








Somerset Bridge Primary School
Aspire - Brave - Care - Collaborate

Design and Technology

Year 4

Key Vocabulary		✓
Pulleys	A wheel with a grooved rim around which a cord passes. This can be used to raise parts of the robot.	
Gears	Toothed wheels. Two or more gears meshed together can be used to transfer force, or make parts move faster or slower.	
Motors	This provides the power for the robot to move.	
Ports	The connection point for the different parts of the robot.	
Wires/cables	Used to transfer electrical energy safely.	

Key Learning



Know how to use the IPAD App to design an obstacle program.

Know how to assemble pulleys, levers and gears to allow a robot to move freely.

Know how to troubleshoot issues during the robot assembly by identifying the wrong brick or choosing a different brick to complete the robot.

Know how to link ports with electrical wires to turn on a motor.

Know how to put the commands in order and talk about this as an algorithm.

Know how to test a program and debug it.

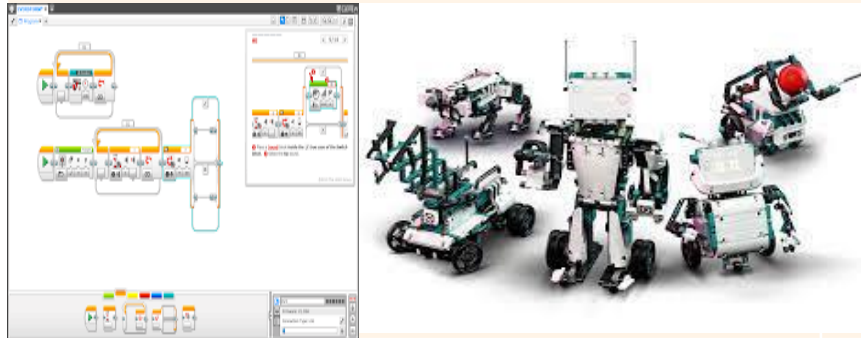
Evaluate the robot and suggest ideas about how to improve it for next time.

LEGO Mindstorms



LEGO Mindstorms is a robot building set based on LEGO bricks.

The robot is controlled by an iPad app that lets you create your own series of commands (instructions) for the robot. These are called algorithms.



Trouble Shooting

When you try an algorithm, the robot might not move or hit an obstacle. If this happens you will need to debug the algorithm. This means you will need to find the mistake in the program and change it.

If the problem is with the robot, then you will need to find which part of the robot is not working and replace it with a different part. This is called a substitute part.



Design



Make



Evaluate

