



Be the best that we can be.

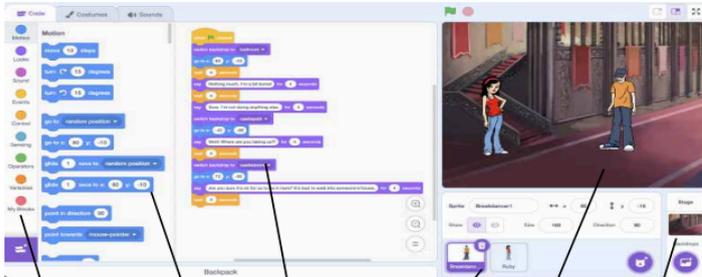
EBJ Knowledge Organiser Computing Year 4

Autumn 1
Further coding
with scratch



What is Scratch?

Scratch is a block coding program where you can make games and animations.



block categories
algorithm
sprites
stage
backdrops
blocks

The algorithm will start when the green arrow is clicked.

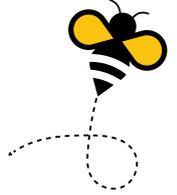
Multiplication game code

```

when green flag clicked
  set score to 0
  ask "What's your name?" and wait
  say "Hi" for 2 seconds
  set name to answer
  ask "Pick a number" and wait
  set multiplier to answer
  ask "What is 3 x " and wait
  if answer = multiplier * 3 then
    say "Well done" for 2 seconds
    change score by 1
  else
    say "Not quite" for 2 seconds
  
```

This block starts the program.
Tracks how many questions the player answers correctly.
These variables store the player's name and chosen number.
These blocks collect input from the player.
Checks if the answer is correct and shows a different message depending on the result.
This adds 1 point if the answer is correct using the score variable.
The 'if, then, else' block checks if the answer is correct and shows a different message depending on the result.

Code block colour key



Commands for animations are colour coded so a code can be easily read and identified.

Creating a code

```

when green flag clicked
  ask "What is your name?" and wait
  say "Hi!" for 2 seconds
  say answer for 2 seconds
  ask "What is 3 x 2?" and wait
  if answer = 6 then
    say "Well done!" for 2 seconds
  else
    say "Not quite" for 2 seconds
  
```

This program starts when the green flag is clicked. It asks for the player's name and says, "Hi!" followed by their answer. It then asks, "What is 3 x 2?"
It checks the answer using an **if statement**. The **condition** 'if answer = 6' decides which message to show.
The 'answer' block stores what the player types, such as their name or maths answer.

Commands can be created to do different things and can be timed for how many seconds you want them to last for.

Key Vocabulary

Condition	A block of code that executes a certain set of instructions only if a specific condition is met, allowing a program to make decisions
If statement	A conditional block that executes a set of instructions only if the specific condition is met
Variable	A container that stores a single piece of information, such as a number or text, which can be changed or recalled.