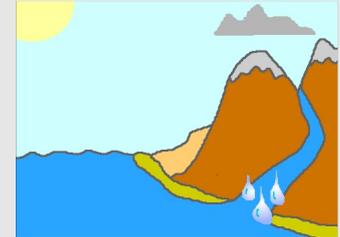# Computing Made Simple

Creating an animation of the water cycle

Age group: Year 4

Length of unit: 6 x 1hr sessions

Objective: To create an animation of the water cycle using Scratch
Resources: Lesson plans, pupil worksheets, example Scratch files

Introduction
During this unit of work, designed to be taught over a series of six one-hour lessons, pupils will learn the skills to enable them to create an animated version of the water cycle using Scratch software. The pupils' will learn how to design and insert a background (stage) and how to create their own characters (sprites.) Pupils will then program their sprites to move around the stage at different times, creating an animation to represent the water cycle. The unit plan includes the following: A lesson plan for each session detailing how to introduce each new concept to the pupils by way of shared examples. Worksheets for pupils containing tasks and extension activities which link to the 'on-screen' work they will complete. A brief overview of this unit of work can be seen below.

Unit overview

Lesson 1: What is a computer program? How to create and program a sprite in Scratch
A brief introduction to the basics of computer programming using real-life scenarios. A demonstration of how to insert a stage and sprites in Scratch and how to use the functions within the block palette make the sprites move.

Lesson 2: Creating a storyboard for your water cycle animation (computers not required)
Pupils draw a storyboard to represent each stage of their water cycle animation. For each frame they should include a brief description of what is happening and must list all the sprites they intend to use e.g. sun, rain droplets, clouds etc...and how they will move.

Lesson 3: Creating the stage and sprites for the animation
Pupils create the background (known in Scratch as the Stage) and their sprites ready to start programming them to move in the next few lessons.

Lessons 4, 5 & 6: Programming sprites to move independently
To make their sprites move around the stage, pupils will use a variety of features from the blocks palette, including the glide and go to commands from the Motion block, the hide/show and switch costume commands from the Looks block and the wait command from the Control block.