

MATHEMATICS

RESOURCE

- Know how to report inappropriate content to an adult.
- Use Safe Search options in search engine.
- Evaluate the reliability of the source they are using.
- Know how to check website addresses and domain names.
- Keep account password a secret.
- Don't upload confidential information.
- Be aware that other users may have access to the stored files.

Comparison

Advanced search
Wiki
Reliability
Domain
Cloud servers
Upload
Download
Syncing

Number recognition.
Capacity.
More/less or add/sub.

Safari



Google Drive



- Know how to report inappropriate content to an adult.
- Do not post personal information on a blog.
- Be aware of permissions before posting images, videos etc.

Evaluation

Navigate
Theme/appearance
Draft
Embed
Hyperlink

2Blog



Data

Year 1

- Know that images give information.
- Say what a pictogram is showing them.
- Put data into a program (pictogram).
- Sort objects and pictures in lists or simple tables.

Year 2

- Place objects and pictures in a list or a simple table.
- Make a simple Y/N tree diagram to sort information.
- Create and search a branching database.

Year 3

- Choose information to put into a data table.
- Recognise which information is suitable for their topic.
- Design a questionnaire to collect information.
- Sort and organise information to use in other ways.

Year 4

- Create and search a branching database.
- Sort and organise information to use in other ways.
- Create a database from information I have selected.

Year 5

- Create data collection forms and enter data from these accurately.
- Know how to check for and spot inaccurate data.
- Know which formula to use when I want to change my spreadsheet model.
- Make graphs from the calculations on my spreadsheet.

E-SAFETY**LANGUAGE****MATHEMATICS****RESOURCE**

- Ensure data entered into a pictogram is accurate.

Explanation

Image
Information
Data
Sort

How many?
Which is the most/least?
How many more/less...than...?
What is the total?

2Count

- Ensure data entered into a pictogram is accurate.

Deduction

Sort
Branching database
Question/answer

How many more/less...than...?
What is the total?

2Question

- Ensure data entered into a pictogram is accurate.
- Check permissions before entering data.

Evaluation

Information/data
Questionnaire
Collect

How many more/less...than...?
What is the total?
Specific data retrieval questions.

Numbers

- Ensure data entered into a pictogram is accurate.
- Check permissions before entering data.

Deduction

Branching database
Sort/organise
Create
Search

Categorising.
Consequential questions (e.g if/then and Yes/No).

Keynote

- Ensure data entered into a pictogram is accurate.
- Check permissions before entering data.

Evaluation

Collection
Accuracy
Formula
Calculations

How many more/less...than...?
What is the total?
Specific data retrieval questions.
Calculations and formulas linked to the four operations.
Word problems.

Numbers

Year 6

- Create data collection forms and enter data from these accurately.
- Know how to check for and spot inaccurate data.
- Know which formulas to use when I want to change my spreadsheet model.
- Make graphs from the calculations on my spreadsheet.
- Sort and filter information.
- Understand that changing the numerical data affects a calculation.

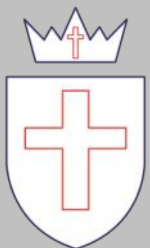
- Ensure data entered is accurate.
- Check permissions before entering data.

Deduction

Accuracy
Formula
Calculation
Sort/filter
Numerical data

How many more/
less...than...?
What is the total?
Specific data
retrieval questions.
Calculations and
formulas linked to
the four
operations.
Word problems.

Numbers



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