

Computing Outcomes Portfolio



Year 3 - Spring 1
Block Coding (2Code - Chimp 2)

Intent

This unit consists of lessons that continue on from the work on the Chimp Activities in the 2Code tool in Years 1 & 2. Children will continue coding using the 2Code tool.

The Chimp activities provide further practice of the concepts that the children will be learning and can be used as extension activities. More able children can be encouraged to explore other things that they can change in their programs and experiment with the options available, such as image and scale in 2Code.

Children will often be able to solve their own problems when they get stuck, either by reading through their code again or by asking their peers; this models the way that coding work is really done.

More able children can be encouraged to support their peers, if necessary, helping them to understand but without doing the work for them.

Lesson 1: L.Q. How can I make the turtle controllable with the keyboard?

Challenge: The turtle misses the broccoli, can you fix it? 🔊

See Code



Variable Watch

- background
- colour =
- flag
 - x = 1
 - y = 1
 - angle = 0
- broccoli

Scripts:

- turtle turn 2 quarter turns
- turtle forward 3 steps
- turtle turn 1 quarter turns
- turtle forward 2 steps

INFO: Turn turtle anti-clockwise
INFO: Move turtle forward
INFO: Turn turtle anti-clockwise
INFO: Move turtle forward

Slow

Lesson 2: L.Q. In coding, what is collision detection and how can it be used?


[Next challenge >](#)

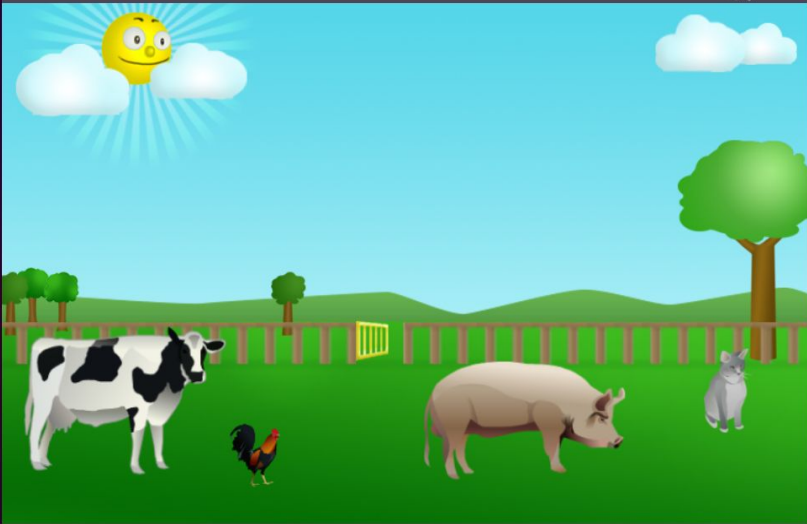
Challenge: The instructions to the knight have been mixed up. Can you fix it?


- knight right
- when knight collides with rightPillar
- knight left
- when knight collides with leftPillar
- knight right

knigh dumps into rightPillar
INFO: Create 'collision detection' block for when knight bumps into leftPillar
INFO: Move knight left


Lesson 3: L.Q. How can sounds be programmed in 2Code?

Challenge: When you click the animals they make the wrong sound. Can you fix it? 




when clicked  Cow


sound Moo 1 times

when clicked  Cat

sound Meow 1 times

when clicked  Pig

sound Oink 1 times

when clicked  Cockerel


sound Cockadoodledo 1 times

INFO: Create a when clicked block for Cockerel
INFO: Click the animals to test.
INFO: Run play sound command
SUCCESS: Challenge completed

Fast

Lesson 4: L.Q. In what way can timers be used in 2Code?

Challenge: The monkey's clock is only meant to ring the bell once every five seconds. But it doesn't work, after a while it starts to ring uncontrollably. Can you fix it?



The screenshot shows a 2Code interface with a challenge and a script. The challenge text is: "Challenge: The monkey's clock is only meant to ring the bell once every five seconds. But it doesn't work, after a while it starts to ring uncontrollably. Can you fix it?". The script on the right contains the following blocks:

- clock start
- timer every 1 seconds
- sound Tick 1 times
- timer every 5 seconds
- sound Bell 1 times

The script is currently broken because the first timer (1 second) is active, causing the 'Tick' sound to play repeatedly. The second timer (5 seconds) is not active, so the 'Bell' sound does not play. The challenge asks the user to fix the script so the bell rings only once every five seconds.

INFO: Run play sound command
INFO: Run play sound command
INFO: Run play sound command
INFO: Run play sound command

Lesson 5: L.Q. How can the Print to Screen command be used in 2Code?

The screenshot shows the 2Code interface with a challenge titled "Challenge: Twelve Monkeys. This program should print 'monkey' 12 times but it is broken. Can you fix it?". The interface includes a top navigation bar with a "Next challenge" button, a filmstrip icon, a question mark icon, and a back arrow icon. The main workspace is divided into three sections: a script editor on the left, a variable watch area at the bottom left, and a script editor on the right. The script editor on the right contains a "repeat 12 times" block with a "Print print to screen 'Monkey'" block inside it. The variable watch area is currently empty. The bottom right corner features a console window with the following log output: "INFO: Repeat 11 out of 12 times", "INFO: Run print to screen command", "INFO: Repeat 12 out of 12 times", and "INFO: Run print to screen command". A "Slow" slider is visible next to the console window. A "See Code" link is located in the top right corner of the challenge area.

Challenge: Twelve Monkeys. This program should print 'monkey' 12 times but it is broken. Can you fix it?

See Code

```
repeat 12 times  
  Print print to screen 'Monkey'
```

Variable Watch

INFO: Repeat 11 out of 12 times
INFO: Run print to screen command
INFO: Repeat 12 out of 12 times
INFO: Run print to screen command

Slow