



# Scratch: Build a Rocket Game

Lesson:

Key Stage / Number of Students	Resource	Time Frame
KS 2 / 12	12 Laptops	45 mins - 1 hour

Overview: Students will learn about variables, forces, game development and coding by making a Rocket Game in Scratch. Then playing each other's games and giving positive feedback to each other.

Aim and Objectives:

Creation of a project that involves interactivity between sprites. The "player" sprite, controlled with the arrow keys, that would cause a reaction when interacting with other sprites (such as "when two sprites collide, have them start a conversation").

To demonstrate what has been learnt in previous lesson.

Produce a rocket ship game.

Show how variables can be used to "speed up" and "slow down" their sprite.

Background:

This can be used to teach Forces (Including Thrust and Gravity)

This demonstrates variables such as speed and can be used alongside introduction to "SUVAT" equations, or simple equations like  $v=x/t$  where the variable relies on the "steps" taken by the "sprite" in a given time.

The lesson can be used in ICT to introduce coding as a skill used by game makers.

The lesson can also be used as a fun way to develop communication skills as students are encouraged to talk about their game and give each other feedback.