

# Tech Trek

## About the Module

This module introduces students to early programming skills through a series of motivating problem solving activities. Students assume the role of mission control, making decisions and controlling a robot as it travels through an adventure in a challenging environment. They will program sound, movement and graphic integration in order to produce imaginative solutions to the problems encountered.



There will be opportunities for students to make predictions, justify the choices they have made, discuss and explain the outcomes of their decisions.

## Key Vocabulary

Control, simulation, input, output, process, prediction, decision, program, procedure, repeat, model, if, then.

## Desired Learning Outcomes

In this module students will learn to:

- Develop a sequence of instructions to control an on-screen animation;
- Use a logical approach to problem solving;
- Explore different solutions to problems;
- Estimate distances and timing;
- Build a sequence of instructions to produce a programme;
- Identify cause and effect within a simulation;
- Use precision when writing instructions;
- Make strategic decisions within the context of a simulation.

## Curriculum Links

### NC ICT

Developing ideas and making things happen 2bc

### QCA ICT

KS2 5E Controlling devices

KS2 6C Control and monitoring - What happens when...?

KS3 Unit 6 Control - input, process and output

**Expectations**

Students will create several programmes and sequences of instructions to control on-screen animations and solve problems.