

# Little Learning Labs Workshops

**JULY 2018**



UNIVERSITY  
OF WOLLONGONG  
AUSTRALIA

—  
Outreach & Pathways



## 3D Printing for Little Labbers

*Presenters: Ben & Heike Roberts*

3D Printing allows you to make unique designs in CAD and then print them. Have you got a T-Shirt Design you would like to turn into a unique 3D Printed stamp? This is the workshop for you.

What you will do on the day:

- Design your stamp on paper
- Transfer and build your design into an STL file using cloud-based software
- 3D Print your unique stamp
- Use fabric paint on your unique 3D Printed stamp to print on your T-Shirt.
- Create your own design of a pen topper and print it if time allows.



## Genie-In-Us

*Presenter: Patty Rose*

Is your genie from Genie-in-us ready to play? The great news is that everybody can think and everybody can solve problems. So you are already qualified for this funshop!

If you have a bright imagination and like to create things then come and release your very own genie-in-us by using the magic of creative and critical thinking to solve mysteries and grant one wish.

Using some fun techniques we will be learning some creative brainstorming strategies, ways to think on the spot and work together to design and make fantastical creatures to feature in your own imaginative World (like Pokemon meets Minecraft) where anything is possible and winning is by helping others.



## Introducing Physics

*Presenter: Lorna Jarrett*

Why is the sky blue? What makes colour? Why does the moon change shape? What's the difference between hot and cold?

These are all questions that physics can answer. Physics is the science that explores forces, energy, how objects move, electricity, magnetism, sound, light, heat, and how solids, liquids and gases behave.

In this workshop we will explore all the questions above, and lots more - with hands-on activities, role-play, demonstrations, model-making and interactive computer applications.

As part of the workshop, you will be invited to send in your own physics question for us to explore.



## Exploring Ancient Egypt

*Presenter: Maria Matic*

Have you ever wanted to explore the world of the Ancient Egyptians? Come on an adventure down the Nile and explore Ancient Egypt's fascinating pyramids, powerful Pharaohs, rich culture, intriguing traditions and society to see what life was like in Ancient Egypt.

Learn hieroglyphics and learn about the gods and goddesses, the beliefs of the Ancient Egyptians and what they believed happened in the afterlife, the mummification process and the role amulets and keepsakes played.

In this workshop, students will be immersed in the Ancient Egyptian culture, make their own pyramid and learn about all things Egyptian.



## Hola! Welcome to the World of Spanish

*Presenter: Sara Del Rio Garcia*

¡Hola amigos! Did you know that many children around the world speak more than one language? Wouldn't you like to be one of those lucky children?

In 'Let's speak Spanish' you will learn the Spanish words from a variety of topics, but you will learn much more than just new words - you will discover a whole new world. We will use songs, games, dance, art and drama to introduce you to Spanish culture and also begin you on the journey of learning the beautiful Spanish language.

This workshop designed for children who are new to the Spanish language, so everybody is welcome. Our workshop will open the door to new ways to express yourself and learn more about the beautiful world in which you live.



## Masters of Minecraft

*Presenter: Devika*

The Minecraft workshop is set out to develop the students understanding and fluency in maker skills through the creative and building aspects of Minecraft which enable players to build constructions out of textured cubes in a 3D procedurally generated world.

Students learn to inquiry, exploring and connecting mathematical concepts, choosing and applying problem-solving skills, mathematical techniques, communication and reasoning. This course is for students taking their first steps with game design and development for primary kids.

Devika is a collaboration of technology start-ups with global and social ambitions. <https://devika.com.au/>



### Mighty Music Makers

*Presenter: Ben Jones*

Design, decorate and prototype your very own percussion, string or wind instrument; and in the process investigate the different ways to make music.

Learn how to read musical maps that help to develop an understanding the process written music undertakes to be transformed into sound. At the end of the workshop there will be a mini concert where you get to perform using your own instrument in a group ensemble!

No musical knowledge is necessary, just an interest in listening, being creative and having fun.



### Painting, Printmaking and Collage

*Presenter: Supriya Eliezer*

In this session students will enjoy learning a wide range of artmaking skills including, drawing, painting, collage, printmaking. Children will have fun and experiment with different mediums including, pencil, oil pastels, acrylics.

This class is a fun mix of basic theory with practical painting and /or sculpture with reference to some famous artist and artworks and techniques. Participants will be able to take their creative work home at the end of workshop.



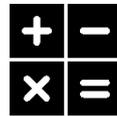
### Rock On!

*Presenter: Kirti Lal*

While walking on the beach or hiking in the mountains, have you ever picked up a rock and wondered what it was made from and where it came from? Well now it's your chance to find out!

"Rock On" is an interactive workshop where students will get the chance to explore the amazing world of rocks. You will get the chance to explore the dynamics of the physical environment and learn about processes that shape our planet. Processes like plate tectonics, earthquakes and volcanoes have occurred over the past thousands and millions of years, and yet we still find traces of them around us. One in particular trace of the past is rocks but they too change with time in fascinating ways.

If you would like to find out more then all you need to do is just rock up.



### STEM Challenges

*Presenter: Claire-Louise Carradice*

Do you enjoy solving problems and finding ways to improve designs? I invite students who are prepared to create models based on a set of challenges. We will be working on how we can improve models when we have tested them for the challenges. All materials are provided by the presenter so just bring yourself!

You do not have to be "good at" STEM (Science, Technology, Engineering and Maths) to come to this workshop. This workshop will be quite different to standard Maths and Science lessons at school. We will be learning how to apply STEM to the real-world.

Come along for a fun learning experience and arm yourself with the skills to think creatively, solve problems logically and collaborate with your team members!



### The Body in Motion: Biomechanics

*Presenter: Diane Harland*

Learning by doing. During this workshop, participants will be involved in a number of practical activities. We will apply the concepts of mechanics to understand human movement and some of the different ways to measure human movement. We will investigate the who, what, why and how of physical performance.

The concepts explored will include: balance and stability, laws of motion, friction, rebound, floating, projecting objects, walking and running and a variety of sports skills analysis.

Participants will also be challenged to consider complications that may threaten efficient motion, how to identify these and how they happen.



### What Happens When...

*Presenter: Stephanie Lorenz*

For every action, there is an equal and opposite reaction. Have you ever wondered why certain things happen?

In this hands on workshop we will use trial (and of course error) to solve problems. Science experiments are fun learning activities that will actively engage all children.

In this workshop we'll do the science experiments you wouldn't get to do in the classroom. Our methods may be unconventional, but our goal is to turn ordinary science experiments into unforgettable learning experiences. Things will fizz, pop, smoke and explode in our quest to find what happens when....

