

KS1 Year A

What do I already know?

Some children will already know:

Unit 1.1 On-line safety

- Safe logins
- Concept of privacy
- Concept of ownership
- The need to logout

Unit 1.6 Technology Outside School

- Developing ideas about the concept of technology that we are surrounded by and its purpose

On-line safety Unit 2.2 2022/23

Key Images

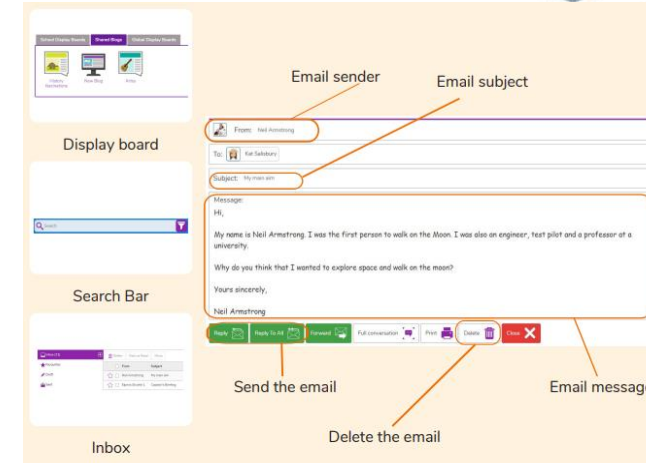


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Church of England Primary School

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to become lifelong learners'*

Key Learning

- To know how to refine searches using the Search tool.
- To use digital technology to share work on Purple Mash to communicate and connect with others locally.
- To have some knowledge and understanding about sharing more globally on the Internet.
- To introduce Email as a communication tool using 2Respond simulations.
- To understand how we should talk to others in an online situation.
- To open and send simple online communications in the form of email.
- To understand that information put online leaves a digital footprint or trail.
- To identify the steps that can be taken to keep personal data and hardware secure.



Key Questions

Why is a search bar useful?

The search bar on Purple Mash or on a website helps the user to quickly find the resources they are looking for.

What is an email?

An email is a way of sending messages electronically from one device to another. An email can have items such as pictures and videos attached to it.

What is meant by my Digital Footprint?

A digital footprint is a term used to describe the traces of yourself that you leave online. With every website you visit, you leave a trail or footprint showing that you've been there.

What do I already know?

All children will know

Unit 1.4 Lego Builders

- Algorithms
- Logical decision making
- Sequencing instructions
- Following instructions

Unit 1.5 Maze Explorers

- Coding a 'turtle'
- Creating programs using sequencing and repeat.
- Visual use of the Logo programming language.
- Program logic and structure

Coding Unit 1.7 2022/23



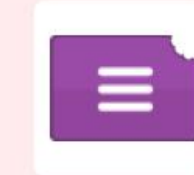
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Key Images

Key Learning

- To understand what instructions are and predict what might happen when they are followed.
- To use code to make a computer program.
- To understand what object and actions are.
- To understand what an event is.
- To use an event to control an object.
- To begin to understand how code executes when a program is run.
- To understand what backgrounds and objects are.
- To plan and make a computer program.



Open, close or share
a file



Save your work



Watch the
instruction video



Get a hint when you
are stuck in 2Code



Open design mode
in 2Code



Switch to code mode
in 2Code



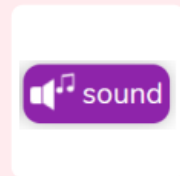
The background
object



A 'when clicked'
code block



An object property



Sound output block

Key Questions

What is coding? Writing instructions in a way that a computer can interpret them to make a program.

Why is it useful to design before coding? It helps you to get a clear idea of what you want your program to do. You can use the design to decide which objects you need to add, what to call them and what actions they should perform.

How can you make characters move in a 2Code program? In design mode, add a character. Change properties such as the name and scale. Exit from design mode and drag your character's code block into the coding window. From the properties menu, select right, left, up or down.

What do I already know? All children will know

Unit 1.7 Coding

- Introducing block coding
- Objects and actions
- Events (Click event, sound output)
- Executing a program
- Design view: Planning

Unit 1.4 Lego Builders

- Algorithms
- Logical decision making
- Sequencing instructions
- Following instructions

Unit 1.5 Maze Explorers

- Coding a 'turtle'
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Coding Unit 2.1 2022/23

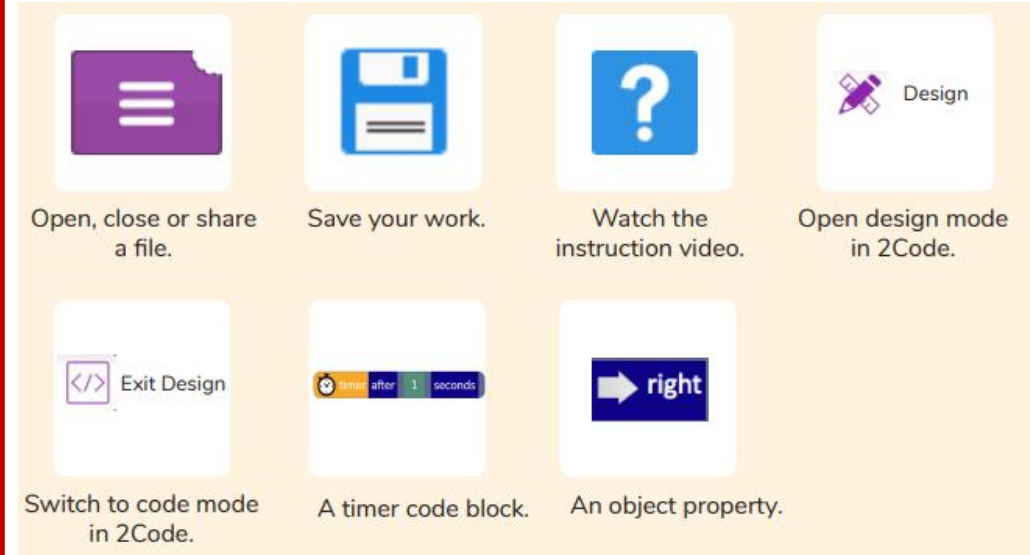


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Key Learning

- To understand what an algorithm is.
- To create a computer program using an algorithm.
- To create a program using a given design.
- To understand the collision detection event.
- To understand that algorithms follow a sequence.
- To design an algorithm that follows a timed sequence.
- To understand that different objects have different properties.
- To understand what different events do in code.
- To understand the function of buttons in a program.
- To understand and debug simple programs.

Key Images



Key Questions

What is an algorithm? Why is it useful in coding? An algorithm is a step-by-step set of instructions used to solve a problem or achieve an objective. A clear algorithm can help you to create code that does what it is supposed to do.

Why is it important to know there are different object types? Different object types can do different actions. For example, in 2Code, an animal object can do actions such as up, down and stop. A turtle goes forward, backward, pen down and pen up.

If you are good at coding, you don't need to debug. Is this true? All coders need to debug to make sure that their program works correctly, and the code does what they intended. As you get better at coding, your programs will get more complex and debugging gets even more important.

What do I already know?

All children will know

Unit 1.7 Coding

- Concept of computers following given instructions
- Planning using an algorithm design

Key Learning

- To compare the effects of adhering strictly to instructions to completing tasks without complete instructions.
- To follow and create simple instructions on the computer.
- To consider how the order of instructions affects the result

Lego Builders Unit 1.4 2022/23



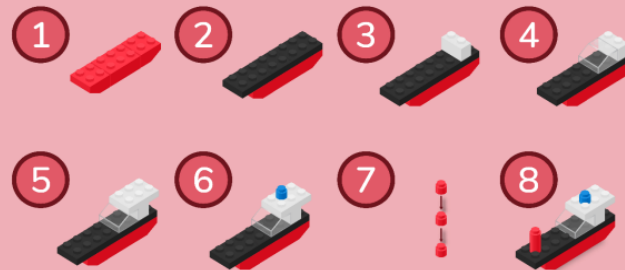
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Key Images



Algorithm

A precise, step-by-step set of instructions used to solve a problem or achieve an objective.



Key Questions

What is an instruction?

An instruction takes you through something step by step so that you can successfully complete a task.

Why do we need to debug code?

When you write code, it won't always work correctly first time. When you search for the errors and correct them, this is known as debugging.

Key Learning

- To understand the terminology associated with searching.
- To gain a better understanding of searching on the Internet.
- To create a leaflet to help someone search for information on the Internet.

What do I already know?

All children will know

Unit 1.1 On-line safety

- Safe logins
- Using Purple Mash search functionality

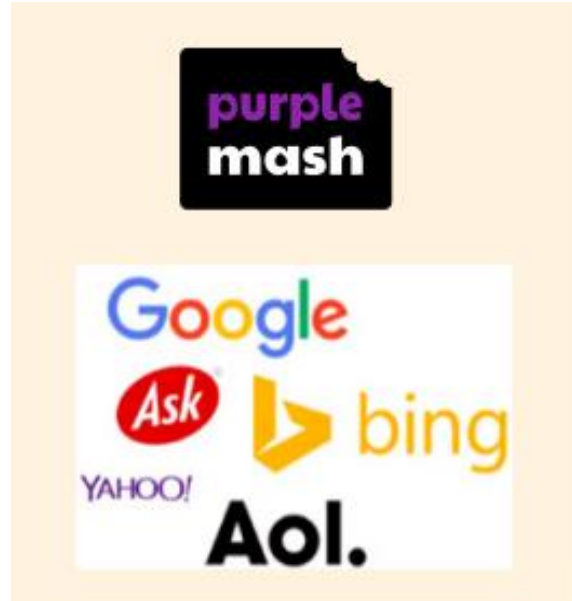
Unit 1.6 Technology Outside School

- Developing ideas about the concept of technology that we are surrounded by and its purpose

Unit 2.2 Online-Safety

- Sharing to a display board
- Sharing online
- Digital footprint

Key Images



Effective Searching Unit 2.5 2022/23



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Key Questions

How can I search the Internet?

The easiest way to search the Internet is using a search engine. The search engine crawls the Internet looking for answers to the search enquiry. Google is a popular search engine.



What do I already know?

Children will have an understanding of Early Years Purple Mash computing skills for Safety and Privacy

- I can explain how my work on the computer belongs to me and other people's work belongs to them.
- I can explain what it means for something to be private.
- I can talk about how my body feels when I am not comfortable with something.
- I know who can help me when I am feeling worried.
- I can show that I understand how to be kind to others.
- I can choose activities in my free time that help me to be healthy.

Key Learning

- To sort items using a range of criteria.
- To sort items on the computer using the 'Grouping' activities in Purple Mash.

Key Images



Grouping and Sorting Unit 1.2 2022/23



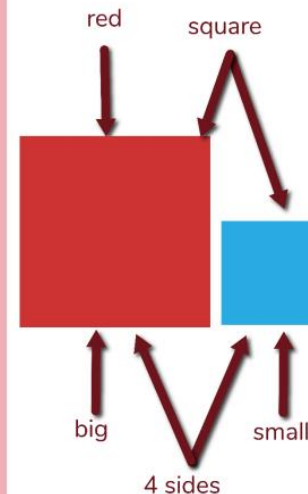
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Key Questions

In what ways can we sort objects?

We can sort objects by different criteria. These include the size of the objects, the colour of the objects or the number of sides the object has. The criteria will depend on the type of objects being sorted.

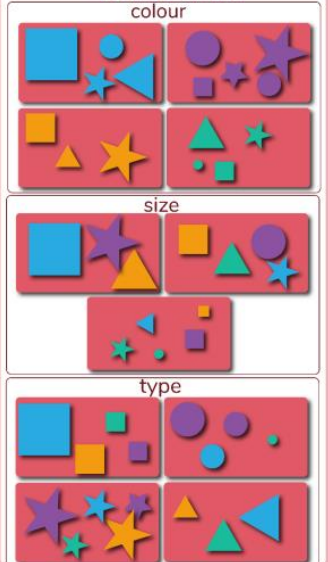
Describing



Grouping and sorting



Criteria



What do I already know?

Unit 1.6 Animated Story Books

- Creating text and the use of illustrations
- Genre: animated picture book

Unit 2.6 Creating pictures

- Presenting ideas in art form
- 2Paint a Picture: art effects, collage effects



Node



Collaboration
(working together)
on or off

Key Learning

- To explore how a story can be presented in different ways.
- To make a quiz about a story or class topic.
- To make a fact file on a non-fiction topic.
- To make a presentation to the class.

Key Images



Open, close and
share a file



Create a new
2Connect document



Choose a quiz
question on 2Quiz



Play the quiz

Presenting ideas Unit 2.8 2022/23



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Key Questions

What do we need to think about when planning a presentation?

The important thing to consider is the audience. Think about how old they are and what they would find interesting. For younger children, a presentation with pictures may be more appropriate.

Why should I plan out my presentation?

Planning out your presentation allows you to make sure you have included all the information you need to. It is easier to do this in the planning phase rather than when you have started the presentation.



Preview the quiz
question



Change the quiz
settings

What do I already know?

Children will have an understanding of Early Years Purple Mash computing skills for Safety and Privacy

- I can explain how my work on the computer belongs to me and other people's work belongs to them.
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On-line safety Unit 1.1 2022/23



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Key Learning

- To log in safely.
- To learn how to find saved work in the Online Work area and find teacher comments.
- To learn how to search Purple Mash to find resources.
- To become familiar with the icons and types of resources available in the Topics section.
- To start to add pictures and text to work.
- To explore the Tools and Games section of Purple Mash.
- To learn how to open, save and print.
- To understand the importance of logging out.

Key Images



Key Questions

What is a password and why should we keep them safe?

A password is a secret word or phrase that allows a user to access a website. Passwords are like toothbrushes in that they should not be shared with anyone else.

What is a digital avatar?

In Purple Mash, an avatar is a picture you create in the software to represent you. It is safer to use an avatar on the Internet than have a picture of yourself.

Where is my work stored on Purple Mash?

In Purple Mash, most of the work you save will be saved in the My Work section of Purple Mash. The only person that can see this work is the teacher and you.

What do I already know?

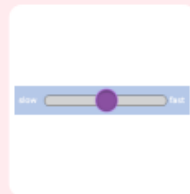
Unit 1.4 Lego builders

- Logical decision making
- Sequencing instructions
- Following instructions

Key Images



Open, close or share
a file



Change the speed
in which the screen
object moves



Rewind an
instruction



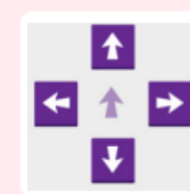
Undo an instruction



Change the settings
in 2Go



Change the colour
of the path that the
object leaves in 2Go



Control the direction
in which the object
moves

Maze Explorers Unit 1.5 2022/23



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Key Learning

- To understand the functionality of the direction keys.
- To understand how to create and debug a set of instructions (algorithm).
- To use the additional direction keys as part of an algorithm.
- To understand how to change and extend the algorithm list.
- To create a longer algorithm for an activity.
- To set challenges for peers.
- To access peer challenges set by the teacher as 2Dos

Key Questions

What is 2Go?

2Go is a program that allows you to move an object around the screen using either the arrows or by creating a simple sequence of instructions.

How do I undo a mistake on 2Go?

In 2Go, you can either click on the undo button to go back one step or the rewind button to go back to the start of the challenge.

What do I already know?

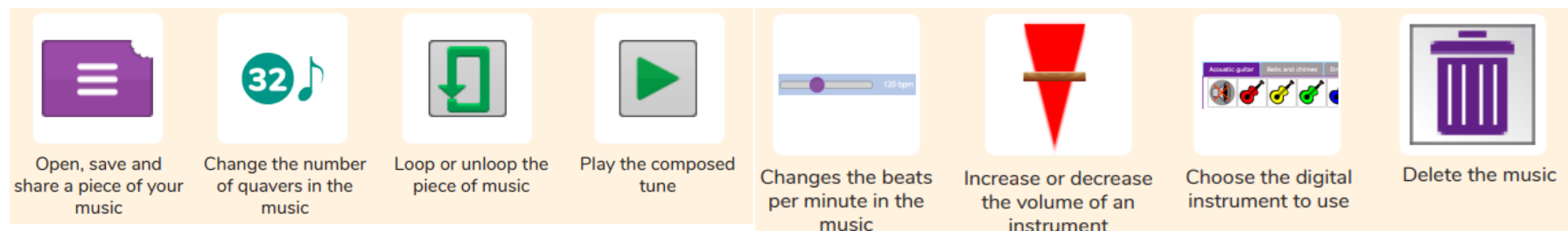
Unit 1.6 Animated Story Books

- Adding simple sound effects to stories in 2Create a Story

Key Learning

- To make music digitally using 2Sequence.
- To explore, edit and combine sounds using 2Sequence.
- To edit and refine composed music.
- To think about how music can be used to express feelings and create tunes which depict feelings.
- To upload a sound from a bank of sounds into the Sounds section.
- To record and upload environmental sounds into Purple Mash.
- To use these sounds to create tunes in 2Sequence.

Key Images



Making Music Unit 2.7 2022/23



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Key Questions

What is meant by digital music?

Digital music is made using a computer or other device. Digital music allows the computer to copy the sound made by instruments and combine them together to make a piece of music.

How can I change how my music sounds?

You can change how your digital music sounds in many ways. One way is to increase the tempo of the music or vary the volume of each instrument in the piece.

What is it meant by the tempo of the music?

Tempo is measured in BPM, or beats per minute. One beat every second is 60 BPM.

KS1 Year B

What do I already know?

All children will know Unit 1.4 Lego Builders

- Algorithms
- Logical decision making
- Sequencing instructions
- Following instructions

Unit 1.5 Maze Explorers

- Coding a 'turtle'
- Creating programs using sequencing and repeat.
- Visual use of the Logo programming language.
- Program logic and structure

Coding Unit 1.7 2023/24



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Key Images



Open, close or share
a file



Save your work



Watch the
instruction video



Get a hint when you
are stuck in 2Code



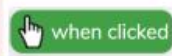
Open design mode
in 2Code



Switch to code mode
in 2Code



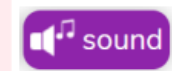
The background
object



A 'when clicked'
code block



An object property



Sound output block

Key Learning

- To understand what instructions are and predict what might happen when they are followed.
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- To understand what object and actions are.
- To understand what an event is.
- To use an event to control an object.
- To begin to understand how code executes when a program is run.
- To understand what backgrounds and objects are.
- To plan and make a computer program.

Key Questions

What is coding? Writing instructions in a way that a computer can interpret them to make a program.

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Coding Unit 2.1 2023/24

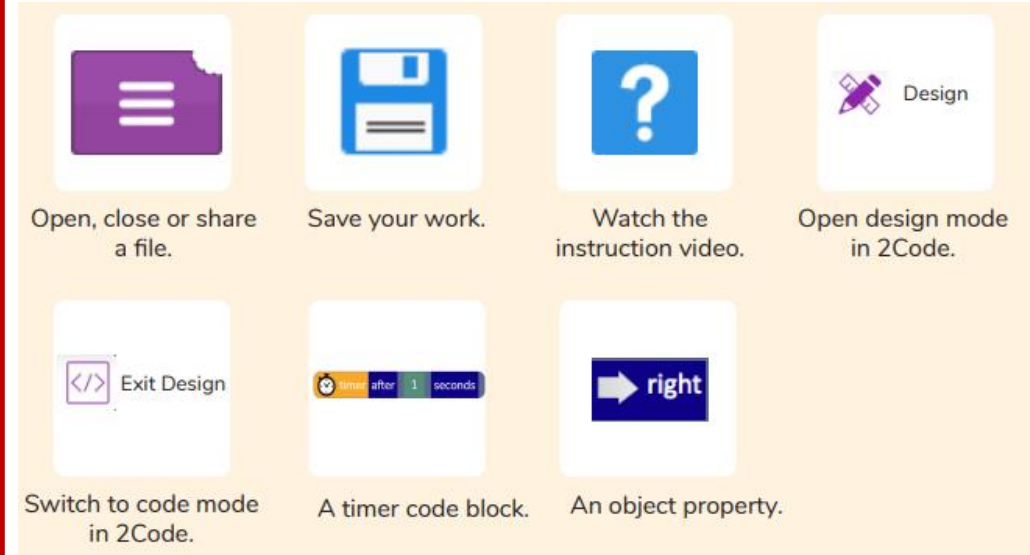


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What do I already know?

All children will know

Unit 1.1 Exploring purple Mash

- General use of Purple Mash
- Design: avatar creation
- Paint Projects: use of the simple paint tools

Unit 1.6 Animated Stories

- 2Create a Story: Painting tool.
- Animating images using built in effects
- Concept of background (static) and foreground (can move)
- Animation

Key Questions

Key Learning

- To learn the functions of the 2Paint a Picture tool.
- To learn about and recreate the Impressionist style of art (Monet, Degas, Renoir).
- To recreate Pointillist art and look at the work of pointillist artists such as Seurat.
- To learn about the work of Piet Mondrian and recreate the style using the lines template.
- To learn about the work of William Morris and recreate the style using the patterns template.
- To explore surrealism and eCollage.

Creating pictures Unit 2.6 2023/24



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Key Images



Choose the style you
want to paint in



Open, Save and
Share your picture



Choose a
background for your
picture



Undo and redo



Zoom in and Zoom
out



Outline options



Eraser and colour
palettes



Fill tool and pen
thickness

What are the main features of Impressionism? Impressionism is a style of painting that focuses on the effects of light and atmosphere on colours and forms. Impressionist artists often used broken brush strokes.

What are the main features of Pointillism? Pointillism is a painting technique developed by the artist George Seurat. It involves using small, painted dots to create areas of colour that together form a pattern or picture.

What are the main features of Surrealism? Surrealistic art is characterized by dream-like visuals, the use of symbolism and collage images. Several prominent artists came from this movement, including Renee Magritte, Salvador Dali, and Max Ernst.

What do I already know?

All children will know Unit 1.1 Exploring purple Mash

- General use of Purple Mash
- Design: avatar creation
- Paint Projects: use of the simple paint tools

Animated story books Unit 1.6 2023/24



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Key Learning

- To introduce e-books and the 2Create a Story tool.
- To add animation to a story.
- To add sound to a story, including voice recording and music the children have composed.
- To work on a more complex story, including adding backgrounds and copying and pasting pages.
- To share e-books on a class display board.

Key Images



Open, close or share
a file



Plan out your story



Play your story



Add animation and
sounds to the story



Choose a story
background



Undo or redo the last
action



Choose the font for
the story



Copy and paste

Key Questions

What is 2Create a Story?

With 2Create a Story, you can create e-books including animated pages, sounds, narration and music.

What is an animated story?

An animated story is a story where the images in the foreground can move in a variety of ways.

How can I make my story better?

As well as adding animation to the story, it can be improved by adding sounds or sound effects to the different pages.



Questioning Unit 2.4 2023/24

What do I already know?
All children will know
Unit 1.2 Grouping and sorting

- Sorting data according to criteria

All children will know
Unit 1.3 Pictograms

- Collecting and presenting data in a picture format

Some children will know
Unit 2.3 Spreadsheets

- Use of 2Calculate to collect data and produce a graph

Key Learning

- To learn about data handling tools that can give more information than pictograms.
- To use yes/no questions to separate information.
- To construct a binary tree to identify items.
- To use 2Question (a binary tree database) to answer questions.
- To use a database to answer more complex search questions.
- To use the Search tool to find information.

Key Images



Open, close or share information



Enter data into a pictogram



Add or delete columns in a pictogram



Add a question to sort the information in a binary tree



Give a name to the binary tree



Find information in a database



Sort, group and arrange information in a database

Key Questions

How does a Pictogram show information? On a pictogram, data is represented by pictures. Pictograms are set out in the same way as bar charts, but instead of bars they use columns of pictures to show the numbers involved.

How is information organised in a binary tree? On a binary tree information is organised through a series of questions that can only be answered 'yes' or 'no'. Eventually only one item is left in the category which forms the end of a branch of the binary tree.

How can a database help organise information? A database is a way of storing information in such a way that it can easily be searched. Databases are designed to hold lots of information that would be difficult to search without using a computer.

What do I already know?

Some children will know
Unit 2.5 Effective
searching

- Developing understanding of the Internet
- Identifying parts of a web search engine

Technology outside school Unit 1.9 2023/24



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Key Learning

- To walk around the local community and find examples of where technology is used.
- To record examples of technology outside school.

Key Images



2Publish Plus

Key Questions

What is technology? Technology is the use of knowledge to invent new devices or tools. Throughout history, technology has made people's lives easier.

How does technology make our lives easier? Technology has made life easier in many areas. It is now much easier to communicate around the world. Messages that used to take weeks to reach the sender can now be sent and received in seconds. We are surrounded by technology from your toys, to machines in your house, to systems that control traffic and planes.

What do I already know?

All children will know Unit 1.3 Pictograms

- What is data?
- Representing data

All children will know Unit 2.4 Questioning

- Ways to represent data
- Pictograms (2Count)
- Binary trees (2Question)
- Databases (2Investigate)

Key Questions

What does a spreadsheet look like? It has a grid of cells. These are in rows and columns. The cells can be coloured, and you can type into them. You can use the toolbox to do different things with the data in the cells.

How could you use a spreadsheet to add up values? You can enter numbers and operators such as +, -, x in the cells. Entering an equals sign in the correct cell will perform calculations.

How could you use the count and speak tools? The count tool will count the number of cells containing the same value or colour as it. The speak tool will say this number each time you click on the cell or the number changes.

Spreadsheets

Unit 1.8 2023/24



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Key Learning

- To know what a spreadsheet program looks like.
- To locate 2Calculate in Purple Mash.
- To enter data into spreadsheet cells.
- To use 2Calculate image tools to add clipart to cells.
- To use 2Calculate control tools: lock, move cell, speak and count.

Key Images



Open, close or share
a file



Save your work



Open a previously
saved file



Increase or decrease
spreadsheet size



The 2Calculate
toolbox



The 2Calculate
image toolbox



Clipart Picker



The 2Calculate
control toolbox



Move cell tool



Lock cell tool



Speak tool



Count tool

What do I already know?

Some children will know Unit 1.8 Spreadsheets

- Introduce 2Calculate
- Spreadsheet navigation
- Adding images
- Vocab: cell, column, row

Some children will know Unit 1.3 Pictograms

- What is data?
- Representing data

Key Questions

Why would you copy and paste when using a spreadsheet? You might want to rearrange the information in the spreadsheet. It will save you entering the same information many times if you want to repeat things in different cells.

How could a spreadsheet help you when you are planning some shopping? You could use it to store the process and work out how much it would cost to buy the things that you wanted.

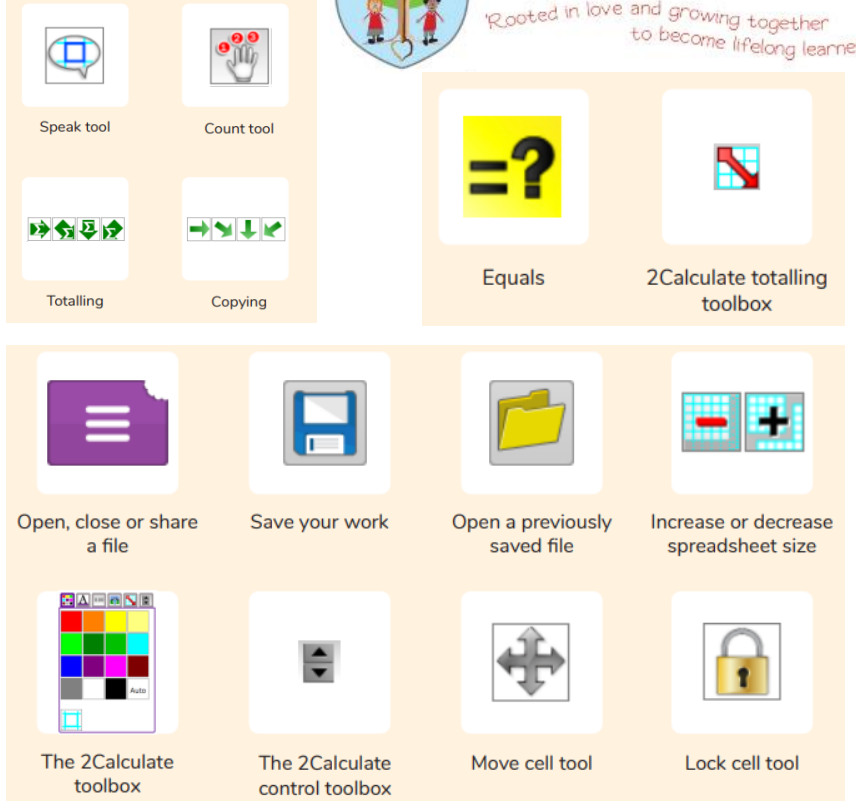
Look at the graph made in 2Calculate showing the class' favourite pets. Which is the most popular?

Spreadsheets Unit 2.3 2023/24

Key Learning

- To use 2Calculate image, lock, move cell, speak and count tools to make a counting machine.
- To learn how to copy and paste in 2Calculate.
- To use the totalling tools.
- To use a spreadsheet for money calculations.
- To use the 2Calculate equals tool to check calculations.
- To use 2Calculate to collect data and produce a graph.

Key Images



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			Jan		
	Ming		Maia		
	Meer		Katie		Noah
Leonard	Zack		Oscar	Mohammed	Casey
Petra	Jay	Harriet	Ishaq	Rina	Eve
Favourite Pets					

What do I already know?

All children will know
Unit 1.2 Grouping and
sorting

- Sorting data according to criteria

Pictograms Unit 1.3 2023/24

Key Learning

- To understand that data can be represented in picture format.
- To contribute to a class pictogram.
- To use a pictogram to record the results of an experiment.



Aiskew, Leeming Bar
Church of England Primary School
*'Rooted in love and growing together
to become lifelong learners'*

Key Images



Frequency



Add or delete objects
from the Pictogram



Open, Close and
Share

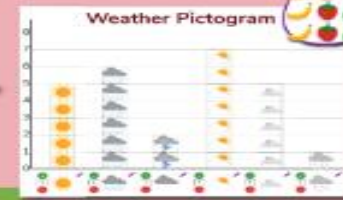


Add or delete
columns

Data can be found everywhere.

Data

A collection of information,
used to help answer questions.

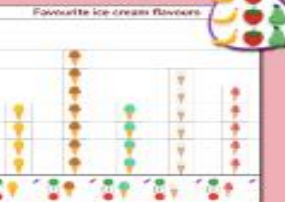


What other
data could
you explore?

Transport Pictogram



modes of transport



Key Questions