



UNIVERSITY  
OF WOLLONGONG  
AUSTRALIA

—  
Outreach & Pathways

# Early Learning Labs & Mini-Labs Workshops (Years 5 & 6)

**JULY 2019**

## 2 DAY LEARNING LABS WORKSHOPS (YEARS 5 & 6) - 16 & 17 JULY



### Creative Coding with Unity

*Presenters: 'Devika'*

This workshop is your first introduction to a computer science course built with Unity Development.

Unity helps young people learn to think creatively, reason systematically, and work collaboratively – essential skills for life in the 21st century. It sets out to give the young students experience in beginning to code, working in teams, making creative solutions to problems, and understand fluency in mathematics through the creative and building aspects of drop and drag development.



### From Idea to Stage

*Presenters: Heath Dennelly*

Are you a creative, dramatic, deep thinking, bubbly person. Do people use drama queen or over the top to describe you? Do you earn to have the bright lights of the theatre shining on you while thousands of people clap and cheer your name?

How does it all start? How do modern performers and directors create drama and theatre? The ability to use improvisation and play to create performance is one of the building blocks of the modern theatre. In these workshops you will have the opportunity to perform and play with a range of styles using your voice and body as the tool to create unique and interesting characters culminating with a performance at the end of each day. All you need is flexible ideas and clothing and the energy to make this happen.

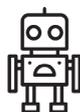


### Introduction to Building Video Games

*Presenter: Alexander Kelly. UOWEIS faculty*

Video games have become one of the most popular forms of entertainment across the globe. A flexible medium, Video Games allows the player to experience things that would not be possible in any other medium. But have you ever wondered how video games are built, and what goes into building one?

This workshop is a crash-course introduction into the world of game construction. In this workshop, you will learn about how video games are produced, by constructing your own game! Learn to draw your own game art, create your own special effects, and of course tie it all together with some programming.



### EV3 Robotics

*Presenter: Kerry Pyle*

Bring the fascinating world of robotics alive with Lego Mindstorms EV3.

We'll go through the process of assembling sturdy robots that you can modify or customise and then work with your partner to problem solve your way through a number of challenges before we prepare our robots for the grand finale – a Sumo battle!



### Momentum Mathematics

*Presenter: Liza Booth*

Learn the secrets of SPEED MATHEMATICS. You will amaze yourself, family and friends when you discover the world of mentally multiplying very large numbers faster than you could tap the digits into a calculator. You will learn to recognise patterns and increase your speed and accuracy.

This workshop will promote your confidence, offer you a real understanding of numbers, increase your mental agility & intelligence and most importantly, sharpen your mind! Bring your calculator along to CHECK your calculations but NOT to actually DO your calculations.



### May the Force Be With You

*Presenter: Maddie Carr*

Force is one of the key concepts that physicists use to describe the world.

In this hands-on workshop we will use both everyday objects as well as specialist physics equipment to explore different types of forces. We will carry out experiments to find out about gravity, magnetism, friction, electricity, buoyancy, air resistance, surface tension and more.

We will design experiments to test the effect of forces, work together to construct objects to solve problems, learn to use physics language to describe our results and make animated videos to explain what we have learned.



### Rocket Physics

*Presenter: John Kennedy*

What goes up must come down! But how can a rocket be designed to travel further and faster? What influences how straight a rocket flies or how quickly it accelerates?

In this workshop we will look at the principles of rocketry using hydraulic and pneumatic rockets. Students will investigate many factors that influence the flight of a rocket in the search for the ultimate design. Students will build, test, and refine water rockets over the two days of this course that can fly higher and faster as well as return safely to Earth. Do you feel up to the challenge? It is only Rocket Science after all



### What's Inside a Story?

*Presenter: Helena Fox*

In this workshop, we'll get familiar with the parts and pieces of story, learn how to put those parts together, and explore the magic touches that make a story sing.

We will use multiple writing prompts, do some collaborative storytelling, and even draw a little as we learn about characters, plot, setting, dialogue, and author voice (the thing that makes your story yours). By the end of the workshop, we will have built many stories and had fun playing with the pieces that make them!



### Welcome to Hogwarts

*Presenter: Lyndal Reid*

Professor Dumbledore and the other professors at Hogwarts invite you to spend two days with us taking part in a wide variety of Special Lessons. You are welcome to come dressed as your favourite student.

We will visit Diagon Alley to collect our wizarding materials and get sorted by the sorting hat into your house (not necessarily the house you expect – the sorting hat knows best!). There will be classes in Transfiguration, Potions & Charms and herbology. The trivia challenge will give you a chance to impress us with your knowledge of Harry Potter (1st Book /Movie). All you need is your imagination, your creativity, your great ideas and to be prepared for fun and excitement.

## 1 DAY MINI-LABS (YEARS 5 & 6) - 18 JULY



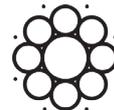
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At Devika, they build experiences using emerging technology. They collaborate with experts in their field, as well as leading technology organizations to facilitate transformations in industries such as enterprise, education, government, and entertainment. For more information, you can visit: <https://devika.com/>



### Mathematics and Art

*Presenter: Supriya Eliezer*

In this workshop, participants will explore mathematical concepts, such as Fibonacci series or tessellations etc., through art.

The aim of the workshop is to integrate art and maths to explore mathematical concepts. We will be making mathematical art projects in this workshop, learning how to make optical illusion drawings, and discussing some famous artists.

Participants will take their art projects home at the end of the workshop.



### A Day with Harry P.

*Presenter: Helen Dudeney*

Professor Dumbledore and the other professors at Hogwarts invite you to spend a day with us taking part in a wide variety of activities. You are welcome to come dressed as your favourite student.

We will spend time exploring your favourite characters, have a game of muggles quidditch and use your imagination, HP knowledge and creativity in our Tri wizard challenge.

There will be opportunities to share your knowledge through art, drama, writing or creating.



### Survivors Ready... Go!

*Presenter: David Wassink*

What's the best way to prove you can outplay, outwit and outlast those around you? That's right: It's challenge time!

Students in this workshop will complete a variety of challenges as part of a team, developing their collaborative skills. You don't even need to worry about being voted off the island; there are no individual challenges, so the only way to succeed is by getting your whole team across the line.

We will be working both indoors and outdoors, regardless of weather conditions, so pack your bags accordingly. Please also inform us of any physical or dietary limitations, so that these can be taken into account when setting challenges.