



iCompute

Overview

In this unit children begin to understand that computer simulations can represent real and imaginary situations. They learn how to explore simulations, investigate options and to test their predictions. They evaluate simulations by comparing them with real situations and consider their usefulness.

Children will apply what they have learnt when using simulations throughout their work.



- * design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts
- * use sequence, selection, and repetition in programs; work with variables and various forms of input and output
- * use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs
- * understand computer networks including the internet; how they can provide multiple services, such as the world wide web; and the opportunities they offer for communication and collaboration
- * select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information

Curriculum Links

- * Mathematics
- * Science

Objectives

Lesson	Title	National Curriculum Links	Objectives	Vocabulary	Success Criteria
3.3.1	iExplore	<ul style="list-style-type: none"> ★ simulating systems 	<ul style="list-style-type: none"> ★ To understand that computer simulations can represent real or imaginary situations 	simulation; choice; rules; variables; model	<ul style="list-style-type: none"> ★ The children understand that computer simulations allow users to try things that would be difficult or impossible to do in real life
3.3.2	iRule	<ul style="list-style-type: none"> ★ use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs 	<ul style="list-style-type: none"> ★ To understand that computer simulations are guided by rules 	simulation; rule; pattern	<ul style="list-style-type: none"> ★ The children use a simulation to identify patterns and rules
3.3.3	iAdventure	<ul style="list-style-type: none"> ★ use sequence, selection, and repetition in programs; work with variables and various forms of input and output 	<ul style="list-style-type: none"> ★ To explore the effect of changing variables in a simulation using them to make and test predictions 	simulation; rules; adventure; choices; variables; predict	<ul style="list-style-type: none"> ★ The children use and explore an adventure game based on an imaginary world
3.3.4	iCircuit	<ul style="list-style-type: none"> ★ simulating physical systems 	<ul style="list-style-type: none"> ★ To understand that simulations can help people try things quickly and inexpensively ★ To understand that simulations help us understand difficult concepts 	simulation; choice; decision; rules; real life	<ul style="list-style-type: none"> ★ The children use an electrical circuit simulation to try out combinations of circuits
3.3.5	iSim	<ul style="list-style-type: none"> ★ select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals 	<ul style="list-style-type: none"> ★ To design and produce a computer simulation or adventure game 	simulate; design; program; choice; effect; decision; variables	<ul style="list-style-type: none"> ★ The children make a computer simulation