

Space Adventures Computing Unit 1

Lesson 2 – In Space

Curriculum Mapping (Computing KS2)

- ◆ use repetition in programs; work with 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

Learning Objective

Code a simple simulation of a spaceship travelling through space, that can be controlled by the cursor keys.

Prior Learning

Basic computing experience.

Introduction

Show pupils the *U1L2 introduction.mp4 video*.

Using the prompts in the video, ask pupils to identify the rules that make the spaceship move and steer. (This can be done orally or written in rough, and is known as the algorithm).

Main Activity

Pupils use Scratch to create their own simulation of a spaceship moving through space.

Show the class the *U1L2 demonstration.mp4 video* or how to access it on their own computers.

Hand out the *U1L2 step by step.pdf* guide or show pupils how to access it on their computers.

(Opening a second tab in the browser will allow pupils to switch between the help guide/video and their own work).

Extension Activity

Show pupils the activities on the *U1L2 going further_export.pdf* document. These include experimenting with aspects of the code, adding additional inputs to make the rocket move more quickly and drawing what Tazz might see in space.

Plenary

Explain that the program allows users to steer the rocket using the cursor keys as inputs. Ask pupils how inputs are used in computer games to control things. Make a list of different games and what controls do in each game.

Notes

The first part of the program uses a **loop** to keep the spaceship moving forward slowly. This section of the program will keep running once the green flag is pressed. The two **when key pressed events** are **inputs**. These short sections of code only run when the key press happens - when there is an input.