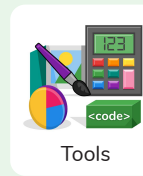# Unit: 3.1
Coding
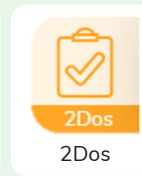
Key Learning

- To understand what a flowchart is and how flowcharts are used in computer programming.
- To understand that there are different types of timers and select the right type for purpose.
- To understand how to use the repeat command.
- To understand the importance of nesting.
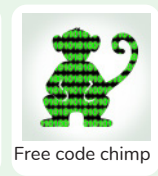- To design and create an interactive scene.
-

Key Resources

purple mash

Tools | 2Dos | 2Chart | Free code chimp

Key Vocabulary

Action
Types of commands, which are run on an object. They could be used to move an object or change a property.

Code block
A group of commands that are joined together and are run when a specific condition is met or when an event occurs.

Control
These commands determine whether parts of the program will run, how often and sometimes, when.

Alert
This is a type of output. It shows a pop-up of text on the screen.

Code Design
Design what your program will look like and what it will do.

Debug/Debugging
Looking for any problems in the code, fixing and testing them.

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

Command
A single instruction in a computer program.

Design Mode
Used to create the look of a 2Code computer program when it is run.

Bug
A problem in a computer program that stops it working the way it was designed.

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Unit: 3.1
Coding

Key Vocabulary

Event
Something that causes a block of code to be run.

Flowchart
A diagram which represents an algorithm.

Input
Information going into the computer. Can include moving or clicking the mouse, using the keyboard, swiping and tilting the device.

Nesting
When you write a command inside something else e.g. a block of commands could be nested inside a timer.

Output
Information that comes out of the computer e.g. sound.

Object
An element in a computer program that can be changed using actions or properties. In 2Code, buttons, characters and vehicles are types of objects.

Properties
All objects have properties that can be changed in design or by writing code e.g. image, colour and scale properties.

Repeat
This command can be used to make a block of commands run a set number of times or forever.

Sequence
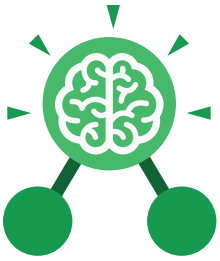when a computer program runs commands in order.

Computer Simulation
A program that models a real-life situation.

Timer
Use this command to run a block of commands after a timed delay or at regular intervals.

When clicked/swiped
An event command. It makes code run when you click or swipe on something (or press/ swipe your finger on a touchscreen).

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Unit: 3.1
Coding

Key Images

Open, close or share a file.

Save your work.

Design
Open design mode in 2Code.

Exit Design
Switch to code mode in 2Code.
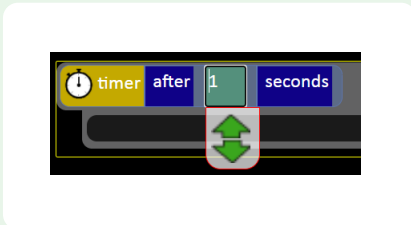
timer after 1 seconds
A timer code block.
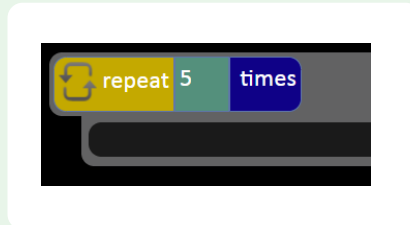
repeat 5 times
Repeat block.

Key Questions

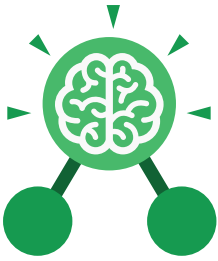### Why is it useful to use a flowchart to design a computer program?

Using a flowchart to design a computer program is helpful as you can see it in its simplest form as inputs and outputs. You can see where the program is going which will prevent mistakes when creating the code.

What does repeat mean in computer programming?

Using the repeat command will make a block of commands run for a set number of timers or forever. These saves rewriting the code many times.

What is the difference between 'timer after' and 'timer every'?

A 'timer after' means after a certain amount of seconds, the action will occur. 'Timer every' means that the action will re-occur every certain amount of seconds on a loop.

2simple

Unit: 3.2
Online Safety

Key Learning

- To know what makes a safe password.
- To learn methods for keeping passwords safe.
- To understand how the Internet can be used in effective communication.
- To understand how a blog can be used to communicate with a wider audience.
- To consider the truth of the content of websites.
- To learn about the meaning of age restrictions symbols on digital media and devices.

Key Resources

purple mash

2Dos

2Connect

2Publish Plus

2Blog

2Write

Key Questions

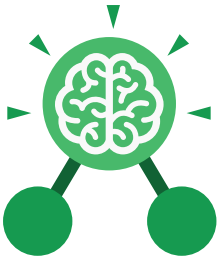### What is a password and why should we keep them safe?

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.

Is everything I read on the Internet true?

Just because something is on the Internet doesn't mean that it is true. Some people create spoof websites that pretend to be something else such as a bank website or to provide misleading information.

How do I know if I am old enough to play a computer game?

Computer games, like films, are often not suitable for children. PEGI ratings will show how old a person must be to play a game.

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Key Vocabulary

Password
A secret word, phrase or combination of letters, numbers and symbols that must be used to gain admission to a site or application such as a website.

Blog
A regularly updated website or web page, typically one run by an individual or small group, that is written in an informal or conversational style.

Website
A set of related web pages located under a single name.

Webpage
A page online that makes up one screen of a website.

Internet
A global computer network providing a variety of information and communication facilities, consisting of interconnected networks and computers.

Concept map
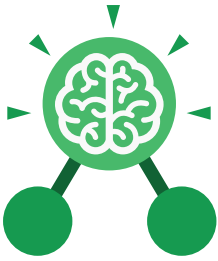A diagram that shows how different objects or ideas are related and connected.

Spoof website
A website that uses dishonest designs to trick users into thinking that it represents the truth.

Username
An identification used by a person with access to a computer, network, or online service.
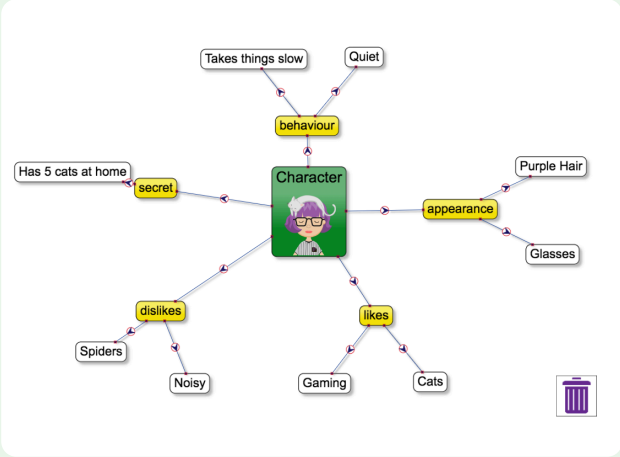
PEGI rating
A rating that shows what age a game is suitable for.
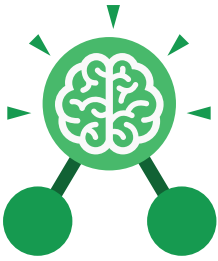
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Unit: 3.2
Online Safety

Key Images

2Connect screen with nodes added

2Blog header

Username and Password screen

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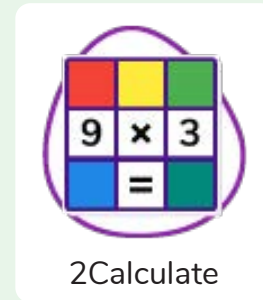Tel: +44(0)208 203 1781 | Email: support@2simple.com | Twitter: @2simplesoftware

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Unit: 3.3
Spreadsheets

Key Learning

- To use the symbols more than, less than and equal to, to compare values.
- To use 2Calculate to collect data and produce a variety of graphs.
- To use the advanced mode of 2Calculate to learn about cell references.

Key Resources

purple mash

2Calculate

Key Questions

Explain how you would collect data to find out children's favourite school subjects. What sort of graph would you create?
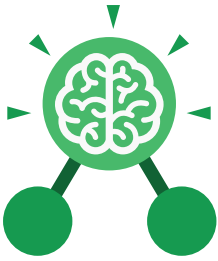
Label one column 'Subject' and list the subjects in this column. In the cells to the right put in the number of children who like this subject. Use the chart button to automatically create a chart. A pie chart would be a suitable choice.

How can you make a 3 times table machine using the spin tool? Could you use the equals tool to check your answer

Put the spin tool in the left most cell of a row. Type 0 x 3 in the next three cells. Put an equals tool in the next cell in the row. When you spin the spin tool, the question will change. Enter the answer and the equals tool will tell you if it is correct.

Explain how you would locate a cell in the advanced mode?

Cells in advanced mode have rows labelled with numbers, and columns labelled with letters. So, each cell has a number and letter. For example, A1 or D7.

2 simple

Unit: 3.3
Spreadsheets

Key Vocabulary

< > =
Symbols used to represent comparing two values. a < b means 'a is less than b'. a > b means 'a is greater than b'. a = b means 'a is equal to b'. These can be combined, for example a =< b means 'a is equal to or less than b'.

Advance mode
A mode of 2Calculate in which the cells have references and can include formulae.

Copy and Paste
A way to copy information from the screen into the computer's memory and paste it elsewhere without re-typing.

Columns
Vertical reference points for the cells in a spreadsheet.

Cells
An individual section of a spreadsheet grid. It contains data or calculations.

Delete key
Use this key to remove the contents of a cell.

Equals tool
Tests whether the entered calculation in the cells to the left of the tool has the correct answer in the cell to the right of the tool.

Move cell tool
This tool makes a cell's contents moveable by drag-and-drop methods.

Rows
Vertical reference points for the cells in a spreadsheet.

Spin Tool
Clicking on this in a cell will increase or decrease the value in the cell to the right by 1.

Spreadsheet
A computer program that represents information in a grid of rows and columns. Any cell in the grid may contain either data or a formula that describes the value to be inserted based on the values in other cells.

2simple
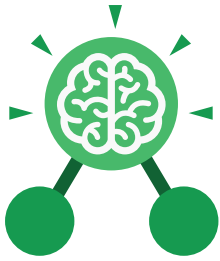
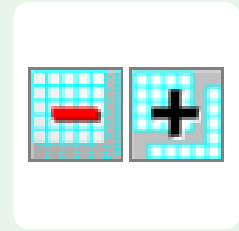# Unit: 3.3
Spreadsheets

Key Images

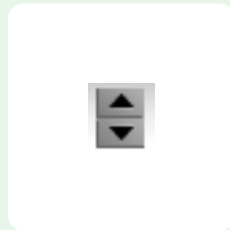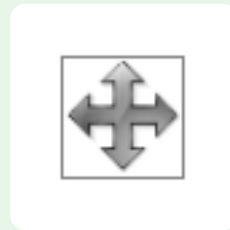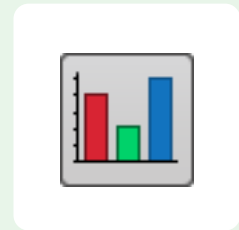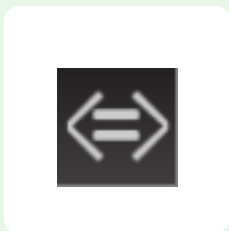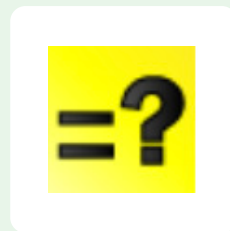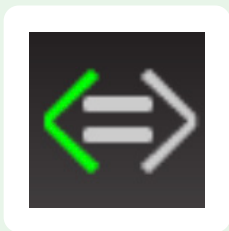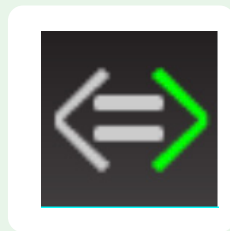|			
Open, close or share a file	Save your work	Open a previously saved file	Increase or decrease spreadsheet size
The 2Calculate toolbox	The 2Calculate control toolbox	Move cell tool	Chart control
Logic	Spin	Equals	Advanced mode
Is less than	Is more than	Is equal to	
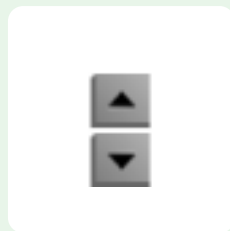
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Unit: 3.4
Touch Typing

Key Learning

- To introduce typing terminology.
- To understand the correct way to sit at the keyboard.
- To learn how to use the home, top and bottom row keys.
- To practise typing with the left and right hand.

Key Resources

purple mash

2Type

Key Vocabulary

Posture
The correct way to sit at the computer.

Top row keys
The keys on the top row of the keyboard.

Home row keys
The keys on the middle row of the keyboard.

Bottom row keys
The keys on the bottom row of the keyboard.
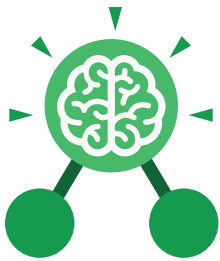
Space bar
The bar at the bottom of the keyboard.

Key Questions

Why should I have a good posture at the computer?

A good posture is important to help you avoid any injuries that come from repeatedly using the computer incorrectly.

Why should I type certain keys with certain fingers?

Using specific fingers for specific keys allows you to type more quickly.

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Unit: 3.4
Touch Typing

Key Images

Check to see if your eyes are level with the top of your screen.

45 - 70 cm

Put your fingers on the keyboard. Make sure your wrists are not touching anything.

Posture

Top Row ←

Home Row ←

Bottom Row ←

Space Bar

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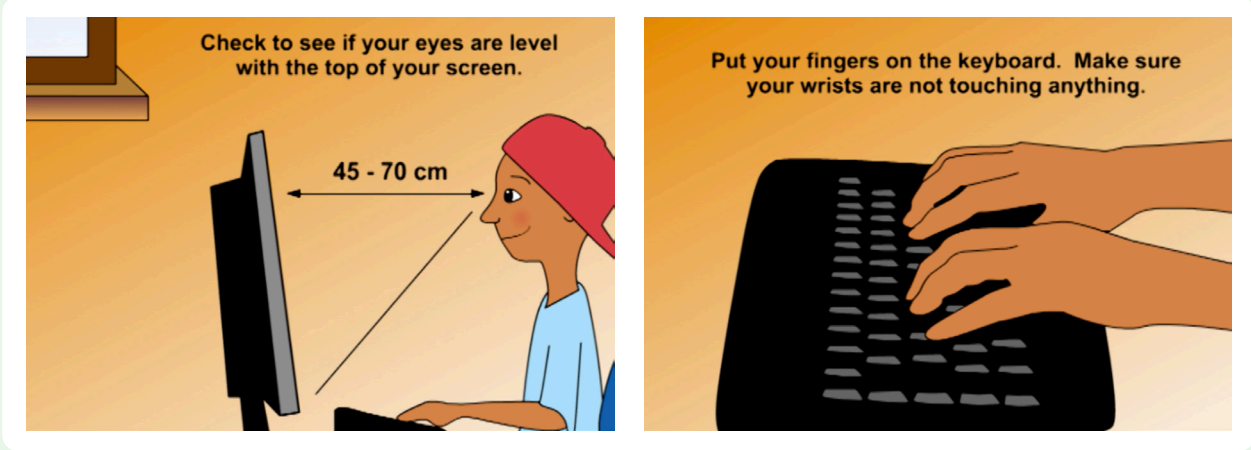
2simple
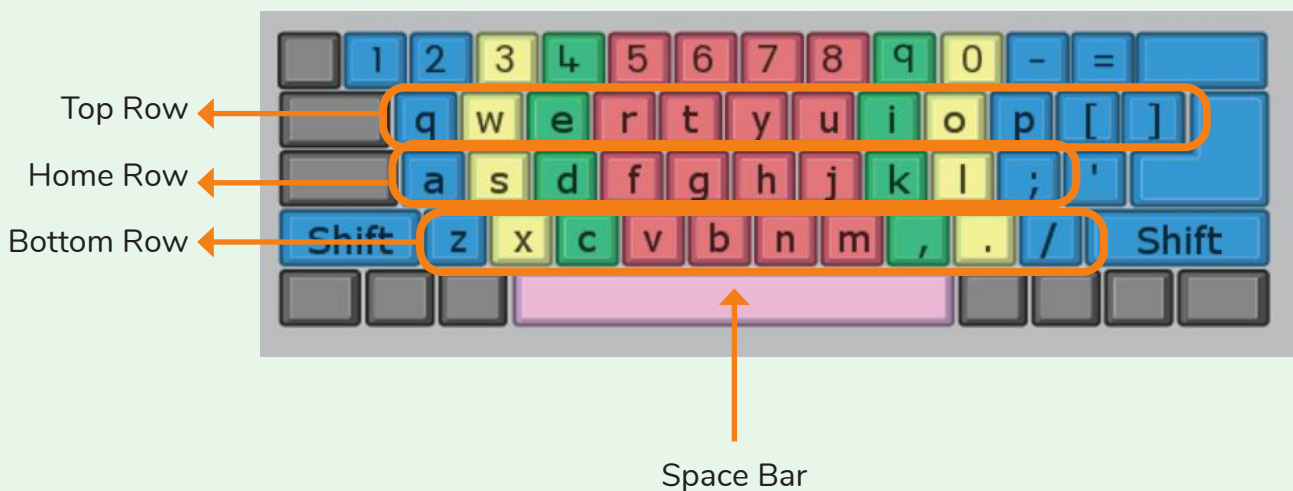
Unit: 3.5
Email

Key Learning

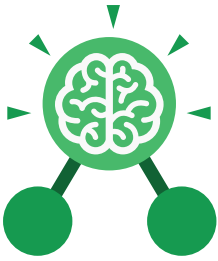- To think about different methods of communication.
- To open and respond to an email using an address book.
- To learn how to use email safely.
- To add an attachment to an email.
- To explore a simulated email scenario.

Key Resources

purple mash

2Email
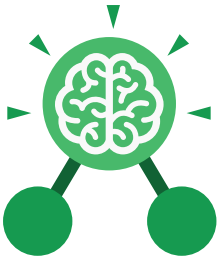2Connect
2Do It Yourself

Key Questions

What is email?

Email is a method of sending electronic communication from one device to another.

What should I do if I receive an email that makes me upset or scared?

If you are at school, you should tell the teacher immediately. If you receive the message at home, then you should tell a parent or guardian.

What information can I send in an email?

As well as sending a message, files such as photographs, videos, music and other resources can be attached to the email and sent to the receiver.

2 simple

Unit: 3.5
Email

Key Vocabulary

Communication
The sharing or exchanging of information by speaking, writing, or using some other medium such as email.

Email
Messages sent by electronic means from one device to one or more people.

Compose
To write or create something.

Send
To make an email be delivered to the email address it is addressed to.

Report to the teacher
A way in 2Email to tell the teacher if you have received an email that makes you feel upset or scared.

Attachment
A file, which could be a piece of work or a picture, that is sent with the email.

Address book
A list of people who you regularly send an email to.

Save to draft
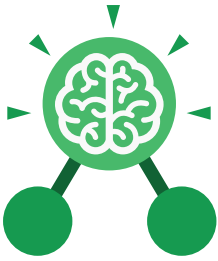Allows you to save an email that you are working on and send it later.

Password
A secret word, phrase or combination of letters, numbers and symbols that must be used to gain admission to a site or application such as email.

CC
A way of sending a copy of your email to other people so they can see the information in it.

Formatting
Allows you to change the way the text of an email looks. For example, you can make the text bold or underline it.

Need more support? Contact us:
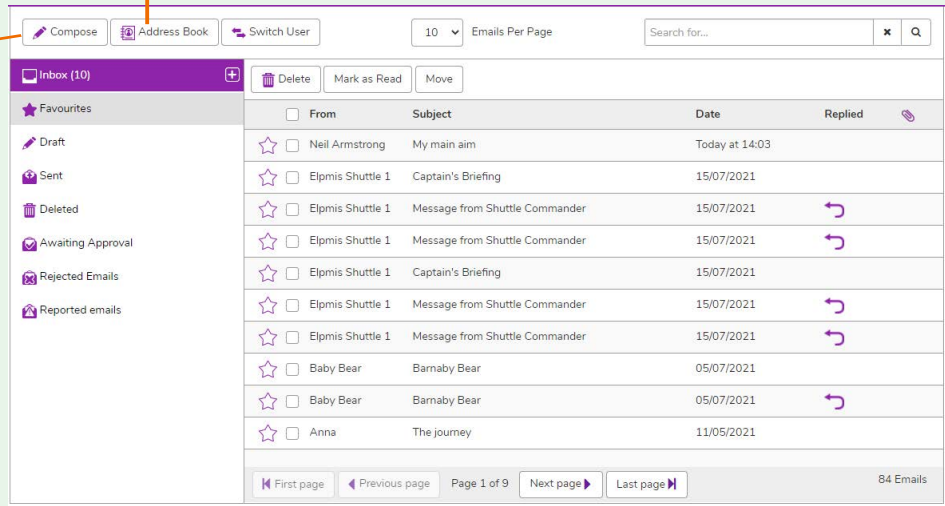Tel: +44(0)208 203 1781 | Email: support@2simple.com | Twitter: @2simplesoftware

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Unit: 3.5
Email

Key Images

A list of people you have sent emails to before
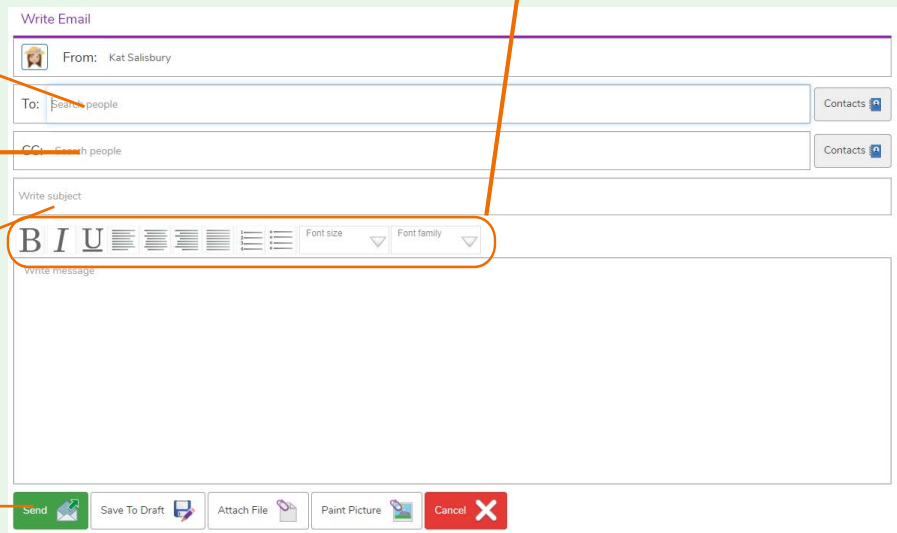
Click here to write your email

Formatting bar where you can change how the message looks.
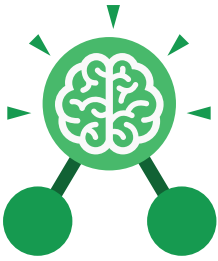
Who is the email to be sent to?

Who else will the email be sent to?

What is the email about?

Click this button to send the email.

Allows you to attach work and pictures to the email

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Unit: 3.6
Branching Databases

Key Learning

- To sort objects using just 'yes' or 'no' questions.
- To complete a branching database using 2Question.
- To create a branching database of the children's choice.

Key Resources

purple mash

2Question

Key Vocabulary

Branching database
Used to classify groups of objects. It is used to help identify the objects by answering questions with either 'yes' or 'no'. Branching databases can also be called binary trees.

Database
A collection of data organised in such a way that it can be searched, and information found easily. Database usually refers to data stored on computers.

Question
Something that is asked or written to try and gain information.

Data
Facts and statistics collected together for information.

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Unit: 3.6
Branching Databases

Key Questions

What is meant by data?

Facts about something; data can be words, numbers or pictures. For example, the class register contains data about the names, addresses and attendance of the children in the class.
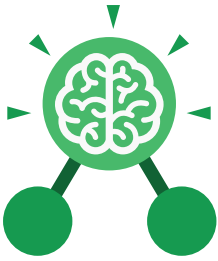
What is a database?

A collection of data organised in such a way that it can be searched, and information found easily. Database usually refers to data stored on computers.

What is a branching database?

Used to classify groups of objects. It is used to help identify the objects by answering questions with either 'yes' or 'no'. Branching databases can also be called binary trees.
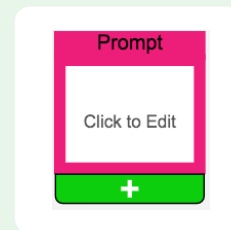
Key Images
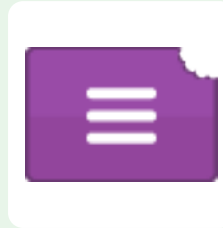
Open, close or share a file

Give the database a name

Add a question to begin to sort the information

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Unit: 3.7
Simulation

Key Learning

- To consider what simulations are.
- To explore a simulation.
- To analyse and evaluate a simulation.

Key Vocabulary

Simulation
A computer simulation is a program that models a real-life situation. They let you try things out that would be too difficult or dangerous to do in real life.

Key Resources

purple mash

2Simulate

Key Questions

What is a computer simulation?

A program that models a real-life situation. They let you try things out that would be too difficult or dangerous to do in real life.

What kind of simulations are there?

Some simulations represent dangerous situations for training such as flying in space, carrying out medical operations or piloting an aeroplane. Others simulate activities for fun, such as racing simulations.
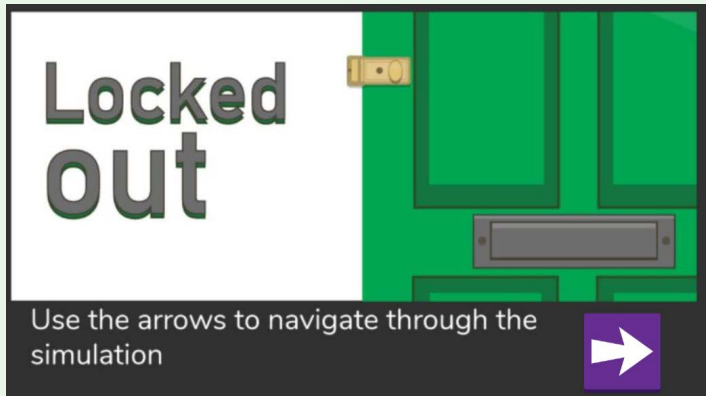
Are there any problems with simulations?

Simulations are often too simple; and unexpected problems can still occur in real life that are difficult to simulate. Simulations can also be very expensive.
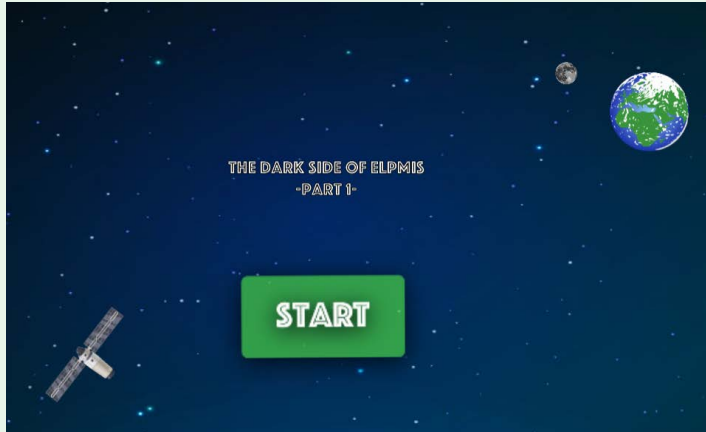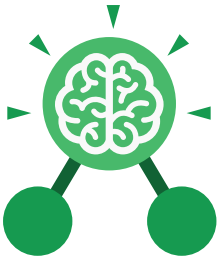
2 simple
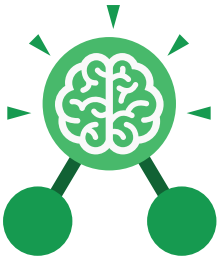
Unit: 3.7
Simulation

Key Images

Locked Out
A lively dog causes problems for Mariza, her baby brother Sam and her mum.

The Dark Side of Elpmis
Trainee astronauts get ready for a mission to the planet Elpmis.
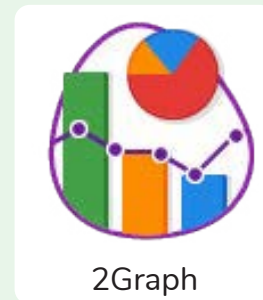
2 simple

Unit: 3.8
Graphing

Key Learning

- To enter data into a graph and answer questions.
- To solve an investigation and present the results in graphic form.

Key Resources

purple mash

2Graph

Key Vocabulary

Graph
A diagram showing the value of objects.

Field
A part of a record.

Data
Facts and statistics collected together for reference

Bar chart
A graph in which the numerical amounts are shown by the height or length of lines or rectangles of equal width.

Block graph
A graph where a block represents one item.

Line graph
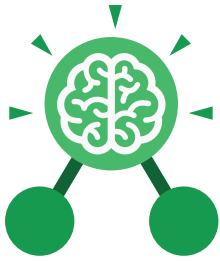A graph where a line is used to show an amount.

Pie chart
A type of graph in which a circle is divided into sections that each represent a part of the whole.

Row
A horizontal line of entries in a table or graph.

Column
A vertical line of entries in a table or graph.

2 simple

Unit: 3.8
Graphing

Key Images

Chart Title ✏️

Insert the name of the graph here.

Add and remove a row from the table.

Vertical Bar Chart

Horizontal Bar Chart

Block Graph

Line Graph

Pie Chart

Data entry table

Key Questions

What is a graph?

A diagram representing part of a set of data. Graphs can be drawn by hand or on the computer. There are different types of graphs.

What are the frame lines on the graph called?

They are the axes. The axis that goes up and down (vertical) is called the 'y' axis and usually shows the amount. The axis that goes across (horizontal) is called the 'x' axis and shows what is being measured.

What different kinds of graphs are there?

There are lots of different types of graphs including line graph, bar chart and pie chart.

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Unit: 3.9
Presenting with Google Slides

Key Learning

- To understand the purpose of the Slides tool.
- To add slides to presentations.
- To add media to presentations.
- To format text appropriately.
- To add shapes and lines to enhance a presentation.
- To use the skills learnt to design and create an engaging presentation.

Key Resources

Google Slides

Key Images

Open a new document	Access sharing options	Return to slides home	Undo key

Text formatting	Insert a text box

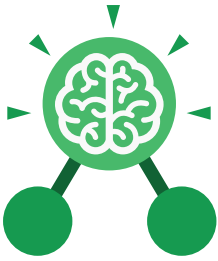|				
Insert image	Insert shape	Insert line	Word art	Insert a new slide

2simple

Unit: 3.9
Presenting with Google Slides

Key Vocabulary

Animation
Visual effects used on objects such as text boxes or pictures. They allow these objects to be bought on and off the slide in a certain way.

Presentation
A visual way of displaying information to an audience that is clear and engaging. It can contain text, images, and videos.

Text box
A box in which text can be inputted and formatted.

Design Themes
A variety of ready-made templates with custom formatting (font, colour scheme etc.) which gives a certain look and feel.

Presentation Program
A computer program, such as Google - 3.9 (Google) Slides, which is used to create a presentation.

Text formatting
When you change the format of text on a page, including the font, the size and whether it is bold, underlined or in italics.

Font
A set of type which shows words and numbers in a particular style and size.

Slide
A single page within a presentation.

Transition
The interesting effect used when one slide moves onto the next.

Media
Images, videos, or sounds which can be added to a presentation.

Slideshow
A collection of pages arranged in sequence that contains text and images to present to an audience. Often referred to as a Slides presentation.

WordArt
A way to treat text as a graphic so that you can add special effects to text.

2simple

Unit: 3.9
Presenting with Google Slides

Key Questions

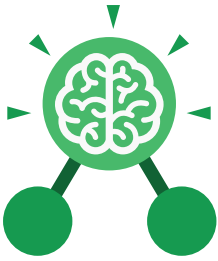### What is a presentation program used for?

A presentation program is used to present information to an audience in an engaging way, such as including text, pictures and videos. Google Slides is an example of a presentation program.

What features can you use to make a presentation more engaging?

You can give your presentation an engaging look and feel by using different fonts, colour schemes and using an interesting layout. Adding pictures, sound, and videos would also make a presentation more interesting to an audience. Using animations and interesting transitions between slides would also be engaging.

How do you add a transition to a presentation?

Click on 'Transitions' at the top of the screen and select the transition you wish to use from the Motion menu. Choose the speed that you think will look best.

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Unit: 3.9
Presenting with Microsoft PowerPoint

Key Learning

- To understand the uses of PowerPoint.
- To create a page in a presentation.
- To add media to a presentation.
- To add animations to a presentation.
- To add timings to a presentation.
- To use the skills learnt to design and create an engaging presentation.

Key Resources
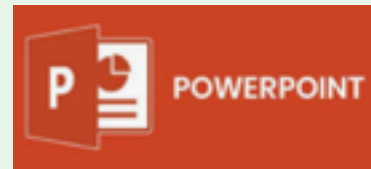
Key Images

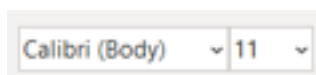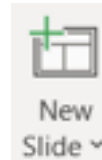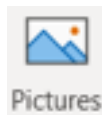|	
Open a new document	Open an existing document
Save your work	Undo key

Font Category

Insert a new slide

Insert a text box

Home tab where many editing tools are found

Insert a picture

Design tab where you can find ready-made design templates

Insert tab where you can add an object such as a picture or

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Unit: 3.9
Presenting with Microsoft PowerPoint

Key Vocabulary

Animation
Visual effects used on objects such as text boxes or pictures. They allow these objects to be bought on and off the slide in a certain way.

Audio
Any type of sound, such as music or voiceover.

Design Templates
A variety of ready-made templates with custom formatting (font, colour scheme etc.) which gives a certain look and feel.

Entrance Animation
The animation used to bring an object (such as a picture or text box) onto the slide.

Font
A set of type which shows words and numbers in a particular style and size.

Media
Images, videos or sounds which can be added to a presentation.

Presentation
A visual way of displaying information to an audience that is clear and engaging. It can contain text, images and videos.

Presentation Program
A computer program, such as PowerPoint, which is used to create a presentation.

Slide
A single page within a presentation.

Slideshow
A collection of pages arranged in sequence that contains text and images to present to an audience. Often referred to as a PowerPoint presentation.

Stock image
Existing photos and images which are available and free to use.

Text box
A box in which text can be inputted and formatted.

Text formatting
When you change the format of text on a page, including the font, the size and whether it is bold, underlined or in italics.

Transition
The interesting effect used when one slide moves onto the next.

WordArt
A way to treat text as a graphic so that you can add special effects to text.

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Unit: 3.9
Presenting with Microsoft PowerPoint

Key Questions

What is a presentation program used for?

A presentation program is used to present information to an audience in an engaging way, such as including text, pictures and videos. PowerPoint is an example of a presentation program.

What features can you use to make a presentation more engaging?

You can give your presentation an engaging look and feel by using different fonts, colour schemes and using an interesting layout. Adding pictures, sound, and videos would also make a presentation more interesting to an audience. Using animations and interesting transitions between slides would also be engaging.

How do you add a transition to a presentation?

Click on 'Transitions' at the top of the screen and select the transition you wish to use. You can preview the transition by pressing 'preview' on the left-hand side.

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