

## 2017 National Science Week Theme Future Earth

Celebrate Science Week in 2017 with these exciting sessions in your classroom!

Energy

Australian Biodiversity

ReNEWable Energy

Freshwater Habitat

## Physical Sciences

### Toys in Motion (Prep - Year 2)

Explore forces and motion through the properties of toys. By the end of the session, students will understand the concepts of push, pull, friction and gravity.

### Light and Sound (Prep - Year 2)

We rely on our sight and hearing to navigate our environment. What is it about light and sound that allow us to do this? Learn how light and sound travel, go through objects, bounce off things, and get absorbed in this wonder-filled session.

### Light and Colour (Year 3 - 6)

Explore the magic of light as students catch, bounce, bend, split, and focus light. Students will love using the assortment of torches, mirrors, and lenses.

### Forces in Motion (Year 2 - 6)

Investigate the factors that affect how objects move through a variety of engaging demonstrations and hands-on activities. Make your own balloon car as part of this popular physics lesson.

### Hot! Hot! (Year 3 - 6)

Learn what heat is, the different ways it is produced, and how it can be transferred through cleverly designed activities and exciting demonstrations. This session covers everything your students need to know about heat.

### Energy (Year 3 - 6)

Explore everything about energy from the foods we eat to generating electricity from different energy sources. Essential to students' understanding of our modern world, this session is **highly recommended**.

### Electric Circuits (Year 3 - 6)

Discover essential elements of a circuit, and construct series and parallel circuits to observe differences between them. Students safely experience electric shocks and examine conductivity of various materials.

### Ramps, Levers, and Pulleys (Year 3 - 6)

Enjoy learning about simple machines that help us do work. Experience how inclined planes, levers, and pulleys reduce the effort of everyday tasks.

## Professional Learning for Teachers

Gain confidence by updating your knowledge and learn how to deliver powerful science in the classroom.

*'Highly recommend this PD – approachable and practical for all teachers – specialists and classroom teachers alike;*

*'It was one of the most relevant, useful teacher PDs I have attended'*

Subscribe to our mailing list for the next series of workshops and get STEM confident!

## Extension Programs

This series of sessions are designed for teachers who are looking for something more challenging to complement their classroom teaching.

### Dinosaur Detectives (Prep - Year 2)

Become a palaeontologist and examine our special fossil collection. Make casts of real fossils and discover what we can learn from ancient teeth and claws.

### Crystal Chemistry (Prep - 2; Years 3 - 6)

See beyond the beauty of crystals to understand these special solids as a product of physical change. Learn about solubility and saturation by making crystals. Examine our crystal collection.

### Acids and Alkalis (Years 3 - 6)

Extend student understanding of solubility to explore acids and alkalis. Understand the interaction between these two types of chemicals, and test the acidity of everyday items like soap, shampoo, and toothpaste. Get ready to be surprised.

### Demystifying DNA (Years 5 - 6)

Learn what DNA is, what it looks like, and how powerful it is. Extract DNA from plant material in this exciting lesson and use karyotyping to understand genetic conditions.

### Magnets (Years 3 - 6)

Explore the mysterious force of magnets in this session. Investigate polarity, the beauty of magnetic fields, make magnets, and use magnets to find your way home.

### Static Electricity (Year 3 - 6)

Understand what charges are, how they build up, and what happens when they jump. Students will love the range of 'shocking' activities.



**Term 2 - 2017**



Keep up to date with the latest PrimeSCI! news and special offers by subscribing to our mailing list at our website [swinburne.edu.au/primesci](http://swinburne.edu.au/primesci)

## PrimeSCI!

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PrimeSCI! interactive classroom lessons are designed for maximum hands-on participation. Sessions are held at your school and run for one hour (with 15-minute changeover between lessons). We require ONE classroom to set up and teach all sessions.

The maximum number of students for any one session is 30.

The cost is **\$225.00** (plus GST) per hour, plus a **\$20** booking fee (2-hour booking minimum per topic).

*Bookings cancelled less than 7 days prior to the first session may incur a cancellation fee.*

## Health and PE - The Human Body

The Human Body Gallery is an unforgettable multi-sensory experience for students as they explore the amazing human body and understand the need to lead a healthy lifestyle. All Human Body Gallery sessions include interaction with real animal organs!

**The Skeletal System (Prep - Year 2)** Learn to name bones in the body, explore what makes bones strong, and identify real skeletons of animals in this popular session.

**Our Digestive System (Years 3 - 6)** Follow food along the digestive tract, and learn about how we taste, digest, and move food along our gut. Make poo to understand why it is important to eat enough vegetables. Touch real animal tongues and stomachs!

**Our Breathing System (Years 3 - 6)**

Understand the breathing process and how it is affected by asthma. Go through a breathing obstacle course, explore inhalation and exhalation, and investigate your own lung capacity. Get up close with this spongy organ and watch it inflate!

**Our Circulatory System (Years 3 - 6)**

Learn about how the heart works non-stop, study dissected lamb hearts, and listen to your own heart with a stethoscope. Find out about heart diseases and the medical procedures involved.

**Our Brain (Years 5 - 6)**

Dissect this delicate organ and be amazed at how this jelly-like structure is responsible for the way we work, think and behave.

*\*A surcharge of \$20 is incurred per lesson for lamb brains.*

## Earth and Space Sciences

**Our Blue Marble (Prep - Year 2)**

Explore how Planet Earth is ideal for supporting life within the Solar System with its temperature, atmosphere, and water cycle. Students learn about how planets rotate and orbit, measure temperature, experience air pressure and snow, and make their own planets in a cup.

**Natural Disasters (Years 3 - 6)**

Explore layers within the Earth, tectonic plate movement, and the causes of natural disasters like earthquakes, volcanoes, and tsunamis. Take part in hands-on activities that teach you about the Earth's mantle layer and its movement.

**Forces of Nature (Years 3 - 6)**

Examine weather phenomena in our atmosphere by creating a tornado in a bottle, a cloud in a bottle and modeling erosion with chalk.

**Our Place in Space (Years 3 - 6)**

Learn the latest in space science as students travel into outer space to understand planetary rotations and orbits, model the gravitational effects of our Moon, and use the language of numbers to represent the wonders of our Universe.

**Earth's Resources (Prep - Grade 2)**

What do we dig up from the Earth? Students identify samples from Australian mines and work out the uses of these minerals in our everyday lives. We can't keep digging up and chopping down Earth's resources forever, so students work in groups to make their own recycled paper.

**Digging Deeper (Years 3 - 6)**

Examine specially selected rocks and conduct a range of activities to learn about the rock cycle, weathering and erosion, and soil.

**ReNEWable Energy (Years 3 - 6)**

Learn the science behind renewable energy and tinker with current technologies related to energy efficiency. Best paired with highly popular **Energy** (see *Physical Sciences for description*).

## Introduction to Robotics

Celebrate robotics with these exciting sessions

**Beebots and Edison (Prep - Grade 2)**

How do we speak to robots? Students communicate with the robots and give them instructions to complete simple tasks. An introduction to robotics and programming for students

**Lego NXT (Years 3 - 6)**

Supported by KIOSC Discovery Centre  
An introduction to robotics and programming.  
Limited availability



## Chemical Sciences

**BeST: Bend, Stretch, Twist (Prep - Year 2)**

Learn how changing the shape and temperature in materials result in dramatic changes in behaviour. Work with amazing materials like nappies and slime. Highly engaging and hands-on.

**Mixing Matter (Prep - Year 2)**

Investigate properties of materials by separating mixtures, and combine different materials to find out if new ones are created. Students learn and experience key chemistry concepts using all senses. **Please advise of food allergies**, as sherbet is made.

**States of Matter (Years 3 - 6)**

Learn about the kinetic theory of matter and the five states of matter by engaging all senses. Students experience knowledge from explosions, dancing colour, coloured flames and temperature-sensitive liquid crystals. Key to students' understanding of the world we live in.

**Physical and Chemical Change (Years 3 - 6)**

Explore the differences between physical and chemical change through a series of exciting investigations, and learn to explain how everyday phenomena occur at the particle level.

**Plastic Fantastic (Years 3 - 6)**

Explore the world of plastics and learn which plastics are dangerous for storing food. Students make their own plastic and will be impressed by the amazing shrinking plastic. Go beyond looking at plastics as waste materials to be recycled.

**Dry Ice Chemistry (Years 3 - 6)**

Learn about carbon dioxide in its different forms and experience first-hand the energy of atoms and molecules as it changes states. Fast-paced and activity-filled, students explore concepts of condensation and sublimation through exciting activities. *\*A surcharge of \$20 per lesson for the dry ice*

## Biological Sciences / Geography

**Life Cycles (Prep - Year 2)**

Discuss and explore what defines a living thing and identify different life stages of freshwater invertebrates in a pond water sample. Best conducted in Term 4 for greatest variety.

**Jack and the Beanstalk (Prep - 2; Years 3 - 4)**

Discover the secret of magic beans in this activity-packed session. Students will dissect seed beans, investigate germination, and use microscopes to explore the secret world of plants.

**Freshwater Habitat (Years 3 - 6)**

Investigate different pond water samples to identify freshwater invertebrates. Discuss the needs of living things, distinguish between living and non-living factors in the pond. Best conducted in Term 4 for greatest variety.