

# The GATEWAYS BRAINWAVES Club

**Term 2 2021: Einsteins – Years 3 and 4**

**Venue: Ryde Public School**

**Term Fee: \$285.00**

## **AWESOME SCIENCE**

Science, as it turns out, is not a niche subject. Everything that we do – all day, every day – relies on science. In this presentation series, Einsteins will discover the science behind everyday activities and observations. Whether it be sports science, climatology or chemistry; Einsteins will be amazed at how concepts on a piece of paper can really impact their world. Off the paper and into our hands, the Einsteins will investigate, experiment and discover that the world of everyday science can be awesome science!

**24 April**

**Meeting 5: Bad Bacteria!**

**Focus: Microbiology**

Whether we like it or not, bacteria are all around us, and influence many aspects of our daily lives. Whether it is the safety of our food, or the hygiene of our bodies, bacteria can both help us or harm us in so many different ways. In this meeting, Einsteins will discover how bacteria are isolated from the environment and identified. In the process, they will be given the opportunity to determine the cause of a food poisoning outbreak. We will need to call upon our investigative skills in this bacteria-buzzing whodunit!

**8 May**

**Meeting 6: Sports Science**

**Focus: Physiology**

When was the last time you played a sport? Probably not too long ago, right? In this session, Einsteins will learn about the processes that allow their bodies to engage in sport. We will learn about what muscles and joints are, and perform experiments to demonstrate their importance in movement. We will then do a little bit of exercise (not too much!), and perform experiments related to breathing and heart rate, in order to investigate how the heart and lungs help us to move.

**22 May**

**Meeting 7: Everyday Chemistry**

**Focus: Chemistry**

Each and every day, we interact with thousands of chemicals. When we boil water, cook food and do the grocery shopping, chemicals are all around us. In this meeting, Einsteins will explore the chemical reactions behind everyday tasks. Not only will we discover how these reactions work, but we will also learn how to write out these reactions like true chemists!

**5 June**

**Meeting 8: Electricity and Magnetism**

**Focus: Physics**

Electricity is all around us. It's behind everything we do at school, at home and beyond. In this meeting, Einsteins will learn how electricity is generated and why it is intricately linked to magnetism. Einsteins will generate electricity in a wind-up radio to play some scintillating tunes and will attempt to create a small electromagnet using everyday appliances. We will then perform a series of experiments to investigate the factors influencing the strength and behaviour of magnetic fields. How electrifying!

**What to Bring:**

Each week please bring an A4 notebook and a well-stocked pencil case.

**About the Club Leader:**

Rengen Parlane has a Bachelor of Science (Advanced), and is currently studying the Doctor of Medicine at the University of Sydney. He is passionate about both disciplines, and how they inform the world around us. Rengen has helped to educate young learners at G.A.T.E.WAYS for the past three years, including as a Brainwaves Club leader, Eureka and Journeys presenter, and loves sharing the inspirational world of science with eager young minds.