

# The Robot Garden

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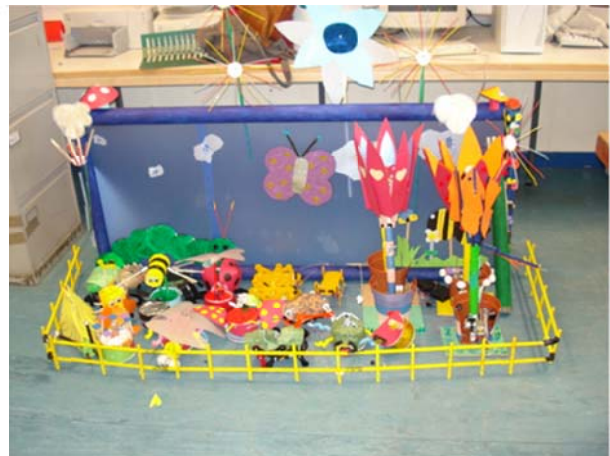
Have you ever wondered where the food you eat is grown? Or how we might continue to provide sufficient amounts as the world's population rises? Studies suggest that the world will need twice as much food by 2050 which will place significant pressures on farmers to squeeze more out of the land. All this means rethinking how we farm. What if we could give each plant exactly the right amount of everything it needed? We'd maximise yield but not waste any resources...easy you say... but is it, when some farms can cover thousands of hectares? The answer... robots!

Over the summer the authors have been piloting The Robot Garden, an activity for use at Key Stage 3 and 4 to engage students with current topics in robotics research but also with the underpinning computer science. This project builds on a previous project, The Robot Garden, funded through a Royal Society Partnership Grant.

Robotics draws together many technical topics, giving it special educational leverage. They are intrinsically compelling and generate a great deal of enthusiasm. Many initiatives (often supported by teachers) have successfully used the LEGO® MINDSTORMS® platform (First Lego League, RoboCup Junior) to engage young people with the STEM subjects. We believe the same platform is an ideal vehicle for engaging young people with the key concepts in computer science. This is especially timely in the UK, as major changes to the computing curriculum are introduced. These changes will result in a curriculum aimed at making students creative producers of technology as well as effective users.

This hands-on workshop presents The Robot Garden. Come along, program seed dispensing robots (using LEGO MINDSTORMS robots programmed with Enchanting - based on Scratch) and hear about the successes and challenges we faced.

Note - this could also be delivered as a presentation.



Students at the previous workshop