



## A G.A.T.E.WAYS JOURNEYS PROGRAM

for gifted Year 5 and 6 children with a

love of the creative arts and technology

### 'MYTHS, MAZES AND MINOTAURS'

**G.A.T.E.WAYS** is an independent organisation offering challenging and enriching activities and experiences to develop and extend highly able children.. This *JOURNEY* for both girls and boys will run over four half days and will focus on the development of literacy, art and technology skills.

You have been recruited by the **A-maze-ing Game Corporation** to create a series of immersive computer games involving tricky labyrinths. The games must be both exciting and educational. Your challenge is to explore the rich history and mythology of mazes and labyrinths, from those of Ancient Egypt and Greece to 20th century arcade games. Then you will combine your Scratch programming and electronics skills with creative flair to design mazes and code twists, turns and dead-ends that will keep players enthralled.

#### Session 1: Behold the Mighty Minotaur

The most famous labyrinth in mythology was located in the ancient Greek city of Crete, and was home to a monstrous half-man, half-bull known as the Minotaur. This creature was fed offerings of young men and women every nine years. The victims were helpless because they were unable to find their way out of the labyrinth. The Minotaur was eventually defeated by a hero called Theseus, who was given a ball of string by a woman called Ariadne. This allowed him to retrace his path, escape the labyrinth and save his friends. In this session, you will use Scratch to design and program a Minotaur's labyrinth, writing code to allow your own hero or heroine to navigate an escape. Can you find and defeat the Minotaur before time runs out. If you can't find and defeat the Minotaur, you will need to practice until you can, or add time to your game's code to modify the battle. To complete the Labyrinth level you will need to retrace your trail to escape.

#### Session 2: A Light in the Darkness

Ancient Egypt was home to the oldest labyrinth in recorded history. This magnificent structure was part of a temple which included a dozen courts, 3,000 rooms full of hieroglyphs and paintings and a central maze. It is not clear whether the Egyptian temple was described as a labyrinth simply because it was so huge and so complex that one could easily become lost, or whether it was intentionally designed as a maze. Not only did individuals who entered the temple have to navigate through a confusing array of ramps, porticoes, rooms, and stairs, but they had to pass through the chambers in darkness. Outside the labyrinth was a pyramid nearly 250 feet (about 73 metres) tall. In this session, you will learn a new Scratch programming technique which will enable you to create an ancient, totally dark Egyptian maze, with the only illumination being a circle representing the torch carried by your intrepid explorer sprite. As an extra challenge, you will aim to code a rotating maze section, and startle your players with atmospheric sound effects at key points in the maze game.

#### Session 3: Batman and the Riddle of the Maze

The Minotaur's maze was featured in the Batman animated series, in a computer game played by Robin on the Batcomputer. Called the Riddle of the Minotaur, this game required players to navigate a maze, overcome dangers and solve mind-bending word puzzles to get to the centre of the maze, where a final riddle needed to be solved to beat the Minotaur and win the game. An example of a riddle you may use in your game is one posed by the the Riddler and the Minotaur: **The Riddler:** You may not believe in Minotaurs, either, but you'll still have to answer the riddle. **Minotaur:** I have million of eyes, yet I live in darkness. I have millions of ears, yet only four lobes. I have no muscles, yet I rule two hemipheres. What am I? **The Riddler:** The earth. In this session, you will use your maze-coding skills to use a selection of mazes with obstacles worthy of the Dark Knight, Boy Wonder and Batgirl, then

learn how to write code to challenge your players with baffling conundrums. You will create a quiz in Scratch using call and response code. You will learn to create variables, data blocks and check boxes. By programing the quiz game activity in Scratch, you will learn about creative programming but also about the data collection and structure of contents related to their prior or new knowledge.

#### **Session 4: The World's Biggest Pac-Man!**

The yellow smiley faces of Pac-Man and Ms Pac-Man took the globe by storm in the 1980s. They munched their way through fruit, dodging colourful ghosts and trying to make their way through a multi-level maze the difficulty of which was ever increasing. Pac-Man originated in Japan, and has been honoured in the Guinness Book of Records as the most successful coin operated game ever. In this session, you will use your coding skills to design a Scratch version of this iconic game, then project it onto a giant screen and control the action with your own arcade controls designed and built with Makey-Makey electronics kits.

#### **Requirements:**

Bring a small, labelled photograph of yourself and a stamped, self-addressed DL envelope to Session 1. Each week bring a snack (no nut products please) as well as an A4 exercise book, a USB and a well-stocked pencil case. Bring a hat (Terms 1 and 4)

#### **About the presenter**

*Carla Maxwell is an Art, Design Technology and Robotics teacher who has completed a Masters of Information Technology in Education (by Research) at the University of Melbourne. Her Bachelor of Fine Art also gives her a unique perspective on teaching in a creative and integrated manner. Carla continues to plan activities for students that are fun, hands-on and experience based, taking into account aspects of mathematical and scientific principles.*