



## Why are we learning this?

So far in your programming journey, you have controlled on-screen objects or characters. However, Sphero is a bluetooth wireless ball that can be programmed from an iPad or Android device using various different apps allowing you to input algorithms into a device and see the output in the physical world.



## National Curriculum Content

Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts.

Use sequence, selection, and repetition in programs; work with variables and various forms of input and output.

Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs



## Important Vocabulary

Bluetooth	A protocol for wireless communication over short distances.
Calibrate	To verify correct markings on an instrument. E.g. ensuring the Sphero is aiming the right way
Algorithm	A set of instructions that describes how to perform a task
Delay	To wait or hesitate – useful when programming shapes or other precise movements



## Quick tips



Always ensure your Sphero is calibrated and aiming the right way before starting (the blue light should be facing you)



Explore the different surfaces for optimal Sphero movement!



## Key knowledge

1. Understanding Bluetooth Technology as Input Device
2. Write programs for the Sphero using movement and repetition (loops).
3. Write a program to trace a maze/route with Sphero and Debug.
4. Write a program with outputs.
5. Write a program with random variables