SPACE MISSION MADA

Teachers' 'Book

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SPACE MISSION MADA

A mathematical adventure in Space.

Program designed and written by Simon Hosler

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CONTENTS

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Space Mission Mada is a mathematical adventure in Space.

Program designed and written by Simon Hosler
Teacher's Book by Bill and Lou Bonham

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Space Mission Mada
BBC models B, B+, MS128 & Compact   **(Disc Based)**
Age Group: 9 to 13 years.

INTRODUCTION

Space Mission Mada is a mathematical adventure intended for children of approximately 9 to 13 years of age. The program covers a wide range of mathematical areas with a particular emphasis on logical thinking and problem solving activities, presented in an interesting and enjoyable way.

The children's mission is to travel from their own planet of Oozie, millions of miles across space to help a small village on Earth called Lower Mada. In doing so the children must solve many new and original mathematical problems. Each of the problems they face will vary each time the adventure is attempted and each problem has three levels of difficulty which can be set by the teacher before each session. Each time the adventure is attempted the types of problem will remain the same but the problems themselves will change so that answers and solutions cannot be memorised from previous attempts.

The adventure is in four parts. Each part should be attempted in one sitting and should take between twenty and thirty minutes to complete.

Some children may find it helpful to have a pencil and paper available during the adventure.

LOADING

Place the disc in the disc drive with the side required uppermost. (Note that 5.25 inch discs supplied are 'flippies' and can be turned over.) Hold down the SHIFT key, press and release the BREAK key and then release the SHIFT key. This will automatically load and run the program.

IMPORTANT NOTE: SPACE MISSION MADA IS A DISC DRIVEN ADVENTURE AND THE DISC MUST BE LEFT IN THE DISC DRIVE THE WHOLE TIME THE PROGRAM IS RUNNING.

OPERATION

If the ESCAPE key is pressed during the adventure in most cases the program will return to the beginning of that part of the adventure.

MAIN MENU

```
              Space Mission Mada
         Main Menu

              1  Teacher Control
              2  To start Part 1

         Type a number  ---
```

1 Teacher Control

This takes you to the teacher control menu.

2 To start part...

This will start whichever part of the adventure you are on.

TEACHER CONTROL MENU

```
              Space Mission Mada
         Press  ESCAPE  for  MAIN MENU
         Teacher Control
              1  Sound level
              2  Set difficulty
              3  Introduction
         Type a number  ---
```

1 Sound Level

When first loaded the sound is set on normal level but the volume can be reduced by pressing 1 or switched off by pressing 0. Pressing key 2 again will restore the sound to normal. The computer will make a sound indicating the volume level set by the key pressed. Press ESCAPE when the setting is correct to return to the Teacher Control Menu.

2 Set Difficulty

The degree of difficulty of all of the problems found in this adventure can be set to one of three levels. This can be done at the beginning of each part of the adventure.

The higher the level indicator is set the greater will be the difficulty of the problems to be solved. Enter the number of the level you require and then press RETURN. Press ESCAPE when the setting is correct to return to the Teacher Control Menu.

Below are the details of the differences found in each problem between each level. You may need to go through the program once to appreciate the changes.

Part 1
Shooting competition (Estimating distances)
Each level changes the score needed to win an asteroid laser.
On level 1 the children need to score 6 points.
On level 2 the children need to score 7 points.
On level 3 the children need to score 8 points.

The asteroids (Spatial awareness and logical thinking)
As the difficulty increases so does the number of asteroids the children will need to avoid.

The box of seed (puzzle similar to pentominoes)
In the easier levels the children are given less pieces to fit into the puzzle.

Part 2
Opening the door of Space Station One (solving secret codes)

On level 1 the first three codes have two parts. The final code has four parts On level 2 the codes contain a mixture of two and four parts. On level 3 each code contains four parts.

Space stations two and three (Shape and simple algebra)

On level 1 the children receive 11 lives.
On level 2 the children receive 7 lives.
On level 3 the children receive 3 lives.

Part 3
The robot stores (Logic and problem solving) As the difficulty increases the number of tasks each robot can perform increases. This should make it harder for the children to sort out the tasks they require from their robots.

Map problem 1 and 2 (Spatial awareness-pattern)

As the level of difficulty increases the maps will become more and more jumbled.

Part 4
Growing flowers (A problem solving simulation) On level 1 the children are given eleven robots. On level 2 the children are given ten robots. On level 3 the children are given nine robots.

3 Introduction
This gives a screen of introductory notes for teachers.

TEACHERS' SYNOPSIS
Tina lives in a small village called Lower Mada. For some strange reason nothing will ever grow in her village and because of this nobody wishes to live there. Her village school is about to close because there are now so few children.

However, Tina sends a radio message across space in the faint hope that somebody or something will come to help her village and stop her school closing.

In this adventure the children are told they are not human but part of a very advanced race of people who live on a planet called Oozie many millions of miles from Earth.

After listening to the radio messages from Tina the children decide to help and begin their long journey to Earth.

During the journey the children are faced with many different problems which they need to successfully complete before they can continue their journey. They collect several useful objects some of which may help them solve the problems of Lower Mada and eventually save Tina's school.

A brief synopsis of each part:

Part 1
After the introduction the children will need to investigate the moons around their own planet of Oozie. Here they must win an asteroid laser (estimating distances) and then try to fly through an asteroid belt (problem solving) to land on a moon that sells rich plant compost. Next they will need to collect some special seed (puzzle problem) before they find the moon that has has the facilities to launch them on their journey to Earth.

Part 2

This part centres on the discovery of six space stations, at least three of which must be visited. The children will need to find the first space station and try to open the door (Breaking codes). Once inside they will find two keys which will allow them to investigate two more space stations, (involving Shape and algebra) where they will find a weather machine and a crate of new robots. Please make sure that the children do not press SHIFT LOCK during these games. If it is pressed accidentally, press CAPS LOCK and the games will proceed normally. At the end of this part they will leave the space stations and approach a mysterious red planet. Here they will either land voluntarily or be forced to land by another space craft.

Part 3

Following on from the last part they land on the red planet. After meeting the queen of the planet they are ordered to choose two robots from the robot stores (problem solving and logical thinking) but when they have chosen the correct robots they are thrown in prison. They escape using the keys found in the first space station and leave the red planet. Eventually they reach Earth but before they find Tina's village they have to repair the computer's maps of Earth (A picture puzzle).

Part 4

In this part the children will need to grow flowers all over the village. This will involve them in a simulation involving many different criteria. It will take them several minutes to complete but finally, as the schools' inspector arrives, flowers grow throughout the village. The inspector likes the village so much he decides to live there with his six children and so prevents Tina's school from closing.

TEACHERS' NOTES

In addition to the mathematical problems included, Space Mission Mada should also provide experience in decision making, planning and logical thinking. To this end it is suggested that there should always be two or three children working together on the adventure as the children will benefit greatly from the co-operation and discussion involved in trying to solve the problems together.

The program can be used in its own right or be linked to a class topic. Alternatively the program could be used as a basis for a mathematical topic with the children extending their knowledge of the various mathematical activities they encounter in the adventure.

The program could also be used to stimulate much creative work. For example....

In the very last part of this adventure the children are asked to think about any new problems facing the village. They could also suggest ways to solve any problems they think of.

The children have travelled millions of miles from Oozie and are now on Earth. The thought of themselves either staying on Earth and joining the village school as aliens or attempting the journey home could also stimulate some interesting creative work.

TROUBLE SHOOTING

Loading Problems

If the disc won't load check:

That you have a 40 track disc for 40 track drives or an 80 track disc for 80 track drives. If your drive is switchable, is it set correctly? (Note: 40 track discs are despatched unless 80 track are specifically requested. 80 track discs are labelled 80 track.)

If you are using a Master 128, is it configured to DFS? If not type *DISC, press RETURN and then !BOOT the disc. Do not try to run the program using the CONVERT program provided with the Master.

Is your equipment all switched on and connected properly?

If the disc still doesn't work try it, if possible, on another computer and disc drive. (Disc drives need a service now and then.)

If you still have no luck you can either telephone for advice or simply return the disc for replacement. Please make a note of any screen messages etc. so that we can try to identify the problem.

It may be that you have a non standard DFS which is the cause of the problem. If this is the case we will be happy to give a refund.

Back Ups

Sorry, but you won't be able to make one. The disc is protected to enable us to run our very popular approval system. Don't worry, all our discs come with a 3 year guarantee.

Corrupted Discs

If your disc corrupts in any way up to three years after purchase, return it together with a blank unformatted disc and we will send a replacement.