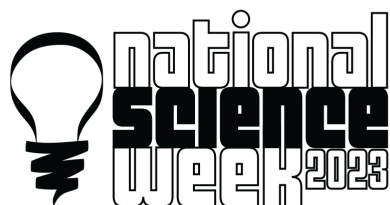




SCIENCE FUN



National Science Week 2023 - which is so important it runs for nine days - is on from August 12-20.

There are all sorts of events and activities happening around Australia, including Tasmania.

You can find out more by visiting the National Science Week website: scienceweek.net.au

There is also a very cool poster to download and print from the Schools section on the website.

We have included a copy of the poster on page 3 of this edition of *The Wonder Weekly*.



The poster is based on the school theme for National Science Week - *Innovation: Powering Future Industries*.

The theme includes advancements in all industries, and focuses on the use of artificial intelligence (AI).

We understand intelligence as the ability to think and learn.

AI is the science of making machines that can think like humans.

Scientists have been researching AI for many years, and trying to make it as close as possible to human intelligence.

This has proven very difficult, because human intelligence is very complicated.

CONTINUED PAGE 2

Making salty water safe with pure Sun power

Did you know you can use the sun to purify water?

You can, but you will need to use science of course.

One of the great things about National Science Week each year are the DIY Science activities provided on the website.

There are a number to choose from, including those from past years.

We have selected the Sunny Survival experiment for you to try, because it only requires some very basic items most of you will have at home or can access easily enough.

All you need is two clean and clear plastic water bottles, table salt, a teaspoon, tape, fruit juice and some natural materials (dirt, rock, leaves).

Create a chart, like the one pictured right, to record your results.

WHAT TO DO:

Imagine you are stranded in the bush with no fresh water. Using simple materials, you will purify salty water to make it safe to drink.

1. Add water to one of the bottles until it is about 1/4 full.
2. Add 1 teaspoon of salt to the water and swirl the bottle to dissolve the salt.
3. Turn the other bottle upside-down so the openings of the two bottles are lined up and wrap tape around the join to hold the bottles together. Use enough tape to create an airtight seal. Be careful to make sure none of the salty water goes into the empty bottle.
4. Find a sunny location and use dirt or rocks to create a low mound.
5. Carefully lay the connected bottles on their sides with the empty bottle resting on the mound. Remember, the salty water must not go into the empty bottle.
6. Use leaves to create shade over the empty bottle.



	QUESTION	ANSWER
Salt water	Does the distilled water taste salty?	
Fruit juice	Does the distilled water taste sweet?	
Fruit juice	What is the colour of the distilled water?	
Dirty water	What is the colour of the distilled water?	

7. Leave the bottles in place for several hours and watch what happens. Can you see water collecting in the empty bottle?
8. To test the distilled water, carefully unwrap the tape while the bottles are still on their sides and take a sip of water from the empty bottle. Does the water taste salty?

9. Wash the bottles and repeat the activity using fruit juice instead of salty water. Does the distilled water taste like fruit juice? What is the colour of the distilled water?
10. Wash the bottles and repeat the activity, but this time DO NOT taste the distilled water. Try mixing dirt with the water in the

first bottle to make it brown and murky. What is the colour of the distilled water?
Have fun.
Children's University Tasmania members can earn stamps in their passports for this challenge, at the discretion of their school/ hub coordinators.



Pictures: iStock/Thinkhubstudio.

Learn about the world of crystals

Did you know crystals are all around us?

They are often in surprising places.

Join Dr Nathan Kilah on *UCTV Alive for Kids* on Monday, August 14, from 2pm - 2:30pm to uncover the amazing world of crystals in your food, medicines and even in airplanes.



You need to register to secure your spot: <https://bit.ly/ScienceWk23>

Children's University members can receive one-hour in their passports for engaging with past episodes of *UCTV*, which are available on the Peter Underwood Centre website: <https://www.utas.edu.au/community-and-partners/peter-underwood-centre/childrens->

Smart machines

FROM PAGE 1

Computers can use logic, or make a decisions based on a lot of facts, while humans use other things such as imagination, emotion and values.

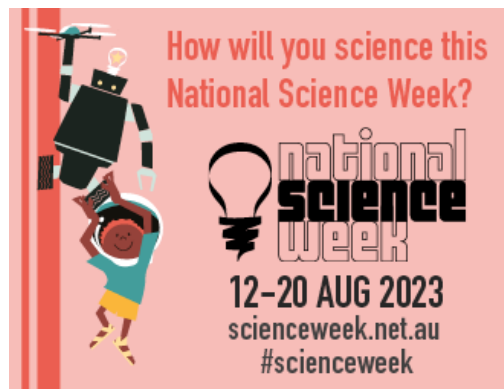
But AI is advancing all the time and can already perform a lot of tasks better than humans.

Artificial intelligence is developed from a set of instructions people write into a computer program.

Computers can then use these programs to study loads of information and provide answers to questions and solutions to problems.

These answers might be beyond human intelligence.

For example, AI might be able to study



huge amounts of data - far too much for humans to study and make sense of - about cells in the human body and find cures for diseases that we don't currently have.

Nearly everyone is already encountering AI in their everyday lives - have you ever used Hey Siri or Okay Google?

Your challenge is to think of other examples of the use of AI?

It could be examples of things you encounter in your life, or other ways AI will impact our daily lives in the future.

For example, self-driving cars—which use AI to recognise pedestrians and road signals - already exist and might be used by lots of people in years to come.

Do some research and make a list.

You might also like to research what's good about AI and how it can help people, and what might be bad about the increased use of AI.

Children's University Tasmania members can earn stamps in their passports for this challenge, at the discretion of their school/hub coordinators.



The Festival of Bright Ideas (FOBI) is packed with experiences and activities that whiz, bang, fly, crawl, swim and maybe even explode.

Located at Princes Wharf No. 1 in Hobart, FOBI is open to the public on Saturday, August 19, but bookings are essential.

Entry is free for under 16s.

Find out more here: festivalofbrightideas.com.au

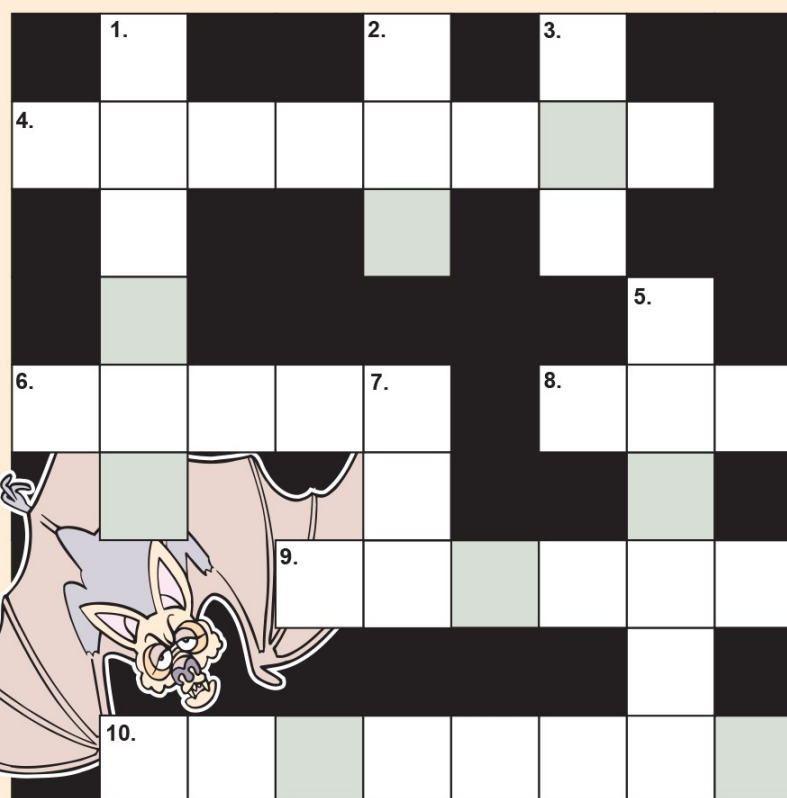
Three ticketed sessions run from 9-11:30am, 11:30am-2pm and 2pm-4:30pm.

You can find out what scientists really do, meet local researchers and test out a whole bunch of

hands-on activities. Here are just a few examples:

- Meet the Young Tassie Scientists.
- Ride the waves in an Antarctic storm.
- Make old T-Shirts into toys for pets.
- Solve Australian Science Olympiad questions.
- Make your own seed bombs.
- Delve into an augmented reality sandpit.
- Find out how bones are plastered.

Australian animals CROSSWORD



Solve the clues, then unscramble the letters in the highlighted squares to discover what kind of animal is pictured in the crossword.

ACROSS:

- 4. The sulphur-crested _____ is a noisy, friendly bird
- 6. The wedge-tailed _____ is the largest bird of prey in Australia
- 8. Dingoes are relatives of the domestic ____
- 9. Herbivorous ocean-dweller
- 10. Small, spiky marsupials that eat ants

DOWN:

- 1. Large, strong mammal that lives in a complex tunnel system
- 2. The flying fox is a mega ____
- 3. Feral pest with a bushy red tail
- 5. Another name for a monitor lizard
- 7. Large, flightless bird

SOLUTION: ACROSS: 4. cockatoo, 6. eagle, 8. dog, 9. dugong, 10. echidna. DOWN: 1. wombat, 2. bat, 3. fox, 5. goanna, 7. emu. (Scrambled word: Ghost Bat)



national science week 2023

scienceweek.net.au

12-20 AUGUST 2023

INNOVATION

POWERING FUTURE INDUSTRIES



AUSTRALIAN
SCIENCE
TEACHERS
ASSOCIATION



An Australian Government Initiative



Inspiring
AUSTRALIA