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

for gifted Year 3 and 4 children

with a love of technology

'Coding Capers'

G.A.T.E.WAYS is an independent organization, offering challenging and enriching activities and experiences to develop and extend highly able children. This JOURNEY will run over four half day sessions   .

Have you ever played Minecraft or the Sims? Behind your epic builds and cities full of happy citizens, are carefully crafted coded instructions that give your device the ability to bring your imagination to life. During this journey you will start to explore the amazing possibilities of coding. As world-famous scientist and author Stephen Hawking said: 'Whether you want to uncover the secrets of the universe, or you want to pursue a career in the 21st century, basic computer coding is an essential skill to learn'! Each session children will be introduced children to the various apps hopefully igniting their curiosity to further explore them at home. Like any new skill 'practice makes perfect'.

Session 1: Jump In and Draw With Code!

In this session, we'll be using **Hopscotch** to learn the basics of game coding. The basic code behind every game, no matter how complicated, tells characters what to do and when. First, we'll write code to make our characters jump, spin and grow. Can you get the bear to do a triple flip in the air when you tap the screen, then grow to twice its size? Once you've got things jumping, you can write artistic code to draw with a shape or character of your choice. Start with a square, then use your artistic skills to get creative!

Session 2: A-maze-ing Games

Coding can get you and the characters you create out of all sorts of sticky situations. Get your iPad ready for a fun challenge as we craft a baffling maze, full of twists, turns and dead ends. Can you get your character to safety? Behind every good code is a good plan, so we'll start by designing our maze using **Pyonkee**, and make sure there is a way out! Then we will make a sprite (character) and use drag and drop code to tell them to go left, right and straight ahead until they beat the puzzle and walk to freedom.

Session 3: Level Up With Lightbot

Are you ready to level up? In this session, we will use **Lightbot** to solve mind-boggling levels of a puzzle game using coding logic, while testing our skills and having a blast. Lightbot was created in 2008 by Daniel Yaroslavski when he was a student, using a $4000 award he won from his school! Coding makes great things possible.

Session 4: Tynker, Tailor, Soldier, Coder!

Have you ever heard the old playground rhyme that kids used to predict their future job? In those days, a tinker was someone who travelled around selling saucepans and buttons, today **Tynker** is a website that teaches you how to write code! In this session we will weave a tall tale with lots of laughs, using code to control the animation, timing and dialogue of a joke that will have your class in stitches. Once you've completed this comedy challenge, you can write code to make it rain cats and dogs. Can you change the physics of your scene to make the characters fall up, sideways or round in circles, and create sound effects to boing, blip and splat as they move?

Requirements: Please bring your pencil case, an A4 exercise book or notepad , a snack (no nuts please) and a fully charged iPad (not an iPad mini) with the following apps downloaded: Hopscotch; Pyonkee; Lightbot and Tynker.

About the presenter
Mark Maxwell is a multimedia artist, mathematician and workshop presenter. His creative practice encompasses creating robots, building marques, programming animations and lighting sequences. Mark has completed an Art and Design degree as well bookkeeping (accounting) where he has learnt to program many mathematical formulas and processes. He presents workshops for Regional Arts Victoria, which brings professional art practitioners to schools, community groups, art galleries, libraries and festivals.
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