

MissionMaker Case Study NE Manchester CLC

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Overview of the project

This project was designed and delivered at North East Manchester CLC by myself and Helen Nicholls, Head of Technology/Assistant Head, St Matthews' School Moston.

We decided to use the MissionMaker software as we felt the concept would be motivating to students and provide a great way to bridge the gap between CLCs and the conventional classroom environment. We planned a scheme based around controlling devices. We both felt that the theme and objectives of the MissionMaker games were secondary to pupils becoming proficient in writing rules that control the game.

Delivering the programme

We delivered the programme in nine lessons. The aim was for pupils to complete a computer game or work booklet, demonstrating an understanding of control.

Before embarking on any MissionMaker lessons, Helen taught a lesson on flowcharts and sensors to ensure curriculum coverage. Pupils were then introduced to MissionMaker and learnt how to navigate around the 'world', pick-up objects to add to their health, strength and vulnerability levels. More importantly it got them thinking about solving puzzles and completing an objective.

In the second lesson pupils started creating their game in MissionMaker. They created a 3D world by adding locations with props and pick-ups for atmosphere.

They could then embark on the most important part of the scheme which is understanding rule creation. This is essentially writing 'if statements' to control events in the games. It was an opportunity to teach input, process and output used in control technology. For example, pupils were shown how to put a door into their game and then use a trigger, eg 'the player clicks the door' to make it open.

One of the most difficult parts of game creation is to follow and revise your original plan and objective. It is tempting to randomly place objects and rules that do not work well together as a puzzle. At first pupils added props, pickups and special effects that served as decoration, but over the weeks it was pleasing to see them refine their games and produce coherent and well thought out games. This was helped by pupils playing each others games; the formative feedback was a really good example of peer assessment for learning.

We weren't certain that pupils would cope with the complexities of adding speaking characters, but their enthusiasm and demand for more was really noticeable. All the pupils managed to add a speaking character; some also used flowcharting to script and record a dialogue between characters. The games were finished by adding pop ups and setting the game attributes to recognise success or failure and end the game.

Outcomes and evidence

We looked at the national curriculum, strategy framework, QCA units and level descriptors for ICT and D&T and produced a simple self assessment scheme based on MissionMaker tasks (either a completed MissionMaker game or a completed MissionMaker Project book.) All pupils were able to

claim a level four with the majority assessed at levels five and six. Details of each level are outlined below:

Level 3	Level 4	Level 5	Level 6
I have created a plan for my game including an objective, props, characters and pickups.	My game is an improvement on the original plan and I have checked it can be played.	I have improved my game because of feedback from someone else.	I have refined my game due to limitations in the software.
I have added at least one rule to my game and tested that it works.	I have used more than one type of trigger in my game and tested that it works. (E.g. global trigger, speech trigger, object clicked or state change).	I have two or more rules working together in my game to form a sequence and tested it works. (E.g. two way speech, a door opening by clicking on a prop).	My game includes an objective and a succeed or fail ending.

Pupil Feedback

We were keen to assess what the pupils thought of their experiences with MissionMaker. We were pleased to see that generally they had benefited from the experience. Some of the responses are shown below (17 respondents in total):

What did you think of the software?

Fabulous	Very good	Fair	Needs some work	Needs a lot of work
12% (2)	59% (10)	18% (3)	6% (1)	6% (1)

How did you find the MissionMaker lessons?

	Too difficult	Challenging	About right	Easy	Too easy
MissionMaker tasks	0% (0)	24% (4)	59% (10)	18% (3)	0% (0)
Teacher instruction	6% (1)	12% (2)	53% (9)	29% (5)	0% (0)

Thinking about all the MissionMaker lessons, please give us some feedback.

	A lot	A little	Not much	Not at all
Did you enjoy the lessons?	47% (8)	53% (9)	0% (0)	0% (0)
Did you learn about control?	56% (9)	38% (6)	0% (0)	6% (1)

Summary

It's good to see that 72% of our students using MissionMaker rated it 'Very good' or 'Fabulous' and that over 60% said they learnt "a lot" about control using MissionMaker". I was also pleased when two of the pupils asked to work on their games at lunch time and after school and did this regularly. Two others also joined the CLC's regular computer club as a result of the project. Helen and I feel in future we need to remind the children they are actually learning as they almost didn't realise it!

You can download the games the pupils created from www.clc-stm.co.uk.