

Progression guide for control and monitoring (Developing ideas and making things happen)

Concepts	Aspects of level	Control and monitoring aspect of National Curriculum level description		Expansion of level description	Illustration What might pupils do?
		Key characteristics of National Curriculum level			
Sampling rates are important in recording conditions and for later analysis of results.	7	They use ICT to measure, record and analyse physical variables and control events. Scope, define, implement and refine systems.		At this level pupil can develop a specification for the design and implementation of solutions to complex control problems. At this level pupil can record physical data remotely and at specified time periods, considering the amount of data required for effective analysis.	The problem of managing the flow of cars into and out of a car park has been analysed and a specification for the system produced. Controlling car park barrier now includes variable – length of time barrier is open depending on time taken to drive through.
Feedback changes performance of the system.	8	When developing systems that respond to events, they make appropriate use of feedback. Design and implement systems for others to use.		At this level pupil research into existing systems is used as a basis to develop a solution. Areas for testing are identified and documented. How the system changes with the use of feedback is explained. Documentation of the complete system includes possible problems with operation (variables which may need adjusting), maintenance.	Pupils analyse the problem of managing the flow of cars parking. System specification includes testing under a variety of conditions and feedback. Documentation of the complete system includes possible problems with operation (variables which may need adjusting), maintenance.
	EP	Design, implement, test, document and evaluate systems for others to use.			