

Bedside beacon

Build your own low-light activated mini lighthouse, and use it as a beacon to guide you to bed at night!

The light source for the beacon is a pair of white LEDs which you will solder to an electronic control board. This control board uses a light-dependent resistor (LDR) and two transistors to switch battery power to the LEDs when the surrounding light fades. The battery and completed control board are slid into a protective plastic vial.

The second part of the project is the beacon structure to house the vial of electronics. You will make the beacon tower, reflector and cap from paper (with a choice of colours) and aluminium foil, and will use a small transparent plastic bowl as the lantern room. When assembled and decorated, this structure is placed over the vial to complete the beacon - and when the daylight fades, the beacon shines!

2 hour sessions at:

11.00am

and 2.00pm University of Adelaide, North Tce Campus, Braggs Building

Meet at Gate 9 on Victoria Drive, opposite the Uni Footbridge, 15 minutes before the start.

Everyone, including adults, must wear enclosed shoes.



Members \$25 child aged 8 &

over

Warriparinga Wetlands & Kaurna cultural tour

Our session includes native plants, "scar" trees, bush tucker, Kaurna culture, birds and animals, bush medicine and didgeridoo workshop.

In this "walking workshop", a Kaurna guide will take us through this magnificent wetland to understand the natural environment of Warriparinga and the Sturt River. The wetland is a series of ponds that diverts and filters water from the Sturt River before releasing it back.

This will be followed by an introduction to Aboriginal music, with a demonstration and performance on how the didgeridoo is made and played.

Warriparinga is a unique site in the heart of Marion. The Living Kaurna Cultural Centre was established to ensure that Kaurna culture, and the Dreaming Story of the Land, is passed on from generation to generation.

90 minute sessions at: 10.30am 12.30pm

Living Kaurna Cultural Centre, Warriparinga Way, Bedford Park

Entrance is off Sturt Road, between the Sturt Police Station and the Marion Carayan Park.



Members and parents

\$15 child \$15 adult

Pelican Point Power Station

Tour of one of the most advanced, environmentally-friendly & efficient power stations in Australia. The power station uses a combined-cycle gas turbine operation capable of producing up to 25% of SA's peeds

The sessions, conducted by Mobile Science Education, will feature an overview of the power station, including the background to its development.

Then there's an interactive science show, hands-on activities and a tour of the plant.

90 minute tours at: 9.30am

11.15am

1.00pm

At the end of Pelican Point Road, Outer Harbor



Members & parents

Free



Gadgets and Gizmos (1)

We'll start with some cool demonstrations like the Fun Fly Stick and the Walking Sand Beast.

Then you'll discover the science behind lots of gadgets and gizmos. Generate electricity using wind power and solar panels; construct an electronic doorbell; check out the mini beasts; make a conductivity tester; discover the effect of temperature on colours.

Play the laser game, time the walking wooden ducks, use the geomirrors and gyroscopes ... and so much more!

You will also make a wooden Jacobs Ladder and a Balancing Bird to take home.

90 minute sessions at: 10.00am, 12.30pm 3.00pm

University of Adelaide, North Tce Campus, Braggs Building

Meet at Gate 9 on Victoria Drive, opposite the Uni Footbridge, 15 minutes before start. Members age 10 & under Also open to nonmembers Members: \$10 child Nonmembers: \$15 child



Gadgets and Gizmos (2)

These Gadgets & Gizmos sessions are for ages 10 and up. The workshops will be similar to the sessions for younger children on Thursday, but with a few additional demonstrations and experiments added.

Examples of the various work stations include measuring voltage and wind speed, testing the effect of varying angles of light on solar panels, and using microscopes.

You'll generate electricity; construct an electronic doorbell; make a conductivity tester; play the laser game; use the geomirrors and gyroscopes ... and so much more!

You will also make a wooden Jacobs Ladder and a Balancing Bird to take home.

90 minute sessions at: 10.00am, 12.30pm 3.00pm University of Adelaide, North Tce Campus, Braggs Building

Meet at Gate 9 on Victoria Drive, opposite the Uni Footbridge, 15 minutes before the start.

Everyone, including adults, must wear enclosed shoes.



Members age 10 & over

Also open to nonmembers Members: \$10 child Nonmembers: \$15 child

Marine Discovery Centre

The Marine Discovery Centre encourages an appreciation and understanding of marine life with a view to promoting conservation and sustainable use.

The special science learning centre includes models, activities, trails and experiments that are innovative, interactive and exciting.

You will also observe and learn about marine creatures in their environment in the large aquariums, as well as undertaking special microscope activities.

Some of the amazing marine creatures you will meet include crabs, sea stars, Port Jackson sharks, sea urchins, anemones, sea horses, elephant snails, octopus, sea cucumbers and much more.

These will be special educational sessions for our club, with adults also participating.

90 minute sessions at: 9.30am

11.30am 1.30pm Marine Discovery Centre, 333 Military Rd, Henley Beach

Situated on the corner of Marlborough St & Seaview Road - within the grounds of Star of the Sea School



Members & parents

\$12 child \$12 adult



Tour of SAHMRI

Tour of this flagship health and medical research institute. The visually striking facility houses more than 600 leading researchers working together for better treatments and cures for some of the world's most challenging diseases.

On this tour, you will gain a deeper understanding of why medical research plays such a vital role in our community, and an insight into why SAHMRI as an organisation is so unique.

You will be treated to stunning views of this state of the art facility and well-recognised architecture. The building is ecologically sustainable, responding to its surrounding environmental conditions to minimise the use of energy.

60-minute tour

11 00am

SAHMRI, North Tce, Adelaide



Members age 11 & over & parents

\$12 child \$12 adult

Christies Beach Wastewater Treatment Plant

Learn how sewage is treated and recycled in South Australia - and how you can play your part.

Every time you have a shower, flush the toilet or pull a plug out of a sink, you are using the sewage network. More than 250 million litres of sewage arrives at one of Adelaide's treatment plants every day. SA Water recycles about 27,000 million litres of sewage every year.

This recycled water is used for irrigation and for flushing your toilet.

Treating sewage is both complicated and expensive. It is also vital to our good health and an essential part of protecting our environment.

We'll be taken on a guided walking tour of the facility as we go behind-the-scenes to explore the process of wastewater treatment. 60 minute sessions at: 10 00am

11.30am

Gilbert Road, Christies Beach - off Gulfview Road

A map and further details will be sent out beforehand to those who book



Free Members age 8 & over &

parents

members

age 12 &

up

\$45 child No charge accompanyi ng adults

Building a Robot

Working together, you will build a FRC (FIRST Robotics Competition) robot.

You will assemble a simple drive base and be taken through the electronics. Then you will undertake some minimal programming, and drive an obstacle course. It will take 4 hours to do the build, working in groups and with mentors to assist.

These are the basis of the competition robots that the Robotics Club recently took to the Houston world championships.

By the end of the session, you will understand all the components that are required to get a robot onto the field of competition.



Start: 12.30pm Finish: 5.00pm

RoboRoos Robotics Club, 22 Leeds St, Wingfield Come off South Rd (not the North-South

motorway) and turn into Wing St, then right into Aberdeen St.

Workshop entry is off Aberdeen St.

Participants & parents must wear enclosed shoes and long hair tied back. Safety glasses will be provided.

Bring your own refreshments.



Mixed Media Animation Workshop

The Mixed Media Animation Workshop with GooRoo Animation will teach you how to create your own animated movies using a variety of different styles and techniques.

Using a chalkboard as your backdrop, and an assortment of craft materials as your animation tools, you will create your own animation, captured on an iPhone with the Stop Motion Studio app.

Your finished videos will be screened to the group and uploaded to YouTube via the GooRoo Animation Workshops channel to be shared with friends and family.

This workshop is an interactive and engaging experience, designed to inspire and provide the knowledge and tools to start making movies at home.

This will be lots of fun!

3 hour sessions

9.30am

and 1.30pm

University of Adelaide, North Tce Campus, **Braggs Building**

Meet at Gate 9 on Victoria Drive, opposite the Uni Footbridge, 15 minutes before the start.

Everyone, including adults, must wear enclosed shoes



\$25 child Members age 8 &

over

Greenock Aviation Museum

Our tour will be conducted by the founder of this amazing museum, Lincoln Nitschke.

The Museum features full sized restored military aircraft (such as a Canberra Bomber), engines, reconstructed cockpits, gun turrets, rocket motors, radar tracking unit, memorabilia and more.

The collection includes the largest public display of 1:72 scale aircraft models in the Southern Hemisphere - over 1,400 models!

There are also diorama displays and various aeronautica, plus a craft shop with a broad range of local produce and craft for sale.

12.30pm Greenock Aviation onwards Museum, 3km from Greenock on the Kapunda Lunch at Road. 12.30pm, tour afterwards

Approx 45 minutes from Adelaide



Members & family

\$6 child \$12 adult Cost includes BBQ lunch, with some of the best Barossa meats plus salads.

SA Museum's Bolivar Facility

The Bolivar Facility was purpose-built for large skeleton preparation. It is the only one of its kind in Australia and one of the best equipped facilities for this work in the world. It houses specialised equipment needed to handle skeletons of all sizes, including large whales.

The facility also accommodates the Museum's collection of whale and dolphin skulls, skeletons and baleen. The sheer size of the whale bones and the huge number of specimens is astounding.

We will tour both the preparation and skeleton collection buildings which show how specimens are researched and prepared. We will also learn about the relevance of the facility to SA marine mammal conservation

2.5-hour session

1.30pm

SA Water, Hodgson Road (off Port Wakefield Road), Bolivar

Meet at locked SA Water gate 15 minutes prior to start time



Members age 12 & over

Due to space restriction s, no more than 1 adult per family

\$5 per child \$5 per adult

Why You Should Love Wasps!

Join PhD student Erinn Fagan-Jeffries as she takes you deep into your garden to view the world of wasps.

Get ready to be grossed out by stories of parasites, including a wasp that turns cockroaches into zombies!

Learn about some of the craziest wasps in the world, find out about the man who let wasps sting him for science, and hear about Erinn's citizen science project and how you can take part.]

60-minute presentation at: 6.30pm

University of Adelaide, North Tce Campus Horace Lamb Theatre



Members & their families

Free

Also open to nonmembers