

Year 3 QR Codes Knowledge Organiser

Key words and prior learning from year 3 'Organising, Creating and Presenting'

Online image – picture on the internet that someone has uploaded, which may or may not give another user permission to take and use elsewhere.

Copyright – understand that copying work without permission isn't fair and might cause problems.

Text box – a rectangular area on the screen where you can enter text.

Border/Frame – the colour and style of the outline of a border/frame can be changed. You may also wish to fill the colour of a border/frame.

Background – add an object/image to a page, put it on the bottom layer and change the transparency to add other objects on top layers.

Layering – placing one object over another. Know that each object on the page is added to a new layer and can be moved backwards or forwards between the layers.

Locking object – an object can be locked in position on the page on screen so that it can't be moved or deleted.

Edit – to make changes to an object or text.

Shapes – objects that can be added to the page to create different effects, e.g. speech bubbles.



New key words we will use in year 3 'QR Codes'

QR – Quick Response

QR Code – image consisting of black and white square dots in a unique configuration. It is a special kind of barcode that is machine-readable by a camera or smartphone that usually directs the user to a website

Machine readable - data in a format that can be easily processed by a computer without human intervention

| Key Learning | Self-Assessment | | |
|---|-----------------|---|----|
| | WT | A | WA |
| I know what a QR code is | | | |
| I can recognise a QR code | | | |
| I know that a QR code stores data that is machine readable that directs a user to the information | | | |
| I know how to create a QR code online | | | |
| I can scan a QR code and access the information that it links to | | | |
| I can search for appropriate images using Google | | | |
| I can save an image from Google | | | |
| I can upload an image to J2e | | | |
| I can add text boxes, shapes and images to a J2e5 file | | | |
| I can use layers in J2e5 | | | |
| I can record sound in J2e5 | | | |
| I can rename a sound file in J2e5 | | | |
| I can create a QR code that links to my sound recording in J2e | | | |
| I can add a QR code to my J2e5 file and print it | | | |

Who uses skills like these?



- Businesses of products and services
- Teachers
- Charities
- Governments

Year 3 Write a Program Part 2 Drawing Shapes Knowledge Organiser

| Key Learning | Self-Assessment | | |
|--|-----------------|---|----|
| | WT | A | WA |
| I know how to write an algorithm in a sentence e.g. steps to draw a shape | | | |
| I know this sequence can be changed into coding blocks | | | |
| I can put coding blocks into the correct order to draw a shape on the screen | | | |
| I can use the pen tools to change the colour of my shape on screen | | | |
| I can use column labels appropriately in a spreadsheet | | | |
| I can use a loop by using a 'repeat' command | | | |
| I can add a nested loop to my code | | | |
| I can explain why I have used a nested loop | | | |
| I can present and explain what I have learnt in a presentation/document. | | | |

Example of a sequence

- fwd 100
- turn R 90
- fwd 100
- turn R 90
- fwd 100
- turn R 90
- fwd 100
- turn R 90

Example of a sequence in code blocks

Who uses skills like these?

- Computer game makers
- Comput4er programmers when they design and make software to solve problem.
- App makers

New key words we will use in year 3 Write a Program Part 2 Drawing Shapes

Unplugged – this is a computer science activity that does not need a computer

Algorithm- Step by step instructions to do complete a task

Program - a stored set of instructions in a language understood by the computer

Sequence – The order of a set of instructions for a computer [program]

Visual – P block based programming language by J2e

Command blocks – these blocks of code that are put together to write a program

Debug - This is finding an error in a program to fix it
Program

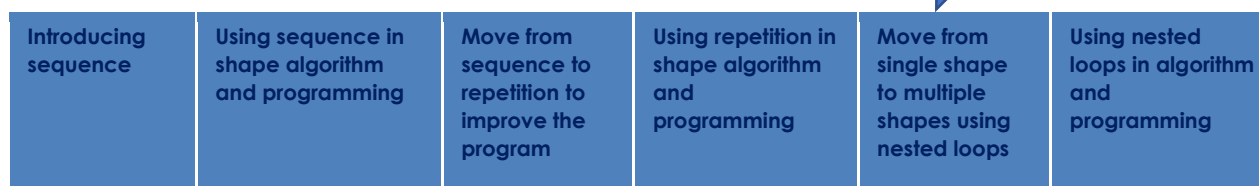
Repeat loop – this is used in a program when we need to repeat something

Nested Loop – this is repeat loop with another repeat loop 'inside' it

key words and prior learning from Year 2 Sequencing Simple Algorithms and Programs

Sequence – a particular order in which related things follow each other.

Reverse – do the direct opposite of the stated command.

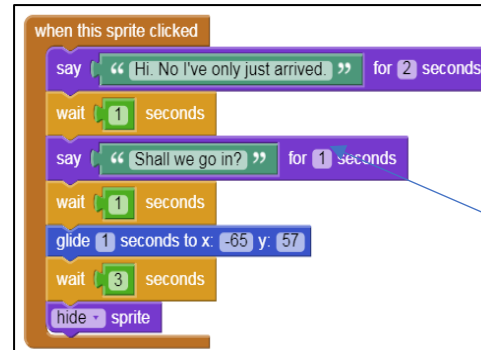


Year 3 Write a Program Part 1 Block Based Sequences Knowledge Organiser

Key words and prior learning from year 2 Sequencing Simple Algorithms and Programs

Sequence – a particular order in which related things follow each other.

Reverse – do the direct opposite of the stated command.



New key words we will use in Year 3 Write a Program Part 1 Blocked Based Sequences

Program – a set of instructions in a language that is understood by a computer

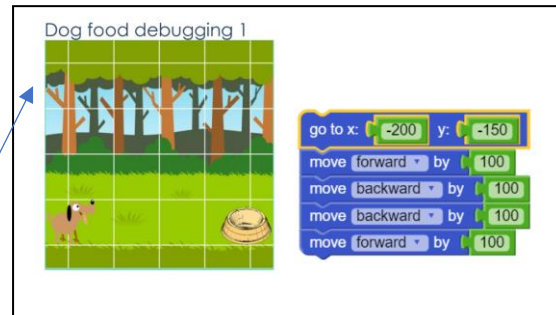
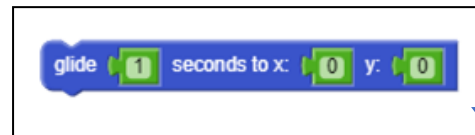
Code blocks – the instruction 'block' that joins together to make a program

Sequence – the order that instructions are carried out

Sprite – name given for a character in computer software Visual or Scratch

Debug - Look at your program and find where there is a problem and fix it

Input – This is usually an external device like a mouse or keyboard, in the case of coding we can add an input event block such as **when this sprite is clicked** or **when the space bar is pressed** to trigger an event



| Key Learning | Self-Assessment | | |
|--|-----------------|---|----|
| | WT | A | WA |
| I can put instructions into a sequence | | | |
| I know what an algorithm is | | | |
| I can predict the code from a partner's piece of work | | | |
| I can use the command tools in Visual to create a simple program | | | |
| I can add a delay block in code e.g. wait 2 seconds | | | |
| I can change the sprite in Visual | | | |
| I can add a background sprite | | | |
| I can debug code to fix errors | | | |
| I can use the input 'when this sprite is clicked' | | | |
| I can use the 'glide to x and y' block | | | |

Who uses skills like these?



- App developers
- Software developers
- Computer game designers

Year 3 Creating a branching database and interrogating simple databases knowledge organiser

Key words and prior learning from Year 2

Multiple Choice - questions which have given answers for someone to choose from

Branching/Binary Database - a way of classifying a group of objects

Data collection sheet/Survey – a form with at least 3 columns used to collect and organise data or answers to questions (category, tally and frequency)

Chart - a chart is used to display data so it is easier to compare

Graph - a graph is used to show how two different set of data relate to each other

Pictogram - a chart that uses pictures to show data

Who uses skills like these?



- Scientists to identify objects, nature and animals
- Police detectives when they are trying to identify people
- Shopkeepers to keep track of stock
- Vets to classify animals

Year 2 Multiple Choice Survey

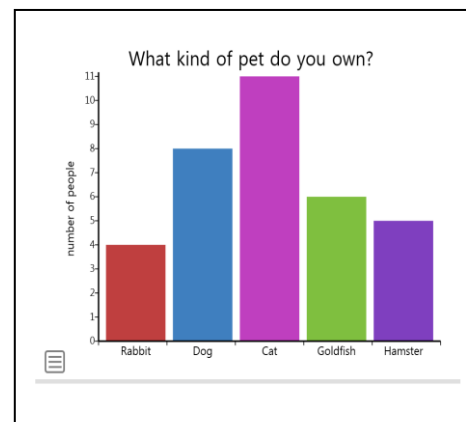
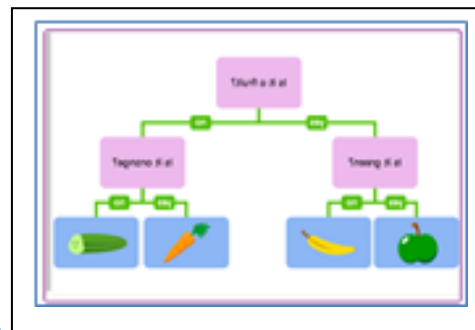


How do you travel to school?

☐ Walk ☐ Car ☐ Bus ☐ Other

What lunch do you have?

☐ Sandwiches ☐ School Dinner ☐ Go Home



Key Learning

Self-Assessment

| | WT | A | WA |
|---|----|---|----|
| I can ask appropriate questions to sort data | | | |
| I can use a branching database to identify data | | | |
| I understand what a field and record is in a database | | | |
| I can sort information in a database into order | | | |
| I can use a simple search to find information on one field in a database | | | |
| I can use a complex search to find information from more than one field in a database by using AND OR | | | |
| I can find errors in a database | | | |
| I know why it is important to enter data into a database accurately | | | |

New key words we will use in Year 3 'Creating a branching database and interrogating simple data bases'

Record - fields and data about one thing in a database

Database - a way of storing and organising information

Data Types - the options the answers can be displayed as. This can be letters, words, images, numbers or a mixture of them

Form View - shows you an individual record about one thing

Table View - shows you more than one record in rows

Field Name - the title of data in a record or table

Sort - putting data into an order for example alphabetical or smallest to largest

Simple Search - when you look for one criterion at a time

Complex Search – when you look for more than one criterion at a time using AND OR

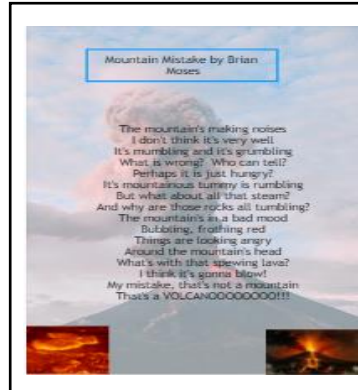
Year 3 Organising, creating and presenting – Knowledge Organiser

Key words and prior learning from Y2 unit 'Create a topic-based eBook'

Online Image – You can search for images that are saved online

File Types – Files can be saved as different file type such as Paint Files, Write Files, Images and Mix files.

Presentation Software – this software can be used to create an eBook that presents our research



New key words we will use in Year 3 'Organising, creating and presenting'

View and edit mode – most programs with edit mode toggle between "view" and "edit." When in the "view mode," the user can only look at the file; however, in "edit mode," the user can view and change its contents

Fill borders and frames – a presentation technique used to add colour for effect or meaning

Import and export - importing and exporting allow different computer programs to read each other's' files. "Import" means to bring a file from a different program into the one you're using, and "export" means to save a file in a way that a different program can use it

Layering – to organize the arrangement of objects (photos, text, graphics and background colours) you've placed on a page so that you can manipulate them more easily.

Stop motion animation – take a photo of an object or scene and slightly move the objects before taking another photo. This process is repeated until the scene is completed and uses each photo as a frame in the animation

Onion skinning – a technique used in animation which lets you see a 'ghostly' image of the previous captured frame over your new frame so that you can line up objects accurately before capturing the next frame

GIF – stands for Graphics Interchange Format. GIFs are a series of images or soundless video that will loop continuously and doesn't require anyone to press play

Page orientation - is the direction in which a document is displayed or printed. The two basic types of page orientation are portrait (vertical) and landscape (horizontal)

| Key Learning | Self-Assessment | | |
|---|-----------------|---|----|
| | WT | A | WA |
| I can add and edit text to improve its presentation and can adjust its position on the page | | | |
| I can search and upload an appropriate image into my work | | | |
| I make decisions over colour schemes, combine text and images and work with layers on the page | | | |
| I can use tools to create a digital worksheet that includes objects that are locked or free to move around the page | | | |
| I can add an image as a background and change its transparency to improve the presentation of my work | | | |
| I can take an image using a camera and retrieve a saved image | | | |
| I can remove the background of an image | | | |
| I can save my work and retrieve previously saved files and continue working with them | | | |
| I can create a simple stop motion animation | | | |
| I understand about the onion skinning technique and how it is used in animation | | | |
| I know what a GIF is and can upload it into another work file | | | |

Who uses skills like these?



- Magazine creators, and publishers who make books and digital books
- Graphic artists – making adverts, web pages, logos