

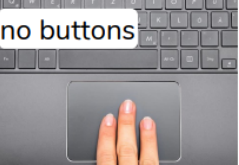





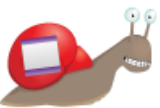


Reception - Computing Knowledge Goals Spring 1

| | |
|---|---|
|  | Children can hold a computer mouse with my finger on the correct buttons. |
|  | Children are able to use a mouse to make the cursor move around the computer screen where I want it to go. |
|  | Children can click the correct mouse button to play games on the computer. |
|  | Children can use a laptop touchpad knowing that there are two different types of clicking options. |
|  | Children are able to use a mouse accurately to click and drag objects on the screen. |

Year 1 - Computing Knowledge Goals Spring 1

| | |
|--|---|
|  <p>Fun with fish</p> | <p>Children use prior knowledge from reception to hold and click mouse.</p> <p>Children can give and follow instructions. Children can draw symbols to represent instructions. Children can arrange code blocks to create a set of instructions.</p> |
|  <p>Bubbles</p> | <p>Children can create a program using code blocks. Children can use object and action code blocks.</p> |
|  <p>Air Traffic Control</p> | <p>Children can create a simple program using code blocks. Children can use event, object and action code blocks.</p> |
|  <p>Snail Race</p> | <p>Children can create a simple program using code blocks. Children can use event, object and action code blocks. Children can notice when their code executes when their program is run.</p> |



Vehicles

Children can edit a scene by **adding, deleting** and moving **objects**.
Children can change the size of objects using the attributes (properties) table.

Year 2 - Computing Knowledge Goals Spring 1



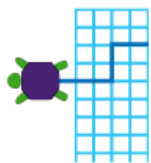
Princess and the frog

Children use prior knowledge from year 1 block coding basics.
Children can explain that an **algorithm** is a set of instructions.
Children can describe the **algorithms** they created.
Children can explain that for the computer to make something happen, it needs to follow clear instructions.



Magician

Children can plan an algorithm that includes **collision detection**.
Children can create a **program** using collision detection.
Children read blocks of **code** and **predict** what will happen when it is run.



Turtle

Children can create a program that uses a timer-after **command**.
Children can explain what the timer-after command does in their program.
Children can **predict** what will happen in a program that includes a timer-after command.



Haunted Scene

Children can create a computer **program** that includes different object types.
Children can **modify** the attributes (properties) of an object.
Children can use different events in their program to make objects move.



Free code scenes

Children can create a computer program that includes a **button** object.
Children can explain what a button does in their **program**.
Children can **modify** the attributes (properties) of a button to fit their program design.

Year 3 - Computing Knowledge Goals Spring 1



Free code scenes

Children use prior knowledge from year 2 and year 1 on block coding.
Children can read and explain a **flowchart**
Children can use a flowchart to create a computer **program**.
Children can create a computer program that uses **click** events and **timers**.



Night and Day

Children can create a program that uses a timer-after **command**
Children can create a **program** that uses a timer-every command
Children understand there can be different ways to solve a problem.



Tick tock clock challenge

Children understand how the turtle object moves.
Children can use the **repeat** command with an object.
Children can create a computer program that includes use of the **repeat command**.



Free code chimp




Children can create computer **programs** using prior knowledge.
Children can run, test and **debug** their programs.
Children can consider nesting when **debugging** their programs.



Jumping Monkey

Children can use the **attributes** (properties) table to set the attributes of objects. Children can plan their scene and **code** before they create their program.
Children can confidently make several different things happen in a **program**.

Year 4 - Computing Knowledge Goals Spring 1

| | |
|---|--|
|  <p>Free code gibbon</p> | <p>Children use prior knowledge of 2code from years 2 and 3.</p> <p>Children can explore different object types in 2Code.</p> <p>Children can use a background and objects to create a scene.</p> <p>Children can plan an algorithm for their scene and use 2Code to program it.</p> |
|  <p>Lost - 2Code Example</p> | <p>Children can create a program that includes an IF statement.</p> <p>Children can interpret a flowchart that depicts an IF statement.</p> |
|  <p>Guard the Castle (Gibbon)</p> | <p>Children can make use of the X and Y attributes (properties) of objects in their coding.</p> <p>Children can create a program that includes an IF statement.</p> |



Genie





Children can read **code** that includes repeat until and **IF/ ELSE** and explain how it works.
Children can create a **program** that includes an IF/ ELSE statement.
Children can **interpret** a **flowchart** that depicts an IF/ ELSE statement.



Night and Day (Gibbon)

Children can explain what a **variable** is in programming.
Children can create and use variables when **programming**.

Year 5 - Computing Knowledge Goals Spring 1

| | |
|---|---|
|  <p>Free code gorilla</p> | <p>Children use prior knowledge from 2code chip and use skills for Gibbon (higher level) challenges.</p> <p>Children can use simplified code to make their programming more efficient.</p> <p>Children can use variables in their code.</p> <p>Children can create a simple playable game</p> |
|  <p>Traffic lights</p> | <p>Children can plan an algorithm modelling the sequence of traffic lights.</p> <p>Children can select the right images to reflect the simulation they are making.</p> <p>Children can use their plan to program the simulation to work in 2Code.</p> |
|  <p>Functions</p> | <p>Children can make good attempts to break down their task into smaller achievable steps.</p> <p>Children recognise the need to start coding at a basic level of abstraction to remove superfluous details from their program that do not contribute to the aim of the task.</p> |
|  <p>Random words and wizards</p> | <p>Children can create a program which represents a physical system.</p> <p>Children can create and use functions in their code to make their programming more efficient.</p> |



Splatty Bug

Children can create and use **strings** in programming.
Children can set/change **variable values** appropriately.
Children know some ways that text variables can be used in **coding**.

Year 6 - Computing Knowledge Goals Spring 1



Catching Game

Children use all prior knowledge of 2code at all different levels for Gorilla level coding.
Children can **plan** a **program** which includes a **timer** and a **score**.
Children can follow their plans to create a program.
Children can **debug** when things do not run as expected.



Football Game

Children can create a **program** that makes use of functions.
Children can create a program that uses **multiple functions** with the code arranged in tabs.
Children can explain how their code executes when their **program** is run



Send the rocket to
space

Children can follow flowcharts to create and **debug** code.
Children can create flowcharts for **procedures**.
Children can be creative with the way they code to generate novel **visual effects**.



Turtle road crossing






Children can code programs that take **text input** from the user and use this in the program.
Children can attribute **variables** to user input.
Children are aware of the need to code for all possibilities when using **user input**.



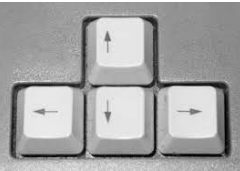


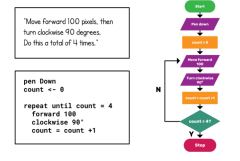
Free code gorilla

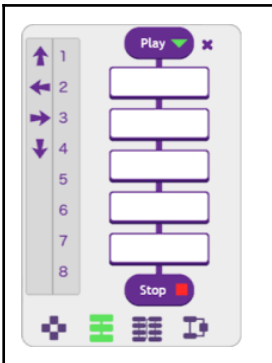
Children can follow through the **code** of how a text adventure can be programmed in 2Code.
Children can design their own **text-based** adventure game based on one they have played.
Children can adapt an existing text adventure so it reflects their own ideas.

Reception - Computing Knowledge Goals Spring 2

| | |
|---|--|
|  | Children can find all the letters of the alphabet on a keyboard . |
|  | Children can put spaces between words in my typed work. |
|  | Children know how to correct typed work without re-doing the work entirely using the delete keys. |
|  | Children can type capital letters and lower case and know how to change between these |
|  | Children can type numbers using a keyboard. |

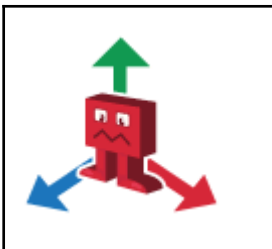
Year 1 - Computing Knowledge Goals Spring 2

| | |
|--|---|
|  | <p>Children use prior knowledge from reception on keyboard functionality.</p> <p>Children can understand the functionality of the direction keys.</p> |
|  | <p>Children begin to understand the concept of creating and debugging a set of instructions.</p> |
|  | <p>Children can understand that there can be additional direction keys as part of an algorithm.</p> |
|  <pre>Move forward 100 pixels, then turn clockwise 90 degrees. Do this a total of 4 times. pen Down count <- 0 repeat until count = 4 forward 100 clockwise 90 count = count + 1</pre> | <p>Children can understand how to change and extend the algorithm list.</p> |



Children can create a longer **algorithm** for an activity by using step by step instructions to code their character, using different directions and counting the number of steps.

Year 2 - Computing Knowledge Goals Spring 2



Children can **plan** a game using 2DIY3D. Including a range of features and tools, as well as characters and an end goal.



Design and create the game environment.



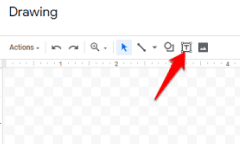
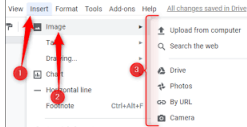
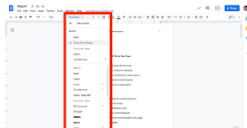


Design and **create** the game quest.



Self and peer **evaluation**.

Year 3 - Computing Knowledge Goals Spring 2

| | |
|---|--|
|  | Children know how and when to use bullet points and numbering in online documents . |
|  | Children are aware of keyboard shortcuts and how they are helpful to use. |
|  | Children know how to insert and format text boxes in online documents. |
|  | Children know how to insert and format an image in online documents. |
|  | Children understand what makes an online document presentable and they know how to format accordingly. |

Year 4 - Computing Knowledge Goals Spring 2



Children can use Google Keep to uplevel **notes**.



Children are aware of the many ways text can be **formatted** in Google Docs.



Children understand the reasons for the Google Slides etiquette when creating a **presentation**.



Children can create a Google Site using relevant **content**.



Children can display **data** using Google Sheets.

Year 5 - Computing Knowledge Goals Spring 2



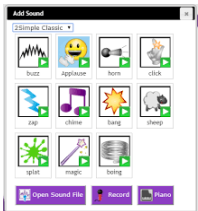
Children know how **animations** were originally created by hand.



Children know animation can be created in a similar way using the computer.



Children learn about **onion skinning** in animation. How it can be used and why it is used. The importance of it is to ensure that each animation can move on swiftly from the last sequence.



Children can add backgrounds and sounds to animations. Children also know that they can add in their very own recorded sounds and backgrounds.



Children are introduced to 'stop motion' animation.

Year 6 - Computing Knowledge Goals Spring 2

| | A | B | C | D |
|---|----------------------|-------------|-------|---|
| 1 | | Jan | Feb | |
| 2 | Entertainment | | | |
| 3 | Cable TV | 52.98 | 52.98 | |
| 4 | Video Rentals | 7.98 | 11.97 | |
| 5 | Movies | 16.00 | 32.00 | |
| 6 | CDs | 18.99 | 29.99 | |
| 7 | Totals | =SUM(B3:B6) | | |
| 8 | | | | |

Children can use the **SUM function** to perform calculations.

Children can sort **data** appropriately. This is by creating their own formulas using different calculations.

| | A | B | C | D | E |
|---|----|---|----------------|--------|-----------|
| 1 | 25 | | Operation | Result | Formula |
| 2 | 5 | | Addition | 30 | =A1+A2 |
| 3 | | | Subtraction | 20 | =A1-A2 |
| 4 | | | Multiplication | 125 | =A1*A2 |
| 5 | | | Division | 5 | =A1/A2 |
| 6 | | | Percent | 2.5 | =A1*10% |
| 7 | | | Exponentiation | 125 | =A2^3 |
| 8 | | | Square root | 5 | =SQRT(A1) |
| 9 | | | Cube root | 2.92 | =A1^(1/3) |

Children are able to use **formulas** to calculate totals and averages.

Children understand that **spreadsheets** can be used to solve problems.

Children know spreadsheets can be used for budgets and can **calculate** a running total.