

SPACE ADVENTURES COMPUTING UNITS

These two units are designed to teach pupils computing concepts in line with the coding aspects of the National Curriculum for Computing. Clearly all pupils will have very different previous experiences of coding, but Unit 1 should be suitable for most lower Key Stage 2 pupils. Unit 2 is aimed at more experienced pupils who have good existing coding skills, likely to be upper KS2. There are six lessons in each unit, each following a different part of Tazz's mission.

Each lesson contains:

- A presentation that can be used by the teacher with the class on an IWB
- An introductory video
- A video demonstrating how to code the activity covered by the lesson
- A step by step PDF document offering further support to pupils during the activity
- Ideas for extension activities (as a PDF)
- An example Scratch (code) file for teachers

CURRICULUM COVERAGE

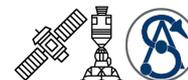
The units cover the following Attainment Targets:

- 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

Coverage per lesson is shown below:

Unit 1

	Coding concepts:					
Lesson	Sequencing	Inputs	Selection	Repetition	Variables	Other concepts
Blast Off!						
In Space						
Moon Buggy						
Mining on the Moon						Duplication
Asteroids Approaching						
Splashdown!						X & Y coordinates



Unit 2

	Coding concepts:					
Lesson	Sequencing	Inputs	Selection	Repetition	Variables	Other concepts
Launch						Random numbers, Coordinates
Booster Separation						Duplicates
Starburst						Cloning, random numbers
Lunar Landing						Coordinates, calculations
Moon buggy driver						Cloning, random numbers
Asteroid Cloud						Cloning, random numbers

USING THE RESOURCE

Start by showing pupils the presentation on the IWB. This contains links to the other support files for each lesson. The second slide introduces the LO to pupils. The third slide contains the introductory video. The video briefly explains the lesson and shows pupils the completed activity. It then asks them to think about the rules that make the program work - the algorithm - similar to a plan for the program. Slide four shows the partly completed algorithm. At this point ask pupils to discuss the slide and try to work out the missing words.

Once pupils have discussed this for a few minutes move on to the next slide and show them the completed algorithm. Slide 6 contains a link to the main activity. Even if pupils are experienced at coding it is recommended they watch this. Alternatively show pupils how they can view this on their own computer.

There is also a link on slide 6 to the step by step PDF guide for the lesson. As an alternative to printing this out, show pupils how to access this on another tab in their browser. At this point pupils carry out the main part of the activity - coding.

If pupils complete the activity slide 7 contains a summary of extension activities, together with a link to a more detailed PDF.

Slide 8 contains suggestions for a plenary.

The resource also contains a number of ready-made images that can be used by pupils.