Junior Field Naturalists SA

Newsletter - September 2020

Hi Junior Field Naturalists,

As from our upcoming September meeting, we will now meet on the **LAST TUESDAY** of each month in the **SCHOOL GYM**. This allows us far more room to spread out. Other advantages are that the chairs are kept in the gym (so we no longer need to run them back and forth), plus the gym has its own toilets (so no more walking all the way down to the toilet block in the dark!).

September Meeting

When: **Tuesday 22 September**, 7.00pm, Bellevue Heights Primary School Gym

Topic: **iBandi Junior Citizen Science Workshop**

Speakers: **Jasmin Packer** and **Wendy Warren** from the **iBandi project**

Overview: We invite you to help protect endangered **southern brown bandicoots** by discovering more habitat for them. These curious creatures use impenetrable blackberry thickets if there's no suitable native vegetation. We're looking for habitat they could use - *and we need the help of junior field naturalists!*

During this workshop (which is aimed at the appropriate level for young people) you'll be able to join our **iBandi citizen science** team. You'll be trained in basic field safety, iBandi iNaturalist platform, fundamentals for data collection, gain insight into the importance of bandicoots within ecosystems and discover how you can help to protect them. Plus you'll have some fun taking photos of your own chosen subject matter in the gym from 3 different viewpoints (habitat, bandicoot-eye level, and distinctive features).

If possible, bring along your mobile device with the iNaturalist app installed, and click to join the iBandi project.

Program of Talks and Activities

Below are the dates of our regular monthly meetings for the remainder of 2020.

We will be adding more activities to our program, so this list will be updated as we lock in dates.

Tuesday 22 September - BANDICOOT WORKSHOP

Saturday 10 October: Making Bedside Lightstations / Bickford's Lanterns at the Clipper Ship

Tuesday 27 October - ANIMALS ANONYMOUS

Sunday 22 November: Making Electronic Christmas Trees at the Clipper Ship

Tuesday 24 November - DAVID CHRISTOPHEL MEMORIAL QUIZ NIGHT

Parents attend meetings and field trips with their children and are responsible for their supervision.

Nature Festival

A new festival for South Australia!

When: 25 September - 4 October 2020

A 2020 pilot project, **Nature Festival** is a 10-day open-access festival celebrating the role nature plays in the identity of all South Australians. Expect family play experiences from Nature Play, outdoor yoga, public talks, and artistic installations. Nature Festival's inaugural program hosts free and ticketed events dedicated to celebrating nature in positive, creative and meaningful ways.

With over 80 events for all ages, the **Nature Festival** is full of imaginative ways to connect with others and to set out on adventures near and far.

The program includes events in the following categories:

*adventure *learning *slow down *help out *arts + culture *nature play *self-guided

Examples of events include orienteering, beach rambles, nature walks, Birds SA walking tours, Oaklands wetlands by night, fungi hunts, frogs of the Adelaide Hills, making bee hotels, and so many more nature adventures.

Join in 10 days of encounters, events and experiences to celebrate our love of nature in South Australia.

Check out the web site for the full program: https://www.naturefestival.org.au/events

Making Bickford's Lanterns & Bedside Lightstations at the Clipper Ship

The wonderful volunteers and electronic experts from the **City of Adelaide Clipper Ship** have organised these 2 activities for our club. Simply choose which activity you would like to do, and book in via the link.

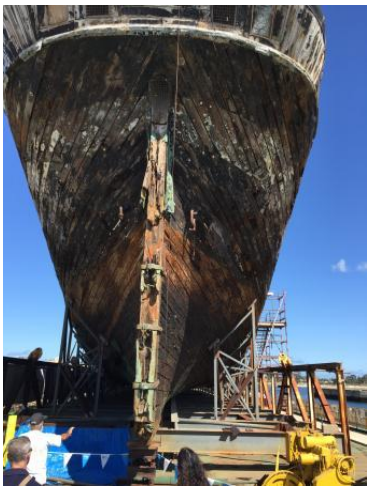
When: **Saturday 10 October**

Time: **Lanterns** - 10.30am to midday; **Lightstations** - 1pm to 2.30pm

Where: Clipper Ship, Dock 2, Honey St, Port Adelaide. Check out the City of Adelaide web site for a map of the ship's new location - https://www.cityofadelaide.org.au/

Cost: $15 per adult for ship tour - children get tour for free

$10 per child to make lantern or lightstation



Bookings & Payment: Via Eventbrite at -

Lanterns: eventbrite.com.au/e/120688365149

Lightstations: eventbrite.com.au/e/120717590563

Tour of the vessel:

Experience being inside an 1864 sailing ship! Come on a guided tour of the outside, and several decks inside, of the City of Adelaide Clipper Ship, the most important existing historic ship in Australia.

Moved by barge from Scotland after a 14 year campaign to save the vessel, it arrived in Adelaide in 2014. Along with the *Cutty Sark*, the *City of Adelaide* is one of the last 2 clipper ships surviving in the world today. Learn about the amazing iron-frame timber-clad technology and the ongoing issues of preservation.

Note: *You will need to climb some stairs to board the vessel and, for safety reasons, everyone must wear enclosed shoes.*

Bickford's Lanterns:

Build your own working model hurricane lamp to keep! Each child will assemble their own lantern based on the traditional brass clipper ship lanterns of old. You will build an electronic circuit using flickering orange/yellow LEDs that resemble burning candles, and construct its housing. You will appreciate how gloomy ship life was in years gone by as you light your way through the bowels of the clipper ship. The lanterns will SHINE!

Bedside Lightstations:

Build your own mini lighthouse, then add seaweed, shells and driftwood to create a mini lightstation for use as a beacon to guide you to bed at night!

The light source is a white light-emitting diode (LED), which you will mount on a battery box and position to shine upward and into the lamp room of the surrounding lighthouse.

You will make the lighthouse tower and roof from coloured paper (with a choice of colours), and the light-reflector from aluminium foil. A small transparent plastic bowl will form the lamp room. When you place this assembly over the LED light source, you will have a functioning lighthouse.

COVID Safe Plans will be in place and COVID Marshalls will be in attendance at the events.

Aussie Backyard Bird Count

Get involved in the upcoming Aussie Backyard Bird Count!

When: Monday 19 - Sunday 25 October 2020

Where: Your backyard

Who: Everyone

Conducted by BirdLife Australia, the **Aussie Backyard Bird Count** is a great way to connect with the birds in your backyard, no matter where your backyard happens to be - a suburban backyard, a local park, a patch of forest, down by the beach, or the main street of town.

This is an activity for all ages that involves observing and counting the birds that live near you. While you can count as many times as you like over the week, **BirdLife Australia** asks that each count is completed over a 20-minute period. The data collected will assist in understanding more about the birds that live where people live.

Simply register and download the app to start counting. You can also use the app to identify birds.

Further information about how to register and download the app:
https://aussiebirdcount.org.au/

An upcoming public event that might be of interest to club members:

Super Survivors' Trail at Cleland Wildlife Park

When: 7 September to 11 October *Cost:* Activity is free with entry

Where: Cleland Wildlife Park, Mount Lofty Summit Road, Crafers

Join the **Super Survivors' Trail** and discover the cool super powers our Australian animals need to survive the many threats and dangers they face. Discover what is being done to assist them, and what part you can play to help our precious animals that are at risk of extinction.

Make sure you decode the secret message that is hidden in the trail!

Cleland Membership

Don't forget ... every child member of our club receives **FREE** membership to **Cleland Wildlife Park** (until the end of February 2021). If you are a new club member, your child's pass will be available, from the beginning of the school holidays, at the reception area at Cleland.

Toothless Predator brings out the Claws!

Echidnas are found all over Australia, including Tasmania. They are adapted to thrive in many harsh Australian environments, from deserts to forests and alpine areas.

Echidnas are an egg-laying mammal and are one of just 2 **monotremes** - the other being the **platypus**.

While they have no teeth, they do have strong claws and an impressive 18cm tongue, which is ideally designed for catching their prey of **insects** and **worms**.

Their spiky exterior consists of spines made from **keratin** - the same stuff as our hair and fingernails! These spines are perfect for protecting themselves against potential predators, including foxes, goannas and feral cats. The echidna will roll into a ball, protecting its body with those sharp spines. The echidna will use its powerful feet and claws to dig into the earth, leaving only their spiky exterior revealed.

The echidna lays **one egg** at a time and this will hatch after 10 to 14 days and the young (called a **puggle**) will emerge hairless, blind and smaller than a 10 cent piece. Clinging to hairs inside the mother's pouch, the puggle will suckle for up to three months. At around 60 days old the echidna begins to develop spines and quickly becomes too prickly to remain in its mother's pouch. Mum will then build a burrow for it as it continues to suckle and grow.

Echidnas have a long lifespan of 30 to 40 years in the wild, and up to 50 years in zoos!

Information from Australia Zoo

Have fun with science ...

The Leakproof Bag

Learn how to poke holes in a plastic bag filled with water without spilling a drop. That's the theory you're going to test ... and it's wise to practice your liquid trick over the sink. It's a cool way to learn about the chemistry of polymers.

For this experiment you will need:

- Round pencils
- Plastic zip-lock bag
- Water

What to do:

1. Start by sharpening the pencils. Make sure the tips are sharpened to a point.
2. Fill the bag one-half full with water and then seal the bag closed.
3. Hold a pencil in one hand and the top of the bag in the other hand.
4. Stab each of the pencils right through one side of the bag and halfway out the other side - without spilling a drop! Be careful not to push the pencils all the way through.
5. You could also use wooden skewers.

What happened in this experiment?

The zip-lock plastic bag is made of a polymer called **low-density polyethylene** (LDPE). It's one of the most widely used packaging materials in the world. LDPE is low in cost, lightweight, durable, a barrier to moisture, and very flexible. *Think of the polyethylene molecules as long strands of freshly cooked spaghetti!*

The tip of the sharpened pencil can easily slip between and push apart the flexible strands of spaghetti, but the strands' flexible property helps to form a temporary seal against the edge of the pencil. When the pencil is removed, the hole in the plastic bag remains because the polyethylene molecules were pushed aside permanently and the water leaks out.

As you might have discovered, it's much easier for the stretched plastic to seal around the smooth sides of a round pencil than the straight edges found on other pencils. *Hopefully you discovered this tip during practice and not while the bag was precariously positioned over someone's head!*

From stevespanglerscience.com

The Incredible Hoop Glider

For this experiment you will need:

- A regular plastic drinking straw
- A 7.5cm x 13cm piece of index card or stiff paper
- Tape
- Scissors

What to do:

1. Cut the card or paper into 3 separate pieces that measure 2.5cm by 13cm.

2. Take 2 of the pieces of paper and tape them together into a hoop as shown. Be sure to overlap the pieces about 1cm so that they keep a nice round shape once taped.

3. Use the last strip of paper to make a smaller loop, overlapping the edges a bit like before.

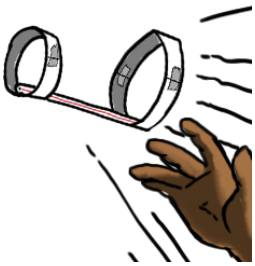
4. Tape the paper loops to the ends of the straw as shown. Note that the straw is lined up on the inside of the loops. *That's it!*

5. Now hold the straw in the middle with the hoops on top and throw it in the air similar to how you might throw a dart, angling slightly up. With some practice you can get it to go farther than many paper airplanes.

What happened?

Can we really call that a plane? It may look weird, but you will discover it flies surprisingly well.

The 2 sizes of hoops help to keep the straw balanced as it flies. The big hoop creates "drag" (or air resistance) which helps keep the straw level while the smaller hoop at the front keeps your super hooper from turning off course.



Some have asked why the plane does not turn over since the hoops are heavier than the straw. Since objects of different weight generally fall at the same speed, the hoop will keep its "upright" position.

Make it an experiment

The project above is a **DEMONSTRATION**. To make it a true experiment, try to answer these questions:

- Does the placement of the hoops on the straw affect its flight distance?
- Does the length of straw affect the flight? You can cut the straws or attach straws together to test this.
- Do more hoops help the hoop glider to fly better?
- Do the hoops have to be lined up in order for the plane to fly well?

Interesting Facts about Cheetahs

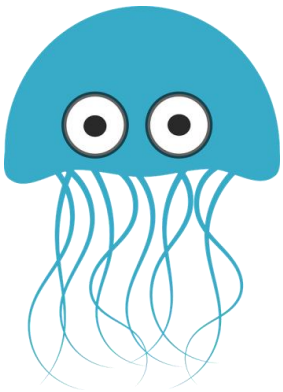
- The cheetah is the **fastest land animal** in the world.
- They can accelerate to a top speed of around **113 km per hour** in just a few seconds.
- Cheetahs are **extremely fast**. However they tire quickly and can only keep up their top speed for a few minutes before they are too tired to continue.

- Cheetahs are **smaller** than other members of the big cat family, weighing only 45 – 60 kilograms.
- One way to always recognise a cheetah is by the **long, black lines** which run from the inside of each eye to the mouth. These are usually called "tear lines" and scientists believe they help protect the cheetah's eyes from the harsh sun and help them to see long distances.
- Cheetahs are the only big cat that **cannot roar**. They can purr though and usually purr most loudly when they are grooming or sitting near other cheetahs.
- While **lions** and **leopards** usually do their hunting at night, cheetahs hunt for food during the day.
- A cheetah has amazing **eyesight** during the day and can spot prey from 5 km away.
- Cheetahs cannot climb high trees. Their **non-retractable claws** are better suited to running and turning on the ground.

- They have **poor night vision**.
- With their light body weight and blunt claws, cheetahs are not well designed to protect themselves or their prey. When a larger or more aggressive animal approaches a cheetah in the wild, it will give up its catch to avoid a fight.
- Cheetahs only need to drink once every three to four days.

(Information from Science Kids)

Did you know ...?



- A small child could swim through the veins of a **Blue Whale's** heart.
- There is a type of **jellyfish** that lives forever.
- The **Sailfish** is the fastest fish on Earth, reaching top speeds of 110kph.
- The **tooth** is the only part of the human body that can't repair itself.
- A **crocodile** can't stick out its tongue.
- **Bats** are the only mammals that can fly.
- Eating **salmon** makes hair grow faster.
- More **electrical impulses** are generated in one day by a single human brain that by all the phones in the world.
- Statistically, at least one molecule of **water** out of every glass of water you ever drank once passed through a **dinosaur**.

From bing.com/images

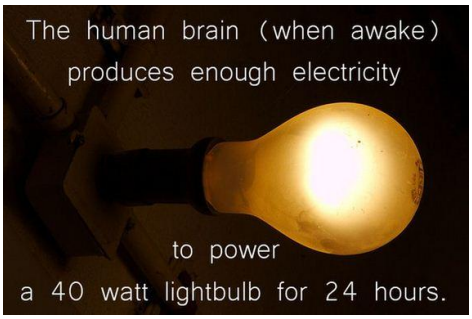
And some science jokes just for fun ...

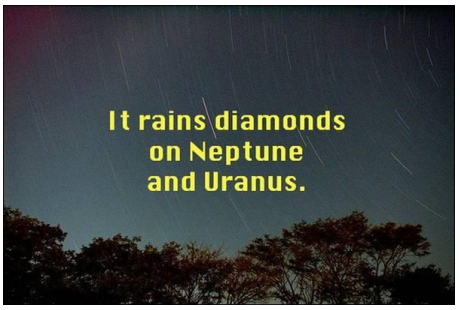
How do trees get on the internet? They log in!

What kind of tree can fit into your hand? A palm tree.

Why was the bee's hair sticky? Because he used a honey-comb.

From sciencefun.org





From bing.com/images

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