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Maze in a Mathematics Games Day

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A mathematics games day was held in my school in January, 2010. It was the highlight of the Mathematics Week. Most of the game stalls were designed by our Primary 5 and Primary 6 students. The students were also responsible for conducting the games. While planning for more varieties, I found some interesting mazes in the website designed by Mr. Robert Abbott, an American game inventor. His design was in the form of interactive on-line games. Instead of using the computer, I considered trying the maze outdoors. To proceed, I wrote to Mr. Abbott for granting me the approval for using the design of two of his mazes, the Easy Maze 5[1] and Eyeball Maze 1[2]. I was very glad to receive his prompt and positive reply. Besides his kind approval, he reminded me of the way to conduct the Eyeball Maze. The games day was running smoothly and students enjoyed the mazes very much.

I would like to introduce the mazes and share my experience on how I modified the design from an interactive on-line game to a non-electronic one. The two maze boards below were the original designs extracted from the websites.

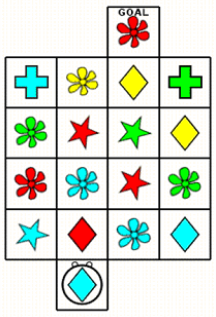
Easy Maze 5:

4	2	2	3	3
2	2	2	2	2
3	2	2	2	2
1	2	3	2	3
3	2	2	2	Goal

As what a maze is like, you start at a specific point (the square at the upper left) and, walking through the maze, reach the Goal. Without reference to the clicks and colour change in the interactive version, the game idea is based on the number in each square that indicates how far you must move - horizontally or vertically - when you leave the square.

(Refer to http://logicmazes.com/n0mz.html for details.)

Eyeball Maze 1

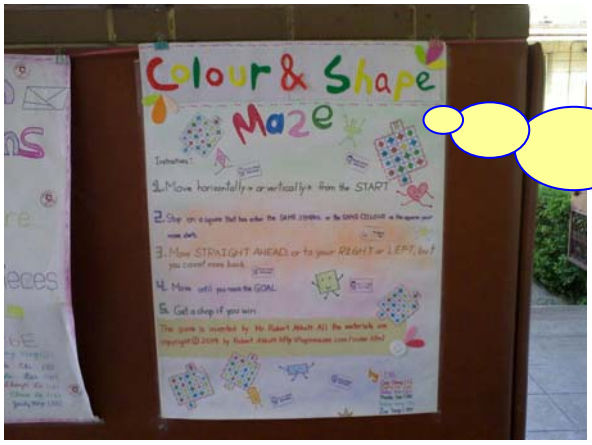


*For the Eyeball Maze, you play the moving character – the circle with two little eyeballs, trying to reach the square marked GOAL. The eyeballs indicate the direction you're facing. You may move straight ahead or to your right or left, but you cannot move back to any square behind you. Once turned right or left, the eyeballs will then point in a new direction. A move can go across any number of squares, but you can only end your move on a square that has either the **same symbol** or the **same colour** as that in the square your move starts.*

(Refer to http://logicmazes.com/eyeball.html for details.)

I fully adopted the two games but reproducing the maze boards in the form of cards with numbers and shapes laying on the ground. Students moved over the maze board according to the instructions. They were asked to finish the maze within a specified period of time. Some student-helpers were trained to guide them.

"Easy Maze 5" involved numbers of steps, and it was renamed as "Number Maze".



We cannot mimic the "eyeballs" as in the computer version. But, since moves were associated with shape and colour, this maze game was renamed as "Colour & Shape Maze". But, just as there were no "eyeballs" to indicate the changing direction, we had student-helpers telling the player the direction she was facing at each step.

Easy Maze 5 (Number Maze)

Eyeball Maze 1 (Colour and Shape Maze)

On the whole, students had fun with the maze. Although some of them could not finish it within the limited time, they were eager to find the route. Most students found the Number Maze easier than the Colour and Shape Maze for they might be more familiar with numbers. When moving around in the Colour and Shape Maze, they had to consider both colour and shape. Certainly, time did not allow all students to try these interesting mazes on the games day. We provided the source websites on the posters and encouraged the students to play them online at home.

The mazes with less difficulties were chosen for my junior primary students in the games day. Though they were not interactive as they had on computers, students found them interesting. Actually, Mr. Robert Abbott has invented many other games and puzzles with higher level of difficulties. Games are always welcomed by students. I recommend them to teachers and students for you may have fun too.

1. Easy Maze 5 can be accessed at http://logicmazes.com/n0mz.html.
2. Eyeball Maze 1 can be accessed at http://logicmazes.com/eyeball.html.