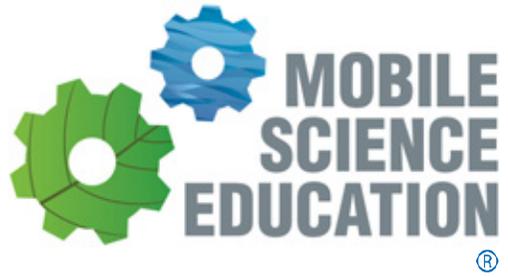


STEM PROGRAMS 2020



We are SA's premier **science education support service**, with the largest and best range of STEM incursions to be found. All of our programs are created by teachers and for teachers, and **we come to you**. Don't waste your budget on a bus - give us a call to make your day easy and worthwhile.

Looking for engaging and high-quality hands-on education experiences? With 13 interactive shows and 14 hands-on workshops, we have what you need.

****Special Offer****

Book now for Term 1, 2020
to get a 10% discount on the
regular price.



ENGAGE
EXPLORE
DISCOVER

Interactive Shows

General Science

The Science Show

60 minutes, yr R-3

Through classic science demonstrations explore: what science is; why we need it; asking questions; fair tests; how to be wrong; what we always know.

STEM Show - Deep Blue Sea

60 minutes, yr 3-10, Terms 3 + 4

Intro to ocean physics - tides, pressure, light; aquaculture; plastic impact; tidal and wave energy; offshore wind.

90 minutes, Yr 7-10, Terms 3 + 4

Above + climate change and sea level rise, ocean acidification

Physical Sciences

The Forces Show

90 minutes, yr 2-9

Definition; inertia and acceleration; friction; simple machines; Newton's Laws; Buoyancy; Gravity; Pressure and bed of nails.

The Light Fantastic

60 minutes, yr R-9

Light's speed limit; reflection and refraction; spectra, emission and absorption; what Newton got wrong; light and colour perception and mixing.

The Energy Show

60 minutes, yr 2-7

Conservation, transfers, transformations; chemical energy and food; sound, light, forms of potential.

90 minutes, yr 5-10

Above + collisions; heat/work; electricity; spectra and diffraction; Reuben's tube.

Earth and Space Sciences

The Climate Emergency

90 minutes, yr 6-12

Evidence, causes of global heating; current and future climate change impacts; myth busting; possible solutions.

The Universe

90 minutes, yr 7-11

Intuitions, 'common sense' vs science; earth-moon scale; intro to special and general relativity; Big Bang cosmology; immersive portable planetarium.

30 student limit per session, \$300 +GST

Starlab Experience

45 minutes, yr 3-12

Immersive portable planetarium. Finding south; constellations; storytelling; physics of stars; origin of atoms. Up to 30 students per session, \$150 +GST, 3 session minimum.

Chemical Sciences

The Matter Show

60 minutes, yr 2-7

Properties; solids, liquids and gases; changes of state

90 minutes, yr 3-7

Above + expansion, contraction; particle model; mixtures.

Atoms and Chemistry

90 minutes, yr 7-10

Particle model; discovery of atomic structure; elements and the periodic table; physical vs chemical changes.

Hands-on Workshops

General Science

How Science Works

90 minutes, yr R-2

Hands-on introduction to science skills; making a hypothesis; measurement; observation; fair testing; recording.

Our Forensic Puzzle

90 minutes, yr 3-7

Test forensic evidence, including blood, fingerprints, fibres, tool marks, soil, hair, fluorescence and chromatography.

Earth and Space Sciences

How Astronomy Works

90 minutes, yr R-2

Introduction to stars and size; spinning earth; North, South, Up and Down; moon phases; craters; planets.

Our Place in Space

90 minutes, yr 3-7

Scale; moon formation and phases; day, night, year - earth movement; seasons; solar system (*option: replace seasons or solar system with Planetarium, + \$30*).

Our Active Earth

90 minutes, yr 3-7

Water resources; rock properties and types; tectonic drift; faulting and folding; glaciation; deep time.

Our Energy Future

90 minutes, yr 3-9

How electricity is produced, and why it must change; sustainable energy tech in SA; hands-on energy mix models of wind, solar thermal, and photovoltaics.

Chemical Sciences

How Materials Work

90 minutes, yr R-2

Hands-on introduction to science skills through: viscosity; physical properties; indicators; polymers; heating and cooling.

Our Chemical World

90 minutes, yr 3-7

Chemical science skills lab; electrochemistry; mixtures; reaction rate; indicators; identification.

Physical Sciences

How Energy Works

90 minutes, yr R-2

Hands-on introduction to science skills through: moving sounds; colour mixing and shadows; hot and cold; fast and slow.

How Pushes and Pulls Work

90 minutes, yr R-2

Hands-on introduction to science skills through: gravity and speed; balance; friction; stored energy and wheels.

Our Physical Forces

90 minutes, yr 3-7

Gravity, ramps and loops; inclined planes; pulleys; mechanical advantage; pendula; acceleration; magnetism.

Coding and Robotics

Coding and Robotics

Level 1: 90 minutes, yr R-2

Level 2: 90 minutes, Yr 3-5

Level 3: 90 minutes, Yr 5-9

Programming skills workshop using robots for problem solving; logic and sequencing skills.

Pricing:

1) Within 40km of Adelaide (Victoria Square, according to Google maps)

A daily minimum charge of \$450 +GST applies.

Any 2 programs (3 for Starlab), or 1 show for 90+ students, will cover the minimum charge.

Interactive shows:

60 minutes: \$5.00 +GST per student (\$270 +GST minimum per session)

90 minutes: \$5.00 +GST per student (\$300 +GST minimum per session)

Starlab Experience: \$150 +GST per 45 minute session (3 sessions minimum)

The Universe: \$300 +GST per 90 minute session.

Hands-on workshops:

\$270 +GST per 90 minute session

2) 40km to 150km from Adelaide (Victoria Square, according to Google maps)

As above +travel costs of \$40 per hour roundtrip, first hour free

3) More than 150km from Adelaide (Victoria Square, according to Google maps)

A daily minimum charge of \$810 +GST applies, +travel costs

Discounts are available for:

- **Cat.1-4 disadvantaged schools, (daily minimum still applies)**
- large bookings of 3 or more sessions per presenter per day
- bookings covering several full days

Contact our office for details

**To make a booking,
send an email detailing:**

- preferred times and dates (please include some options)
 - the program(s) you are looking for
 - the year level and approximate number of students
 - your school contact details

to: **info@mobilescienceeducation.com.au**

or call the office on **08 8396 2250** to discuss your requirements

Staff are very busy in schools and office hours are limited - if your matter is urgent please email us.

Show/Workshop Combination Terms 1-4, 2020

How can your school save hundreds of dollars through the year on quality science shows and workshops?

Book our combination packages to achieve stronger learning outcomes with a workshop and a related show to help students retain and deepen their knowledge across the following areas:

Recommendations

The Climate Emergency + Our Energy Future (Yr 6-9) NEW

The Science Show + How Science Works (R-2)

The Light Fantastic + How Energy Works (R-2)

The Energy Show (60 minutes) + How Energy Works (Yr 2)

The Forces Show (60 minutes) + How Pushes and Pulls Work (Yr 2)

The Matter Show (60 minutes) + How Materials Work (Yr 2)

The Energy Show (90 minutes) + Our Energy Future (yr 3-10)

The Forces Show (90 minutes) + Our Physical Forces (Yr 3-7)

The Matter Show (90 minutes) + Our Chemical World (Yr 3-6)

Atoms and Chemistry (90 minutes) + Our Chemical World (Yr 7)

Package Deals (flat rate, max 32 students per class)

Show/workshop combo for 3 classes

Day 1: show + workshop session 1

Day 2: workshop sessions 2+3

~~\$1200 +GST*~~ **\$1100 +GST**
or book **3 or more** packages
through the year at
\$1000 +GST each (save \$600+)*

Show/workshop combo for 4 classes

Day 1: show + workshop session 1

Day 2: workshop sessions 2+3+4

~~\$1600 +GST*~~ **\$1450 +GST**
or book **3 or more** packages
through the year at
\$1350 +GST each (save \$750+)*

Show/workshop combo for 5 classes

Day 1: show + workshop sessions 1+2

Day 2: workshop sessions 3+4+5

~~\$2000 +GST*~~ **\$1800 +GST**
or book **3 or more** packages
through the year at
\$1650 +GST each (save \$1050+)*



*estimate based on average class size of 26 students
3 classes = \$390(show) + (\$270 x 3)(workshops) = \$1200
4 classes = \$520(show) + (\$270 x 4)(workshops) = \$1600
5 classes = \$650(show) + (\$270 x 5)(workshops) = \$2000



This year's science week school theme is
Deep Blue:
innovations for the future of our oceans
and is linked with the establishment of
the Blue Economy Cooperative Research Centre

To complement this theme, our STEM show this year is:

STEM Show - Deep Blue Sea

60 minutes, yr 3-10

Intro to ocean physics - tides, pressure, light; aquaculture;
plastic impact; tidal and wave energy; offshore wind.

90 minutes, Yr 7-10

Above + climate change and sea level rise, ocean acidification.

STEM Show - Deep Blue Sea

will be available throughout Terms 3 and 4, 2020,
and bookings are now open.

For primary schools, "STEM Show" is not appropriate for your
junior primary students. Instead we recommend
"The Science Show" during science week.

To make a booking, send an email detailing:

- preferred times and dates (please include some options)
 - the program(s) you are looking for
- the year level and approximate number of students
 - your school contact details

to: info@mobilescienceeducation.com.au

or call the office on **08 8396 2250** to discuss your requirements
*Staff are very busy in schools and office hours are limited - if your
matter is urgent please email us.*