GIANT KILLER SUPPORT DISC

Introduction

In this age of stunning computer graphics and digital stereo sound, our popular maths adventure game GIANT KILLER remains as it was first conceived - fairly quiet, and resolutely text only. Peter Killworth (who wrote it, along with such famous Acornsoft titles as 'Philosopher's Quest' and 'Countdown to Doom' - all now available from Topologika), wanted to challenge children to put their reading and maths skills together and see if they couldn't get some real learning and honest fun out of a similar 'classic' adventure. That he succeeded admirably in this task is shown by the fact that GIANT KILLER remains our best-selling program on a host of school and home computers.

Of course we do get complaints. A small percentage of purchasers have wished it had pictures to complement the text. Several grown-ups have written to tell us that it's too difficult - but that their children managed it all right!

Over the three years that GIANT KILLER has been available we have come to the conclusion that its text-only format - whilst 'right' for the majority of players - does put some people off, particularly those who find reading a chore or who find it hard to extract the puzzles from the text. Several teachers wrote to say that it would be helpful to have a disc of puzzles taken from the game. These, they said, should be presented in pictures and could be used either before the child (or class) met the puzzles in the game or whenever they 'got stuck'...

So here they are: SEVEN programs which permit players to investigate graphically some of the harder problems encountered verbally in GIANT KILLER. To load the disc, follow the instructions on the label and in the accompanying machine-specific Technical Notes.

Some programs contain loading screens; a keystroke after these have loaded will skip straight to the program. All programs contain full instructions which can be skipped once you're familiar with them; hence the program notes that follow are as brief as we could make them.

If, heaven forbid, you need 'evidence' that the children have been working whilst using the disc, we have provided the facility in some versions to print certain completed screens to paper. Full details of these are also in the Notes.

THE MIRROR MAZE

Early in the game the player finds that even if he/she wants to buy the pig that his/her mother told him/her to buy they've all been sold. So what does he/she - she from now on - do with her mother's groat? She turns it into a penny by playing the Calculator Game - just enough money to try her luck at the next games stall: the MIRROR MAZE.

Once inside the maze the player realises - if she read the instructions carefully enough - that she is inside a maze made of mirrors, and that if her image is BIG in one of the mirrors it would be silly to move any closer to it! The technique then is to turn away from BIG reflections, exploring the maze by walking towards SMALL ones until they, in turn, turn BIG. Mapping the route followed is, we think, essential, although many children have surprised us with the ease with which they have been able to retain the maze 'in their heads'!

This support program gives a perspective view of what the player could 'see' in the Mirror Maze, together with an on-screen, continually updated 'map'. There are three random mazes, identical to those to be found in GIANT KILLER. The player may move Forward, turn Left or Right, choose another maze, or leave the game. Some teachers have found it profitable to turn the activity into a mildly competitive one by allowing each group to time their escape from each maze.

THE BOTTLE STALL

Based as it is (loosely) on the tale of Jack and the Beanstalk, your aim, of course, is to locate a magic bean, to plant it and climb up to that great giant's castle in the sky, where lots of (mathematical) adventures are to be had!

Having escaped from the mirror maze - the player has a guinea. The temptation then is to try her luck at the Bottle Stall...

The owner of the stall asks for 18 bottles to be placed in a 6 x 4 crate so that an even number of bottles occur in each row and column. To permit wider investigation - and a more leisurely solution - in this support program the user may choose numbers of rows and columns between 3 and 6, and select any number of bottles which makes sense. (Some numbers are rejected, for example odd numbers; this will permit discussion as to why.)

THE GIANT'S INITIALS

Exploring the Giant's castle involves solving many challenging time and space puzzles (how to get past the giant cat, how to get off the chessboard, etc). Having solved all of these, the player finds herself lost in a wooden (not wooded) valley. In 'reality' this valley consists of some carvings in the lid of the Giant's desk: he has carved his initials thereon!

The player's task is to find out what the Giant's (random) initials are. The only way to do this is to explore the carvings, preferably drawing a map as she goes.

Many children are notoriously reluctant to draw maps. This program permits more 'thorough' investigation, by drawing a 'map' for them and making a chosen name while doing so. A simple 'back-tracking' facility is provided to permit error retrieval.

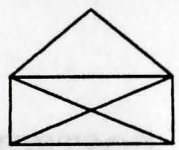
(Note that the computer doesn't check that the player has drawn the name 'correctly', since letter shapes can be created in lots of different ways.)

THE GIANT'S TEATOWEL

Having survived 'Desk Valley', the player finds herself unceremoniously dumped beside four of the Giant's extremely threadbare teatowels. Indeed so threadbare are the teatowels that 'threads' are all that's left of them!

With the Giant hot on your heels, the only way to escape is to traverse one of the teatowels, using it as a sort of 'tightrope'. The problem here is that as soon as you've traversed one of the threads, it snaps! And you have to traverse them all!

Its a bit like the old 'envelope' problem. How can you draw this shape without (a) taking your pencil off the paper and (b) going over any line twice? (Circuits which CAN be traversed in this way are known as Euler's circuits.)



In GIANT KILLER, players can only deduce the shape of each circuit (and hence whether it can be completed) from text descriptions. This support program gives an aerial view of each circuit, with navigation either by cursor keys or by N, E, S and W keys. A simple back-tracking facility is provided.

PRIME NUMBERS

When the player finally escapes from the castle she'll be carrying a golden goose which lays magical eggs. However, only some of these will be in PRIME condition! Success will be achieved by players who know a prime number when they see one!

This support program presents an interactive Sieve of Eratosthenes. If you don't recognise it by that name, its the activity that most primary children have a go at at some time in their later years where they draw a '100 square' and colour in all the numbers in the two times table, then all the threes, then all the fours, etc, until they can colour in no more: the prime numbers. In this program the players can select which number to use as a basis for eliminating multiples; these disappear visually. The program will continue until only the 26 primes under 100 remain.

THE WORKMEN PUZZLE

The workmen puzzle is frequently found very difficult by children. It also takes a long time to explain, so we won't attempt to describe it again here! This program repeats the puzzle, but gives a visual interpretation of the problem. Since the puzzle is random, several sessions will be necessary before children can find an optimal solution which will work under any circumstances.

THE VENN CUBE

Solving the Venn Cube is again found difficult by many children, since it involves co-ordinating several factors simultaneously. This game gives a perspective view of the cube, together with a continuously updated description of the state of the 'ever-changing rock'. The program is randomised just as in GIANT KILLER.

POSTSCRIPT

We hope that you'll find these programs useful. As always we'd be pleased to hear your comments and suggestions. Write to:

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