

# Junior Field Naturalists SA

## Newsletter - August 2020



Hi Junior Field Naturalists,

Our August meeting is coming up shortly, and we have started to again organise field trips and other events. Thank you to our club families who came to our July meeting - you all did brilliantly in adhering to our new meeting procedures. *We look forward to seeing you all again as we get back to regular activities.*

## August Meeting

*When:* Thursday 27 August, 7.00pm, Bellevue Heights Primary School

*Topic:* **MUSEUM COLLECTIONS**

*Speaker:* **Peter Hunt**. Peter is a long term member of the historic Malacological Society of South Australia. His interest is marine ecology, in particular the recent temperate shell reef restoration projects. Now retired, Peter is a volunteer at the SA Museum, reviewing the collections of terrestrial snails and slugs.

*Overview:* What makes a scientific collection in a Museum? How are objects sorted and classified? What is Taxonomy? What is a species? Why do we use scientific names for things? What system is used when naming discoveries? What makes a picture useful to scientists?



*So many questions!* Come along and find out all the answers from **Peter Hunt**, who is a wonderful supporter, having previously given talks to our group and taken us on a memorable field trip to the Aldinga Reef, as well as donating shell collections to our club.

## 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.*

Thurs 27 August - Peter Hunt: **MUSEUM COLLECTIONS**

Thurs 24 September - speaker to be advised

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

Thurs 29 October - speaker to be advised

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

Thurs 3 December - **DAVID CHRISTOPHEL MEMORIAL QUIZ NIGHT**

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



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

## Meet the Authors, Inventors & Maritime Historians at the Clipper Ship



*When:* Saturday 26 September, 11am to 2pm

*Where:* Shed 13, Dock 2, Honey St, Port Adelaide - next to the Clipper Ship

*Cost:* Free! No bookings required

*More Info:* <https://www.cityofadelaide.org.au/events>

This is a special school holiday activity, open to everyone. The program includes such authors, inventors and historians as Rob Morrison (The Curiosity Show), Russell Penney, Bob Sexton, Peter Christopher, Paul Simpson, Brian Gillan, Nigel Stone, Meredith Reardon and possibly Steve McNicol.

You will have the opportunity to chat with these people, interact with some of the items they have made, meet the authors and purchase merchandise. An added bonus is having your books/merchandise signed.

An optional extra is to explore the **City of Adelaide Clipper Ship**. There will be a reduced adult tour fee between 11am & 2pm, with children under 16 free.

# Great Southern Bioblitz 2020

Don't forget to participate in the **Great Southern Bioblitz!**

How many wild animals and plants live in your area? Are there any threatened species? Help scientists by documenting the wildlife in your area from **Friday 25 to Monday 28 September 2020.**

This is an international period of intense biological surveying in an attempt to record all the living species within several designated areas across the Southern Hemisphere in Spring.

The Great Southern Bioblitz will collect "observations" made on **iNaturalist** over the 4 days.

More info: <https://greatsouthernbiobl.wixsite.com/website>

*Don't miss this perfect opportunity to engage in science and nature learning.*



## Go the Mighty Magpies!

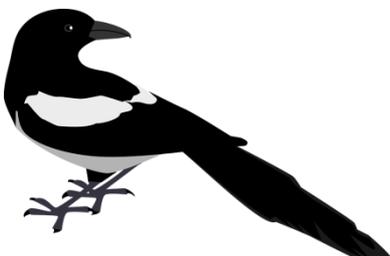
Love them or hate them, the mighty magpies - *no, not the footy team* - are an ever present part of our environment.

The **Australian Magpie** is a distinctive black and white bird that is very common throughout much of Australia and Papua New Guinea.

They can live for about 30 years and are usually found in large social groups. As they are very territorial, especially during the mating season between August and October, they commonly swoop people and other animals that enter their territory.

**Australian Magpies** only feed on the ground, so they prefer open grassy areas that also have plenty of trees with nesting and roosting sites. They are very common in urban parks, farms, gardens and along roads and creek lines. They mainly feed on invertebrates - it's great fun to watch them listening for and pulling up worms - but they also eat frogs, lizards and seeds.

**Australian Magpies** are great vocalisers, producing complex calls that may mimic barking dogs and other birds. Australian Magpies are sometimes known as **Piping Shrikes**, as featured on the South Australian flag, badge and coat of arms, because their songs can range over four octaves and may exceed 100 decibels - the volume produced by a chainsaw! In fact, the Latin name *tibicen* means 'piper' or 'flute player' so it is a great description for this little Aussie larrikin!



*Information from NRM Education*

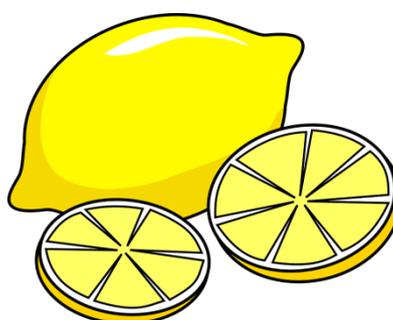
*Have fun with science ...*

## **Invisible Ink with Lemon Juice**

Making **invisible ink** is a lot of fun! You can pretend you are a secret agent as you keep all your secret codes and messages hidden from others. All you need are some basic household objects and the hidden power of lemon juice.

### **For this experiment you will need:**

- Half a lemon
- Water
- Spoon
- Bowl
- Cotton bud
- White paper
- Lamp or other light bulb



### **What to do:**



1. Squeeze some lemon juice into the bowl and add a few drops of water.
2. Mix the water and lemon juice with the spoon.
3. Dip the cotton bud into the mixture and write a message on to the white paper.
4. Wait for the juice to dry so it becomes completely invisible.
5. When you are ready to read your secret message or show it to someone else, heat the paper by holding it close to a light bulb.

### **What happened in this experiment?**

**Lemon juice** is an organic substance that oxidizes and turns brown when heated. Diluting the lemon juice in water makes it very hard to notice when you apply it to the paper. No one will be aware of its presence until it is heated and the secret message is revealed.

Other substances which work in the same way include orange juice, honey, milk, onion juice, vinegar and wine. Invisible ink can also be made using chemical reactions or by viewing certain liquids under ultraviolet (UV) light.



*This experiment is from Science Kids.*



# Steel Wool and Vinegar Reaction

Soak **steel wool** in vinegar and watch what happens as the iron in the steel begins to react with the oxygen around it. This fun science experiment for kids is great for learning about chemical reactions.

## For this experiment you will need:

- Steel wool
- Vinegar
- Two beakers (or glasses or jars)
- Paper or a lid (something to cover the beaker to keep in the heat)
- Thermometer



## What to do:

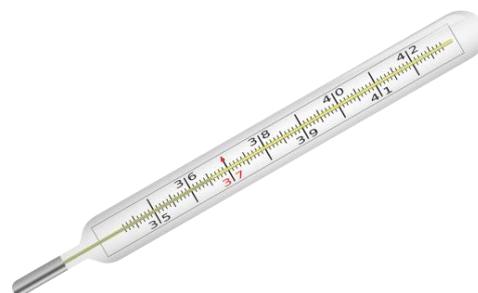
1. Place the steel wool in a beaker.
2. Pour vinegar on to the steel wool and allow it to soak in the vinegar for around one minute.



3. Remove the steel wool and drain any excess vinegar.
4. Wrap the steel wool around the base of the thermometer and place them both in the second beaker.
5. Cover the beaker with paper or a lid to keep the heat in. Make sure you can still read the temperature on the thermometer. Having a small hole in the paper or lid for the thermometer to go through is a good idea.
6. Check the initial temperature and then monitor it for around five minutes.

## What happened in this experiment?

The temperature inside the beaker should gradually rise. You might even notice the beaker getting foggy. When you soak the steel wool in vinegar, it removes the protective coating of the steel wool and allows the iron in the steel to rust. Rusting (or **oxidation**) is a chemical reaction between iron and oxygen. This chemical reaction creates heat energy which increases the temperature inside the beaker. This experiment is an example of an **exothermic reaction**, a chemical reaction that releases energy in the form of heat.



*This experiment is from Science Kids.*



# Interesting Facts about Frogs



- A frog is an **amphibian**. They lay their eggs in water. The eggs hatch into a tadpole which lives in water until it metamorphoses into an adult frog.
  - **Tadpoles** look more like fish than frogs. They have long finned tails and breathe through gills.
  - An amphibian can live both on **land** and in **water**.
- Although frogs live on land, their **habitat** must be near swamps, ponds or in a damp place. This is because they will die if their skin dries out.
  - Instead of drinking water, frogs **soak it** into their body through their skin.
  - Frogs breathe through their **nostrils** while also absorbing about half the air they need through their skin.
  - Frogs use their sticky, muscular **tongue** to catch and swallow food. Unlike humans, their tongue is not attached to the back of its mouth. Instead it is attached to the front, enabling the frog to stick its tongue out much further.
  - The common pond frog is ready to **breed** when it is only three years old.
  - Frogs in the wild face many **dangers** and are lucky to survive several years. In captivity, however, frogs can live for much longer.
  - Frogs can see forwards, sideways and upwards all at the same time. They never close their **eyes**, even when they sleep.
  - Remarkably, frogs actually use their eyes to help them **swallow food**. When the frog blinks, its eyeballs are pushed downwards, creating a bulge in the roof of its mouth. This bulge squeezes the food inside the frog's mouth down the back of its throat.



*And some science jokes just for fun ...*



*Why shouldn't you take atoms seriously? Because they make up everything.*

*How do astronauts serve dinner? On flying saucers.*

*What is a volcano? A mountain with hiccups.*

*(Information from Science Kids)*



## Did you know ...?

- **Babies** have around 100 more bones than adults.
- The **Eiffel Tower** can be 15cm taller during the summer.
- Some **metals** are so reactive that they explode on contact with water.
- A teaspoonful of **neutron star** would weigh 6 billion tons.
- **Hawaii** moves 7.5cm closer to Alaska every year.
- In 2.3 billion years it will be **too hot** for life to exist on Earth.
- **Polar bears** are nearly undetectable by infrared cameras.
- It takes 8 minutes and 19 seconds for **light** to travel from the Sun to the Earth.
- **Stomach acid** is strong enough to dissolve stainless steel.
- The earth is a giant **magnet**.
- **Venus** is the only planet to spin clockwise.
- A **flea** can accelerate faster than the Space Shuttle.

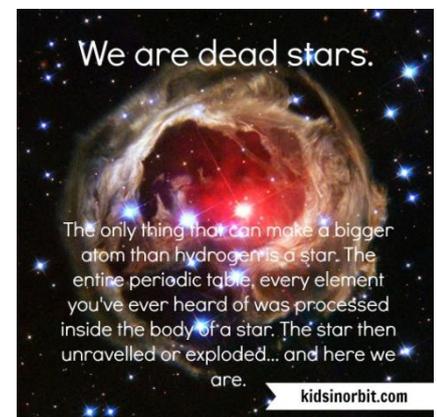


*From howitworksdaily.com*



Scientists believe **it was the egg and not the chicken that came first.** The first chicken egg was laid by a bird that was not a chicken.

From bing.com/images



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*Patron: Prof Chris Daniels*