

G.A.T.E.WAYS has pleasure in inviting gifted and talented
Year 1 and 2 children to a 'Festival of Workshops'
 hosted by Firbank Grammar, Middle Crescent, Brighton

THURSDAY 13 DECEMBER and FRIDAY 14 DECEMBER, 2018

PROGRAM	Thursday 13 December	Friday 14 December
1	AM: Weird and Wondrous Water (S) PM: Sphero Battle Machines! (T)	AM: Welcome to the Jedi Science Training Academy (S) PM: Fairy Tale and Fantasy Bots (T)
2	AM: Calling All Balloonologists (S) PM: Maths Penguin (M)	AM: Calling All Balloonologists (S) PM: Maths Penguin (M)
3	AM: Better Gnomes and Gardens \$5 levy (A) PM: Do NOT Open This Box (L)	AM: Do NOT Open This Box (L) PM: Cool Catapults & Tremendous Trebuchets (T)
4	AM: Escape! A Night at the Museum (M) PM: Forensic Detectives (S)	AM: Escape! A Night at the Museum (M) PM: Forensic Detectives (S)
5	AM: Blown Up! (S) PM: The Pirate Poet and the Golden Words (L)	AM: Blown Up! (S) PM: The Pirate Poet and the Golden Words (L)
6	AM: The Case of the Stolen Amulet (M) PM: When Atoms Collide (S)	AM: The Case of the Stolen Amulet (M) PM: When Atoms Collide (S)
7	AM: Let's Chase the Wind! (A, S) PM: It's an Invention Convention (L, T)	AM: My Kitchen Art Rules! (A) PM: Mirror, Mirror in My Hand, take Me to Another Land (L)
8	AM: Sand-sational! (S) PM: Air is Life (S)	AM: Sand-sational! (S) PM: Air is Life (S)
9	AM: Bubble Trouble (S) PM: Pluto Reveal Your Secrets (S)	AM: Bubble Trouble (S) PM: Let's Chase the Wind! (A, S)
10	AM: Mirror, Mirror in My Hand, Take Me to Another Land (L) PM: Cool Catapults & Tremendous Trebuchets (T)	

(A) Arts: Creative or Performing (L) Language (S) Science (T) Technology (M) Maths (P) Problem Solving

**Please choose one program only per day. Workshops cannot be mixed and matched.
 The fee is \$103 per day.**

Please bring a notebook and a well-stocked pencil case with a grey lead pencil, coloured pencils, a capsule sharpener, ruler, bright textas, scissors and glue.

Please also bring along any additional materials listed for your program.

Enrolment Procedure:

1. Go the G.A.T.E.WAYS website www.gateways.edu.au and follow the links to 'Parent Enrolled Programs' on the Home Page. Select 'Festivals'.
2. Click 'Enrol' next to Existing Account Holder OR 'Register' next to New Account. Please do not create a new account if your child has attended G.A.T.E.WAYS in the past.
3. Complete fields then click 'Continue to Program Selection'.
4. Check the box under 'Select' for the festival required, then 'Continue to Unit Selection'.
5. Select 'Enrol' for the days required. Only programs with availability can be selected.
6. Select a program and then 'Continue to Home Address'. Complete all fields and proceed to payment page.

Enrolments open Monday, October 22

Year 1 and 2 Festival Workshops

9.30 am – 3.15 pm

SPHERO BATTLE MACHINES!

WITH ANDREW DOBBYN

How can programmable balls become battle machines in this fun STEM based workshop? Using a range of commonly available materials including paper cups, cardboard, balloons, straws, push pins and tape you will create a design that will help your Spero battle machine move efficiently around a competition arena. You will need to test and modify your design to improve it before a final competition. Will your machine pop the balloons on the other battle machines before yours gets popped? A great design and good coding will increase your chances of staying alive in the competition. Whose battle machine will be the last one standing - will it be yours?

WEIRD AND WONDROUS WATER

WITH SIMON MATHESON

Did you know that water has a skin? Or that some creatures can actually walk on water? Would you like to know why water drops are round or why bubbles burst? How many drops of water can you fit on a five-cent coin? You will answer all these questions and more as you experiment with this weird and wondrous material and discover the science behind the substance that is so essential to us all. We'll find out how to test water purity and see how much it actually costs us when a tap starts dripping.

CALLING ALL BALLOONOLOGISTS

WITH EMMA CARTER

POP went the balloon! WHOOSH poured the gas! WOW called the Balloonologists! In this entertaining workshop we will be immersed in the exciting world of science, as we participate in fun experiments where the main piece of science equipment will be a balloon! We discover that the unthinkable may be a possibility. Do you think we could puncture a balloon without it popping or blow up a balloon using a bottle? Today we'll learn about gases, air pressure, carbon dioxide, static electricity, molecules and chemical reactions. One thing's for certain - this session will involve lots of action, prediction, and ideas. Best of all, it will involve lots of balloons but hopefully not too many BANGS! **Please note: this workshop is not suitable for children with a latex allergy.**

MATHS PENGUIN

WITH ALISON BROWN

If you love 'Club Penguin Island', try the MATHEMATICAL version 'Maths Penguin'. Start with your own laminated penguin and igloo, then make your way through the ski village, the mine and the coffee shop, earning points to buy clothes and accessories for your penguin and furniture and pets for your igloo. Go fishing and see how many answers you know to the maths questions you catch. Visit the pizza shop and see how many fraction pieces you need to make a complete pizza. Can you plot a correct ski run down the mountain using a co-ordinates grid, and do you have the problem-solving skills to unearth the hidden treasures in the gold mine? Work at your own pace, collect as many points as you can, and decorate your penguin and igloo with flair! **Bring a fully stocked pencil case, scissors, glue, ruler, A4 spiral bound notebook.**

BETTER GNOMES AND GARDENS (\$5.00 LEVY)

WITH DEBI COHEN

Create your own magical, fantasy garden, complete with a little house or a secret garden with a path and a gate. Add a fantasy character or two - fairies, gnomes, pixies, goblins, dragons or even a hobbit perhaps! You'll have fun using your imagination to create a charming, serene little world that will inspire and delight. For your visual masterpiece, you'll use real plants, and you might even create a ring of toadstools or a bridge to climb. Just add a sprinkle of creativity to get the magic of your miniature garden growing. **Please bring any objects you would like to include in your garden (e.g. small stones, butterflies, or figurines)**

DO NOT OPEN THIS BOX

WITH KATE MILDENHALL

Only fearless and imaginative minds need apply! There are a thousand stories lurking and spinning in the box, desperate to be released! Reach inside, if you dare, to discover curious objects that will spark your imagination! What is it that thing? An ancient key? A silken scarf? A kitchen utensil or a secret surveillance device? To whom does it belong? Where was it found that it wasn't supposed to be...? Your challenge, should you choose to accept it, is to craft a fabulous tale incorporating your mystery objects in the setting, characters and plot. Can you do it? Will you dare? Are your fingers itching to discover what's inside the box? Come, reach in and unpack the contents of your mind as you share your narratives with other talented storytellers. Be brave! **Bring plenty of imagination!**

ESCAPE!! A NIGHT AT THE MUSEUM

WITH JENNY LEE

Hooray, it's time for some fun! Millie and her friends are invited to a mystery maths challenge to be held at the Melbourne Museum, which is said to be haunted by a strange power after dark. When they entered the museum on the night of the challenge, they were amazed by what they saw – a gigantic history room with dinosaur bones towering over them, a modern science room with all kinds of strange inventions, and a mathematics room with puzzling problems floating around! Suddenly a deafening clang rang through the air as all entrances and exits were sealed. Everyone was locked in! Then a low, eerie voice announced, "To win tonight's challenge you must be the first to escape the museum!" Millie needs your help to figure out the secret combination to open the only way out!! Can you help her to solve the series of mathematical problems secreted in each room? Can you help Millie and her friends escape the museum before the strange power comes out 'to play'?

FORENSIC DETECTIVES

WITH JACOB PINI

Who did it? Was it Frankie, in Caulfield, for car theft, or was it Lefty, in Balwyn, for assault? Students will become forensic detectives who learn how to analyse crime scenes using some fascinating forensic techniques. Fingerprinting, trace evidence analysis and blood type matching are all techniques we will use to gather information about four crime scenes. The challenge will be to match four dangerous criminals to four different crimes at four different places. This program will expose students to interesting and diverse areas of science and they will need to be rigorous in applying their scientific investigative skills and thorough in their application of logic to become great crime fighting detectives.

BLOWN UP!!

WITH ANDREW PLANT

Explore the exciting and just a little bit scary world of volcanoes. Why do they happen, where do they come from, will one start in your backyard? Why do some destroy cities, but others are tourist attractions? Learn how to make your own volcano, handle real lava (cooled!), and discover how some lava floats, and some is even used in surgery! We will study the link between volcanos and earthquakes and learn how they led to the discovery of plate tectonics – the most amazing phenomenon of our dynamic planet! **Bring a sketch pad, pencils and eraser, and a sense of adventure.**

THE PIRATE POET AND THE GOLDEN WORDS

WITH CAMERON SEMMENS

Join Word Beard – the pirate poet – in his effort to discover gold. *What type of gold?* Beautiful, sparkling words that shine; words to be treasured by others. Aaaaar, me hearties, there's poetic riddles to solve; there's rhymes and wrongs to write; there's planks of words to walk. With cunning and creativity, you'll find the pirate treasure: golden words that gleam and last forever – *that's poetry!* You will learn how to become your very own Pirate Poet – creating your own riddles; producing your own puns; writing your own amazing poems to dazzle and delight!

*One Eyed Jack is a blow in
Steals anything you'll show 'im
Steals from all that know 'im
Even the words of this ...*

Bring an A4 notebook.

THE CASE OF THE STOLEN AMULET

WITH SHARON LEIBOWITZ

Would you like to use your mathematical powers to help Sofia the First recover her stolen amulet? Sofia the First, Princess of Enchancia is the keeper of the mystical amulet of Avalor which gives her the ability to speak to the animals and call up Princesses from all over the world when she is in trouble. However, Cedrik the sorcerer has cast a spell on her and stolen the amulet because he would like the power to rule the kingdom. With the help of Sophia's faithful band of friends, you will embark on a journey to Cedrik the sorcerer's castle to find the precious amulet. However, entrance to Cedrik's castle is only possible after completing a series of mathematical challenges, which includes following precise directions, balancing algebra, measuring games and thinking logically. Inside the castle you will discover four doors. Only one leads to the amulet. Your deductive reasoning will help you make a choice. Which door will you choose? You have 12 hours before the magic of the amulet allows Cedrik to become the new ruler. Will you be able to save the kingdom of Enchancia from Cedrik the sorcerer's cruel rule?

WHEN ATOMS COLLIDE

WITH ALLEN DICKSON

Can you imagine if each of the elements in the Periodic Table was a character in a chemical soap opera? Sparks fly when Sodium and Potassium come together. What are the Noble Gases plotting and why won't they react? And why does Hydrogen and Oxygen's relationship always end in tears? Be prepared to get up and take on the character of an element as we explore what happens when our melodramatic elements combine in our own little soap opera - 'When Atoms Collide'.

LET'S CHASE THE WIND!

WITH JO BAKER

There is nothing like the feel of a kite tugging on the end of a line... the wind blowing into it and the kite soaring high!! In this workshop we will explore how kites have been used around the world, the different types and shapes of kites and how they fly as they catch the wind. Then you will construct and decorate your own diamond kite before finishing the session playing by launching it up in the air!

IT'S AN INVENTION CONVENTION

WITH ANNETTE SUBHANI

Are you creative? Do you like inventing things? If so, here is your chance to 'let your hair down'! Enter the world of possibilities as we enjoy investigating all of the whacky items at the *Invention Convention!* From butter on a stick, to a chopstick with a fan and even the *Whisper-ma-phone* from Dr Suess's *Lorax*, we will laugh (and hopefully not cry) at what has gone before us and what we can create ourselves. Put on your invention 'thinking hat' to come up with a whacky creation that helps solve an everyday problem. You will create a product, come up with a great product name, description, advertising poster or even a jingle, as we prepare for our final *PRODUCT LAUNCH* at the amazing *Invention Convention*.

SAND-SATIONAL!

WITH MAUREEN FRITH

Step into the land of seven quintillion, five hundred quadrillion grains and unlock the mysteries of one of the most abundant materials on the surface of the earth - sand. You will take a very close-up look at sand and discover not only how beautiful and mysterious these little grains can be but how they are made and where they come from. Did you know that the world is running out of **sand**? After air and water, **sand** is our most **used** natural resource. You will investigate uses of sand in timing devices and as sand paper. You will learn about the Foucault pendulum. You will experiment with dry sand and water and discover how it changes from a useful sculpting material to a treacherous hazard. You will even take home some of this amazing substance!

AIR IS LIFE!

WITH TIM BYRNE

What is air? Air is the constant pressure that we feel around us but can never see. The observable effects of air can be seen throughout nature, through the swaying of the plants and the trees. Even though we cannot see air with our naked eyes, we can still feel it around us. We also know for certain that without air, life itself would not exist. Life begins with our first breath and ends with our last. How long can we last without breathing air? In this workshop we'll learn all about air. We'll test our lung power and try to float a ping pong ball. We'll experiment to see if our breath curves or travels in a straight line. We'll also use our breath to perform some amazing stunts. Finally, we'll make two instruments to take home, a vortex generator and the well-named, wind sock. **Bring a clean recycled 1.25 L PET bottle with lid and a clean aluminium (soft drink) can.**

BUBBLE TROUBLE with Stephanie Axon

Everybody loves bubbles- they are a source of fascination and fun for children and adults alike. We marvel at the beautiful iridescent surfaces, their precise spherical shape, their fragility and the buoyancy of soap bubbles. But bubbles are very curious scientifically and hold many scientific secrets. In addition, their ability to find the smallest surface area between points or edges can even help to solve complex mathematical problems of space. In this hands-on interactive workshop, children will explore the science of bubbles, investigating how they work, the scientific principles behind them and the amazing things we can do with them. Children will advance their scientific thinking and develop a whole new appreciation for the humble bubble - nature's own little mirror balls of physics!

PLUTO REVEAL YOUR SECRETS

WITH HERWIG WALDHUBER

Twelve years ago, Pluto was demoted to a dwarf Planet. Why? What crime did Pluto commit? You will learn what makes a proper planet. What is so peculiar about Pluto and Neptune's orbit? What is the bond between Pluto and its largest moon, Charon? Two years ago, the space craft New Horizons flew past Pluto and showed that it was a very complex planet. Could Pluto become a future destination for ultra-extreme adventure for tourists?

MIRROR, MIRROR IN MY HAND, TAKE ME TO ANOTHER LAND WITH RACHEL HOLKNER

Mirrors and reflections pop up a lot in fairy tales, fables, myths and fantasy stories. Snow White's step-mother had a famous one, Alice stepped into one in *Through the Looking Glass*, and Perseus used one to defeat snake-haired Medusa. What is it about them that is so mysterious and magical? Ever looked at yourself in a distorting mirror? Been lost in a mirror maze? In this workshop we'll look at the strange properties of mirrors with some simple experiments. Then we'll write about what we find as we explore the tiny details of our mirror worlds. Is it the truth you see reflected, or like the dog with a bone in Aesop's fable, do you think there is something better on the other side? **Bring a small hand mirror if you have one.**

COOL CATAPULTS AND TREMENDOUS TREBUCHETS

WITH RUTH EVANS

Medieval catapults were used to smash down castles and lay siege to cities. Today, they are used to launch fighter jets from aircraft carriers. Find out about the three main types of catapults. What makes a trebuchet more powerful than a basic catapult? Now that you know how they work, have a go at building your own catapult. Whose catapult will fire its missile the furthest? How can you improve your design to make it more accurate or more powerful? Next, work with a partner to create a basketball game where catapults are used to shoot goals. Experiment with other simple machines such as levers such as bottle and can openers. How do they work? Can you use a ruler to lift a stack of books, or use pulleys to reduce the effort needed to lift a heavy weight? **Bring a cotton reel (with or without cotton), a plastic spoon and two rubber bands.**

WELCOME TO THE JEDI SCIENCE TRAINING ACADEMY

WITH JO DAVIS

Welcome to The Force. Our young padawans will be inducted into the Jedi Science Training Academy prior to their first mission into space. Our training will cover important scientific chemical reactions so that we can rescue Han Solo from his frozen carbonite tomb and inflate our novel flying machines. Our padawans will learn to harness The Force (magnetism) and compare the effects of magnetic repulsion versus gravity. We will also use an alternative Force (electricity) to complete our Jedi training, and harness the powers of levitation. We will complete our training by discovering some challenges that space travel poses for humans – we will explore creating an air supply, the effects of weightlessness and the possibility of growing food in space. Come and join us on this epic adventure into science! **Bring a disposable 600 ml bottle with lid.**

FAIRY TALE AND FANTASY BOTS

WITH MARK MAXWELL

In this workshop you will create and program a character fit for a famous fairy tale or fantasy novel. Some of our favourites from these worlds are characters like sprites, talking cats, or larger-than-life, amazing creatures like dragons. Today you will use WeDo Robotics to create and program your own fantasy or fairytale character – maybe it will be a hippogriff, a friendly two-headed ogre, a fire-breathing dragon or a scary troll. In creating your character, you will learn about gears (maybe your character needs to flap its wings), sensors (maybe you can use one to make your ogres’s head spin!) and a whole lot more!

MY KITCHEN ART (STILL) RULES!

WITH JACKIE MOSS

In this delicious arty adventure, you’ll meet artists from past and present who really bring their ‘kitchen art’ to the table! For centuries food has been a favourite subject for artists and continues to be a source of inspiration in *today’s* art scene. Feast your eyes upon incredible artworks including a room made entirely of icing as well as Arcimboldo’s face portraits comprised purely of fruit. Why did the fabulous French impressionist painter Paul Cezanne admire apples so much? Today our drawing compositions will be inspired by both old and new art and you’ll totally be allowed to ‘play with your food’ when you create an edible sculpture to take home! From Masterpiece to *Masterchef* - this workshop is sure to satisfy your creative foodie cravings! ***Please note: for those with food allergies, sweets such as raspberries, bananas and marshmallows will be used as part of this workshop. Bring along a piece of fruit, grapes or berries to contribute to our ‘still -life’ compositions.***

Our Festival presenters are a brilliant bunch! To learn more about them, head to
www.gateways.edu.au/programs/festivals/end-of-year-festivals

GATEWAYS FESTIVAL

