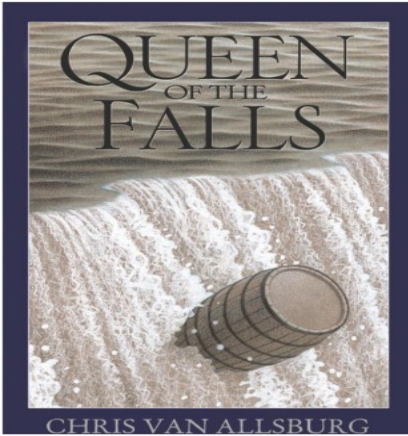


Year 5 English – Autumn 1

Writing Outcome

To write a series of diary entries about significant events in Annie Edson Taylor's life



NC Word List – Years 5 and 6	
achieve	marvellous
bruise	muscle
curiosity	opportunity
desperate	profession
disastrous	queue
embarrass	recommend
especially	sacrifice
immediately	temperature

Punctuation and Grammar

Non-negotiables

- ◆ Use punctuation at Y4 standard correctly (full stops, capital letters, exclamation marks, question marks, commas in a list, commas after fronted adverbials, apostrophes for contraction and possession)
- ◆ Use fronted adverbials
- ◆ Use a variety of verb forms consistently and correctly
- ◆ Organise paragraphs around a theme

Year 5 Expectations

- ◆ Engage reader through use of description, feelings and opinions
- ◆ Use adverbs and fronted adverbials (with doubt in my mind, anxiously, afterwards)
- ◆ Use rhetorical questions to engage reader
- ◆ Use consistent 1st person
- ◆ Write in consistent tense including progressive and perfect forms
- ◆ Include the 5Ws – who, what, where, when, why and how

Developing Vocabulary

restless - unable to rest or relax as a result of anxiety or boredom.

fearless - showing a lack of fear.

Outstretched - (especially of a hand or arm) extended or stretched out

visible - able to be seen.

cascading - (of water) pour downwards rapidly and in large quantities

plunge - jump or dive quickly and energetically.

pounding - repeated and heavy striking or

hitting of someone or something

hypnotised - capture the whole attention of (someone); fascinate.

survive/survival - continue to live or exist, especially in spite of danger or hardship

adjusted - alter or move (something) slightly in order to achieve the desired fit, appearance, or result

discombobulation - to cause to be in a state of confusion : upset, disorient

spectators - a person who watches at a show, game, or other

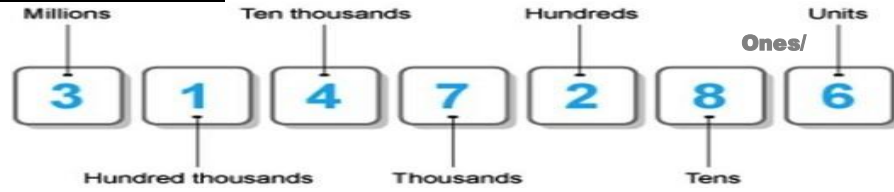
Additional Text



Year 5 Maths – Autumn 1

Crucial Knowledge Organiser

Place Value



Roman Numerals

I	V	X	L	C	D	M
1	5	10	50	100	500	1000

Addition

	3	0	4	5
+	2	1	7	2
	5	2	1	7
		1		

1. Write the largest number on the top line and the smallest number below in the correct place value
2. Add the ones first. Remember to always start from the right
3. As $4 + 7 = 11$ place a small 1 under the hundreds column answer square
4. Add $0 + 1 + 1$
5. Add $3 + 2$.

Multiplication

		1	4	5
X			1	2
		2	9	0
+	1	4	5	0
	1	7	4	0

1. Write the largest number on the top line and the smallest number below in the correct place value
2. Multiply 145×2
3. Put a 0 in the ones column of the second row as you are multiplying by 10
4. Then multiply each digit by 1
5. When complete, add the two products together to calculate the answer.

Subtraction

	3	2	4	5
-	2	1	7	2
				3
	3	1	4	5
-	2	1	7	2
	1	0	7	3

1. Write the largest number on the top line and the smallest number below in the correct place value
2. Subtract the ones first. Remember to always start from the right
3. As it is not possible to do $4 - 7$ you will need to exchange
4. Exchange from the hundreds so that 4 tens becomes 14 tens
5. Complete the rest of the subtraction

Vocabulary

Numeral/Digit — A single numerical symbol which can be used to create a number e.g. 0,1,2,3,4,5,6,7,8,9

Value—The amount that the digit represents in Place value e.g. The digit 4 in the number 49 has a value of 40.

Partitioned—Splitting the number into it's place values e.g. $452 = 400 + 50 + 2$

Rounding—Making a number simpler whilst staying close to it's original value.

Negative—A number who's value is less than 0.

Product — A result of multiplying numbers together e.g. the product of 6 & 3 is 18.

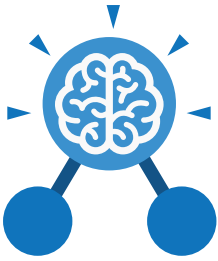
Multiple— The product result of one number multiplied by another.

Factor—To break a number up into numbers that can be multiplied together to get the original number e.g. Factors of 6 = 6×1 & 2×3 so 1,2,3 & 6.

Written Division

1	How many 8s in 8?
$8 \overline{) 8,192}$	$8 \div 8 = 1$
1,0	How many 8s in 1?
$8 \overline{) 8,192}$	$1 \div 8 = 0 \text{ r}1$
1,02	How many 8s in 19?
$8 \overline{) 8,192}$	$19 \div 8 = 2 \text{ r}3$
1,024	How many 8s in 32?
$8 \overline{) 8,192}$	$32 \div 8 = 4$





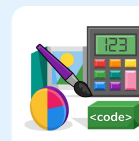
Unit: 5.1

Coding

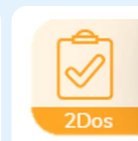
Key Learning

- To begin to simplify code.
- To create a playable game.
- To understand what a simulation is.
- To program a simulation using 2Code.
- To know what decomposition and abstraction are in computer science.
- To take a real-life situation, decompose it and think about the level of abstraction.
- To understand how to use friction in code.
- To begin to understand what a function is and how functions work in code.
- To understand what the different variables types are and how they are used differently.
- To understand how to create a string.
- To understand what concatenation is and how it works.

Key Resources



Tools



2Dos



2Chart



Free code gorilla

Key Vocabulary

Abstraction

A way of de-cluttering and removing unnecessary details to get a program functioning.

Action

The way that objects change when programmed to do so. For example, move.

Algorithm

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

Concatenation

The action of linking a mixture of strings, variable values and numbers together in a series.

Debug\ Debugging

Fixing code that has errors so that the code will run the way it was designed.

Decomposition

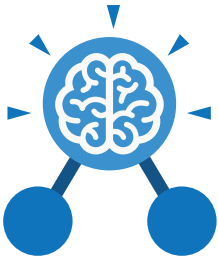
A method of breaking down a task into manageable components. This makes coding easier as the components can then be coded separately and then brought back together in the program.

Efficient

In coding, simplified code runs faster and uses less processing memory, it is said to be more efficient.

Flowchart

A diagram that uses specifically shaped, labelled boxes and arrows to represent an algorithm as a diagram.



Unit: 5.1

Coding

Key Vocabulary

Event

An occurrence that causes a block of code to be run.

The event could be the result of user action such as the user pressing a key (**when Key**) or clicking or swiping the screen (**when Clicked, when Swiped**) or when objects interact (collision). In 2Code, the event commands are used to create blocks of code that are run when events happen.

Nesting

When coding commands are put inside other commands. These commands only run when the outer command runs.

Physical System

In this context, this is any object or situation that can be analysed and modelled. For example modelling the function of a traffic light, modelling friction of cars moving down surfaces or modelling the functions of a home's security system.

Function

A block or sequence of code that you can access when you need it, so you don't have to rewrite the code repeatedly. Instead, you simply '**call**' the function each time you want it.

Object

Items in a program that can be given instructions to move or change in some way (action). In 2Code Gorilla, the **object types** are button number, input, text, shape turtle, character, object, vehicle, animal.

Properties

These determine the look and size of an object. Each object has properties such as the image, scale and position of the object.

Selection

A conditional decision command. When selection is used, a program will choose which bit of code to run depending on a condition. In 2Code selection is accomplished using '**if**' or '**if/else**' statements.

Input

Information going into the computer. This could be the user moving or clicking the mouse, or the user entering characters on the keyboard. On tablets there are other forms such as finger swipes, touch gestures and tilting the device.

Output

Information that comes out of the computer e.g. **sound, prompt, alert or print to screen.**

Repeat

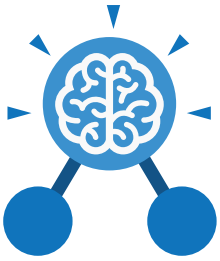
This command can be used to make a block of commands run a set number of times, until a condition is met or forever.

Sequence

This is when a computer program runs commands in order.

Simplify

In coding this is used to describe modifying the code to complete the same process with less lines of code.



Unit: 5.1

Coding

Key Vocabulary

Timer

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

Variable

A named area in computer memory. A variable has a **name** and a **value**. The program can change this variable value. Variables are used in programming to keep track of things that can change while a program is running. In 2Code, variables can be **strings**, **numbers** or **computer-generated** variables to control objects of a type.

Key Images



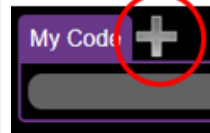
Design

Open design mode in 2Code.



Exit Design

Switch to code mode in 2Code.



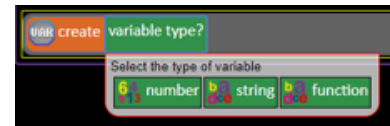
Add a new Tab to your code



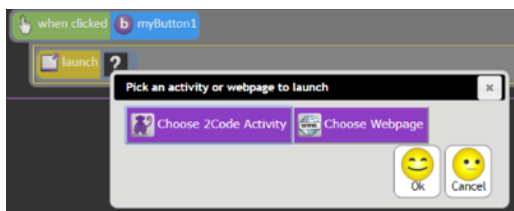
A change variable block.



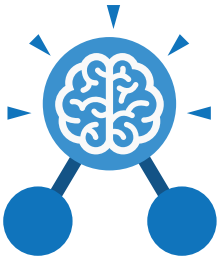
Example of combining variables and strings to print to the screen



Creating a variable in 2Code



Creating a variable in 2Code



Unit: 5.1 Coding

Key Questions

What does simulating a physical system mean?

Creating a program where the objects behave as they would in the real world. For example, a football program that uses angles, speed and friction to simulate kicking a football. When simulating a physical system, you first must break the system down into parts that can be coded (decomposition). The different parts will come together to make the full simulation.

Describe how you would use variables to make a timer countdown and a scorepad for a game.

Timer countdown:
Create a timer variable and set it to the starting number of seconds. Add a Timer command that repeats and subtracts 1 every second. Add a text object in design view to display this number.

Score:
Create a variable to store the score, each time the user gains a point, change and display the value of the variable.

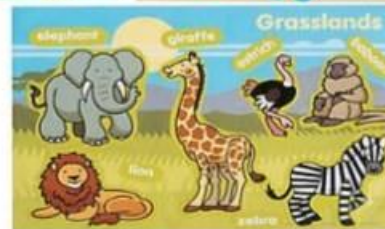
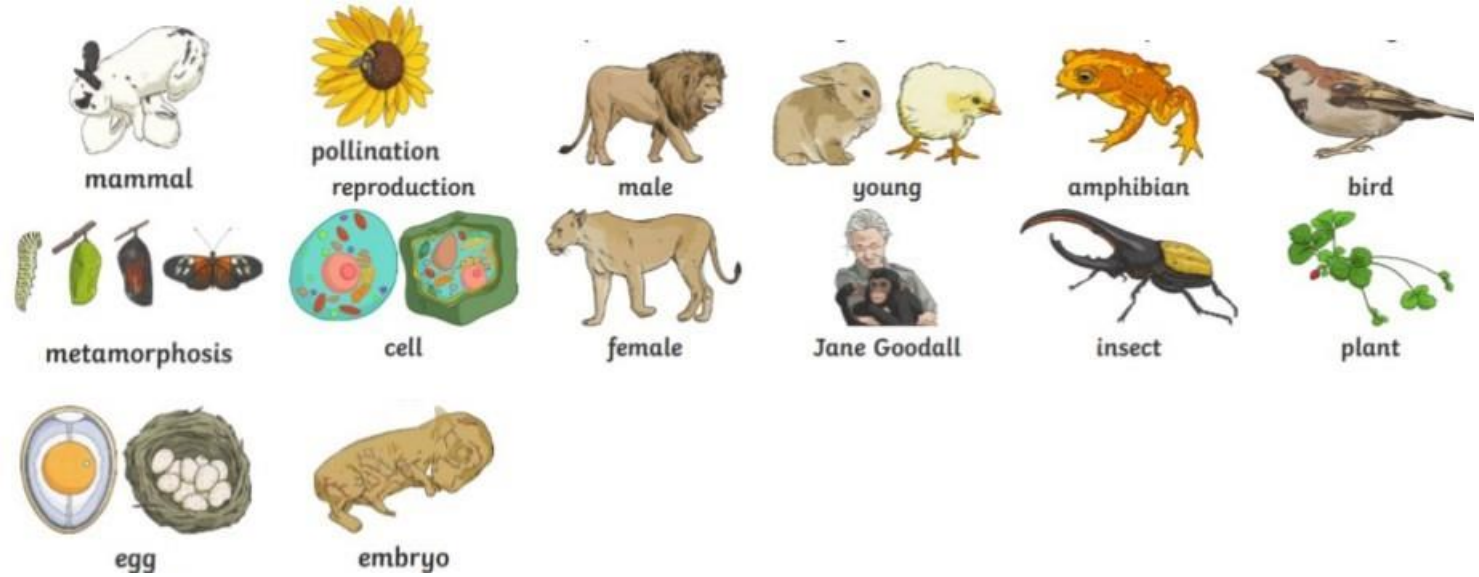
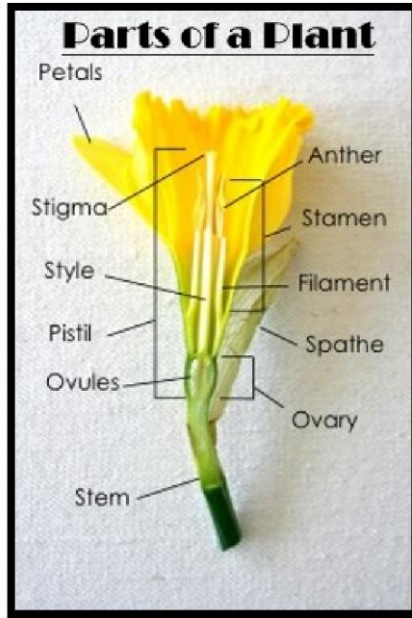
Give examples of how you could use the Launch command in 2Code.

Clicking on a button or other object in the program to opens another 2Code program or a webpage.

What do the terms decomposition and abstraction mean? Use examples to explain them.

Decomposition is breaking a task into its component parts so that each part can be coded separately. If you were coding a game of chess, you could decompose into the moves of the different pieces and the setup of the playing space.

Abstraction is removing unnecessary details to get the program functioning. In the example, the colour and size of the squares is not important to game play.



Vocabulary

Cell — The smallest part of a living organism

Organism - A living thing

Amphibian—Animals that are able to live on land and in water

Mammal— A mammal is an animal that breathes air, has a backbone, and grows hair at some point during its life

Reptile— A cold-blooded animal (as a snake, lizard, turtle, or alligator) that breathes air and usually has the skin covered with scales or bony plates.

Reproduction —Is the process by which a living organism creates a likeness of itself.

Embryo — An embryo is an animal or a plant in its earliest stage of development.

Habitat— A place where an animal or organism lives.

Metamorphosis —Metamorphosis is a process some animals go through to become adults.

The United Kingdom



Year 5 Geography – Autumn 1

Locational Knowledge

I can describe key geographical features of the UK and its countries

I know that the UK can be split into regions and that each region contains several counties

I can identify and name the counties of the UK (such as Staffordshire, Derbyshire, Cheshire and Lancashire)



Geographical skills and fieldwork

I can label the four countries and capital cities of the UK on a map, along with places such as the Isle of Wight and Shetland Islands

I can use given clues to locate the counties of England on a map

I can locate the major towns and cities of the UK on a map (such as London, Manchester, Birmingham, Liverpool, Stoke-on-Trent, Cardiff)



Human and physical Geography

I can explore the human and physical features of a particular town or city in the UK

I know the difference between a hill and a mountain (a mountain is above 2000 ft/610 m)

I can describe how different mountains are formed

I can name and locate mountain ranges of the UK (The Pennines, Scottish Highlands, Grampain Mountains)

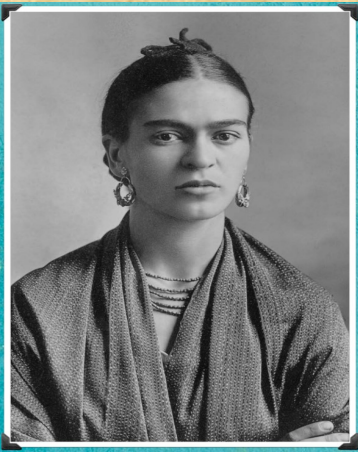
I know the difference between a sea and an ocean (Seas are smaller and usually partially enclosed by land)

I can describe different coastal areas of the UK using vocabulary such as erosion, coastal stacks and cliffs

I can name and locate the major rivers of the UK (Trent, Mersey, Thames, Severn, Clyde, Great Ouse)

I know that rivers start their journey at the source and end their journey at the mouth



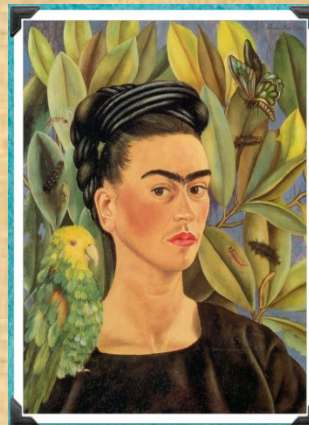
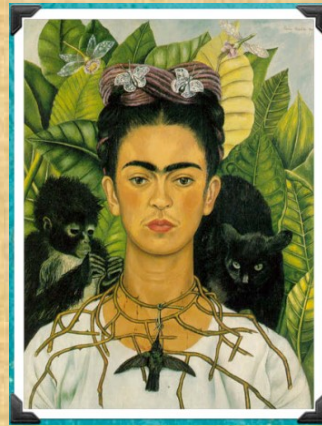


Crucial Knowledge Art: Autumn Year 5– Frida Kahlo



Painting, printing and colour

- I can analyse aspects of a painting including mood and colour
- I can add paint to a sketched self-portrait to add colour and detail
- I can choose colours to express aspects of my personality
- I can choose colours to express aspects of communities I belong to



Drawing– line, pattern and texture

- I can describe the general proportions of a face
- I can use my knowledge of proportions to complete a self-portrait
- I understand that I can use light guidelines for my sketches to help structure my sketches

Responding to artwork and using a sketchbook

- I can describe who Frida Kahlo is and give a brief summary of her work
- I can give my opinion of a painting or artist, giving reasons for my ideas
- I can describe the differences between a portrait and a self-portrait
- I can describe aspects of Mexican folk art
- I can identify aspects of the Mexican culture in Kahlo's artwork
- I can describe the aspects of the surrealist movement
- I can express my opinion of surrealism in paintings