



Year 4 – Summer Term 1

We Are Toy Designers

Computing



In this unit, the children work together to design a simple toy that incorporates sensors and outputs and then create an on-screen prototype of their toy in Scratch.

Computer Science

Prior Knowledge

Children will already know how to design, write and debug simple programs that accomplish specific goals.

Our Learning Journey

- To understand different forms of input and output (such as sensors, switches, motors, lights and speakers).
- To design a computer-controlled toy.
- To create a computer graphic of an image.
- To program an image using algorithms.
- To test and debug a graphic to make improvements.
- To critically reflect and evaluate a project.

E-safety: To compare and contrast the ways messages were sent before and after the internet.

Computing Key Vocabulary

Algorithm	An clear set of rules or a precise step-by-step guide to solve a problem or achieve a particular objective.
Computer	An electronic device for storing and processing data
Debug	To fix the errors in a program
Input	An input is data that a computer receives.
Interactive	nteractive refers to software which accepts and responds to input from people
Output	An output is data that a computer sends.
Prototype	An early sample of a product or program built to test the concept.
Proximity Sensor	A sensor able to detect the presence of nearby objects without any physical contact.
Pseudocode	A simplified programming language, used in program design.
Sensor	A sensor is a device that detects and responds to some type of input from the physical environment.
Simulation	Using a computer to model the state and behaviour of real-world (or imaginary) systems/products.



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This half term we will be using...	
Hardware	Software/Apps
Chromebooks	Scratch



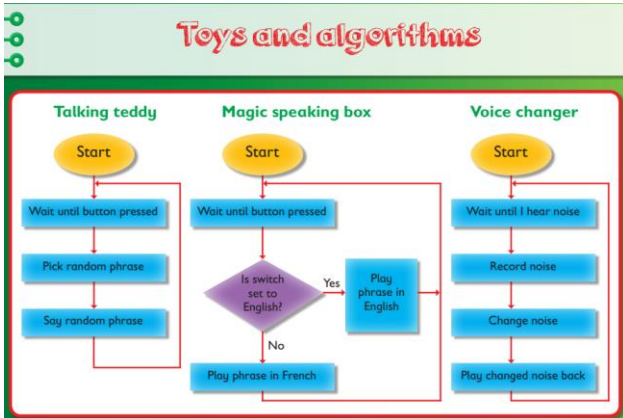
Blinking teddy

Sprite 1

What happens?
When Sprite 1 receives message 1 from sprite 2, it changes costumes to show eyes blinking.

Common Input Devices of Computer

Common Output Devices of Computer



Sensor blocks