



Mega Maths Day encourages Year 9-10 students to consider choosing their HSC mathematics subjects to support their future STEM study pathways and careers.

Friday 24 November 2023

or

Tuesday 28 November 2023

9am-2.30pm

\$22 inc GST per student per day

Mega Maths Day is a full excursion day at the University of Sydney run by the Faculty of Science.

Students will hear from our keynote STEM speaker about their own career path, and what study options are open to your students.

The Program

Start	End	Activity
8.45am	9am	Arrival and registration
9am	10am	My Maths Career!
10am	10.10am	Morning tea break
10.10am	11.10am	Workshop A
11.30am	12.30pm	Workshop B
12.40pm	1.20pm	Lunch break
1.30pm	2.30pm	Workshop C
2.30pm	-	End of Day

Your students will do three hands-on STEM workshops and lab experiments that showcase mathematical skills and techniques in different disciplines. You will have the chance to tell us your class preferences for which disciplines you'd like, and we will do our best to tailor your schedule accordingly.

Teachers must supervise their class throughout the program. This program is only bookable by high school teachers.

Contact:

Contact us at

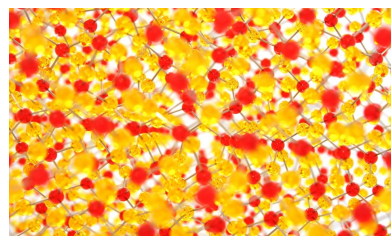
science.alliance@sydney.edu.au or 0421 363 219.

Example Workshop Choices (From 2022)

Here are some of the workshops we offered in 2022. We will let all registered schools know what workshops they can choose from for this year closer to the date. You will be doing THREE workshops and we will do our best to accommodate your school's preferences.

Seeing Through Solutions

What's there in a solution? We will analyse concentrations of molecules in solutions using instruments and mathematics as a gateway to the process of chemical analysis. We'll also explore ways in which the application of mathematics and analytical chemistry techniques play a vital role in society.



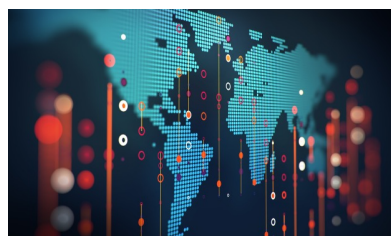
Lost in the Leaf Litter

Take a tour of organic matter and look at what is lurking in the leaf litter. Students will find out how agricultural and environmental scientists measure the biodiversity and abundance of species, and what the practical, real-world applications of these calculations are. We will consider how invertebrates influence the soil and apply some simple statistics to help us understand our dabbling in the detritus.



Decisions for the Decade

Students will be representing countries fortifying themselves for decades of floods and drought in this probability game, simulating the reality and challenges of planning ahead for climate change and natural disasters.



Sweet Soft Drinks

How much sugar is in our soft drinks? In this lab workshop, students will practice their ELMA glucose assay skills to use UV light to measure how much glucose is in regular vs diet soft drinks.



The Power of Mathematics in Art

Explore the collection of the Chau Chak Wing Museum guided by science educators and curators to see the role that mathematics plays in art. Students will be introduced to the use of geometry and proportions in art, featuring the playful and bold artworks of mathematical artist JW Power. They will also handle real historical measuring instruments and mathematical tools and trying their hand at their own mathematical works of art.





Example Workshop Choices (from 2022) continued...

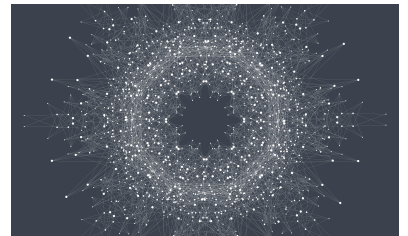
Mind Your Maths!

In psychology, analysing and measuring behaviour, personal abilities and skills, and personality can be complicated and rely on qualitative surveys and tests. With mathematics to the rescue, students will find out how to pull trends from data to determine personality traits. Students will also see how mathematics can be used to fool their minds using psychological tricks and traps.



How to Estimate Anything

How many hairs are there on a human head? What is the probability of intelligent life elsewhere in the Universe? What is the GDP of a small nation? Remarkably, it is possible to answer these questions more-or-less accurately, with minimal information. Learn this valuable skill with the School of Physics, using a variety of examples from the sciences and humanities.



Virtual Reality in 4D

Students will put on VR goggles and take a deep dive into the fourth dimension in our virtual reality immersion lab. They will learn how to navigate in 4D and how to win a match of 4D pool!

