



Teacher Resource

Focus Questions

EV Charging Stations

1. What percentage of new car sales in Australia are electric?
 - a. 1%
 - b. 10%
 - c. 20%
2. What is the government doing to encourage people to buy electric cars?
3. What is another name for electric cars?
4. Complete the following sentence. 20% of carbon emissions in Australia comes from _____.
5. What are some benefits of driving an electric car?

Pacific Islands Climate Change

1. Where are the Pacific Islands? Find on a map of the world.
2. How have rising sea levels affected the island of Nuatambu?
3. How much have sea levels risen in the past 30 years?
 - a. 3 centimetres
 - b. 30 centimetres
 - c. 3 metres
4. Kids in the Pacific are 10 times more likely to experience extreme _____ events than their parents.
5. How do the kids in the BTN story feel?

Life in Space

1. In 24 hours, the International Space Station (ISS) makes 16 orbits of the _____.
2. It is not possible to grow food in the ISS. True or false?
3. How do astronauts shower?
4. Why did astronauts in the SpaceX capsule have to wear nappies?
5. What question would you like to ask an astronaut about life in space?

Check out the [Life in Space](#) resource on the Teachers page.

Koala Fitness Trackers

1. Why are scientists measuring koalas' heart rates?

EPISODE 33

16th November 2021

KEY LEARNING

Students will view a range of BTN stories and use comprehension skills to respond to a series of focus questions.

CURRICULUM

English – Year 4

Use comprehension strategies to build literal and inferred meaning to expand content knowledge, integrating and linking ideas and analysing and evaluating texts.

English – Year 5

Use comprehension strategies to analyse information, integrating and linking ideas from a variety of print and digital sources.

English – Year 6

Use comprehension strategies to interpret and analyse information and ideas, comparing content from a variety of textual sources including media and digital texts.

English – Year 7

Use comprehension strategies to interpret, analyse and synthesise ideas and information, critiquing ideas and issues from a variety of textual sources.

2. How are they measuring their heart rate?
3. What are some threats to koalas' survival?
4. Koalas have excellent hearing. True or false?
5. What other type of technology are scientists using to monitor koalas?

Check out the [Koala Fitness Trackers](#) resource on the Teachers page.

Kangaroo Island Dunnarts

1. What impact did the 2019/20 bushfires have on Kangaroo Island?
2. What type of animal is the Kangaroo Island Dunnart?
 - a. Monotreme
 - b. Marsupial
 - c. Reptile
3. How did the Kangaroo Island Dunnart survive the bushfires?
4. What endangered animals live on Kangaroo Island? List two.
5. Why was the Western River Refuge set up on Kangaroo Island?



Teacher Resource

Life in Space

Focus Questions

Discuss the BTN story as a class and record the main points of the discussion. Students will then respond to the following:

1. In 24 hours, the International Space Station (ISS) makes 16 orbits of the _____.
2. It is not possible to grow food in the ISS. True or false?
3. How do astronauts shower?
4. Why did astronauts in the SpaceX capsule have to wear nappies?
5. What question would you like to ask an astronaut about life in space?

Activity: See, think and wonder

After watching the BTN Life in Space story students will reflect on the story and then respond to the following:

- What do you think it would be like to live in space?
- What are the positives and challenges of living in space? Create a T-chart.
- Would you like to live in space? Why or why not?
- What was surprising about the Life in Space story?
- Think of three questions you have about the story.

Positives	Challenges

EPISODE 33

16th November 2021

KEY LEARNING

Students will learn more about what life is like living on the International Space Station and the impact space has on the human body.

CURRICULUM

Science – Year 5

The Earth is part of a system of planets orbiting around a star (the sun).

Science – Years 5 & 6

Scientific knowledge is used to solve problems and inform personal and community decisions.

Science – Year 7

Scientific knowledge has changed peoples' understanding of the world and is refined as new evidence becomes available.

Activity: Glossary

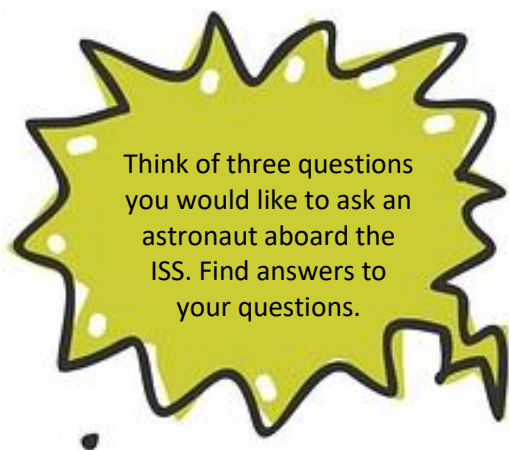
Students will brainstorm a list of keywords that relate to the Life in Space story. Here are some words to get them started.

INTERNATIONAL SPACE STATION	MICROGRAVITY	ASTRONAUT
SPACEX	ORBIT	SOLAR SYSTEM

Activity: Living in Space Research

After watching and discussing the BTN Living in Space story, what questions do students have and what are the gaps in their knowledge? Students will develop their own question/s for inquiry, collecting and recording information from a wide variety of sources. Students may develop their own question for inquiry or select one of the questions below.

- Investigate what it would be like living in microgravity (Eating, sleeping, having a shower, going to the toilet). What would be some of the positives and challenges?
- What impact does microgravity have on the body?
- What is the International Space Station? Give a brief history.
- What do astronauts do on the ISS? Investigate some of the tasks that they are required to perform.



Activity: How do astronauts live in space?

Students will learn more about what life is like on the International Space Station. These videos provide a snapshot of what living on the ISS is like.

[Everything about living in space](#)
[Life inside the ISS](#)

Students will describe a day in the life of an astronaut on the ISS, including information about sleeping, eating, personal hygiene, exercising and carrying out work on the ISS. What do astronauts do in their spare time?



As a class, watch the [Eating in Space](#) video for an in-depth look at how and what astronauts eat to stay healthy. Students will then respond to the following questions:

- What food do astronauts eat?
- Is there any food they can't eat?
- Does food need any special preparation before it can be eaten?
- Why is nutrition important for astronauts?
- If you lived in space, what foods would you miss the most? Why?

Watch the [Exercising in Space](#) video and explain why it's important for astronauts on the ISS to exercise.

Activity: Effects of space

Watch the BTN [Space Effects](#) story to learn more about the impact space has on the body. Students will investigate in more detail, the effect space has on the human body, why it happens and what can be done to reduce the effects. Ask students to share their research with the class in an interesting way.

What is affected	What happens	Why it happens	What can be done to reduce the effects
<i>Bones</i>			
<i>Muscle</i>			
<i>Cardiovascular system</i>			
<i>The spine</i>			
<i>Inner ear and balance system</i>			
<i>Sleep</i>			
<i>Sense of taste</i>			

Activity: Train like an astronaut

Do you have what it takes to become an astronaut? In this activity, students will investigate what some of the physical demands are for astronauts.

Using a range of physical activities students will use the same body parts/systems as astronauts do in training and on missions in space. Choose from a range of these [NASA activities](#), or use the activities we've picked out below.



Mission 1: Taste in Space

Mission question: Can I compare taste sensations on Earth and in space? In this activity, students will investigate and discover variables that affect their own sense of taste. Download the [Taste in Space handout](#).

Mission 2: Agility Astro-course

Mission question: How can you perform a physical activity that will improve your agility, coordination and speed? In this activity, students will complete an agility course as quickly and as accurately as possible to improve agility, coordination and speed. Download the [Agility Astro-course handout](#).

Mission 3: Jump for the Moon

Mission question: How could you perform a physical activity that would increase bone strength, as well as heart and other muscle endurance? In this activity, students will perform jump training with a rope, both while stationary and moving, to increase bone strength and to improve heart and muscle endurance. Download the [Jump for the Moon handout](#).

Useful Websites

- [SpaceX crew using incontinence pants on return home after toilet malfunctions](#) – ABC News
- [How do astronauts go to the bathroom in space?](#) – Curious Kids
- [A day in the life aboard the International Space Station](#) – NASA
- [Life in Space](#) – JAXA Space Station Kids



Teacher Resource

Koala Fitness Trackers

Focus Questions

Discuss the BTN story as a class and record the main points of the discussion. Students will then respond to the following:

1. Why are scientists measuring koalas' heart rates?
2. How are they measuring their heart rate?
3. What are some threats to koalas' survival?
4. Koalas have excellent hearing. True or false?
5. What other type of technology are scientists using to monitor koalas?

Activity: Class discussion

Pre-viewing questions

Before watching the BTN Koala Fitness Trackers story students, as a class, will respond to the following...

- What do you know about koalas? Record your ideas on a mind map.
- Have you ever encountered a koala? Explain more about your experience with koalas.
- Where do koalas live? Refer to a map and mark where you think koalas live.
- What is special about koalas?
- What do you think this BTN story will be about?



After watching BTN

After watching the BTN story students will respond to the following:

- What do you THINK about what you saw in the story?
- What does this video make you WONDER?
- Think of three questions you have about the BTN story.
- What more do you want to learn about koalas?

EPISODE 33

16th November 2021

KEY LEARNING

Students will learn about koalas' physical adaptations and create a fact file of the species. Students will develop a deeper understanding of the issues facing koala populations.

CURRICULUM

Science – Year 4

Living things have life cycles. Living things depend on each other and the environment to survive.

Science – Year 5

Living things have structural features and adaptations that help them to survive in their environment.

Scientific knowledge is used to solve problems and inform personal and community decisions.

Science – Year 6

The growth and survival of living things are affected by physical conditions of their environment.

Scientific knowledge is used to solve problems and inform personal and community decisions.

Science – Year 7

Classification helps organise the diverse group of organisms.

Activity: Scientific exploration

Provide students with the opportunity to think and behave like animal biologists. As a class, plan a study trip to a zoo or your local wildlife park. Alternatively, you can visit a virtual wildlife park, for example the [Koala cam at Healesville Sanctuary](#).

In this activity students will be given the mission to study koalas, including their behaviour and habitat, and record any observations they make about the species. Students will work individually or in small groups and use the following as a guide.

- Plan** As a class, plan a visit to a zoo or wildlife park that has koalas. Write a list of things you may need for the exploration, for example: pen and paper for taking notes, clipboard and a camera. Predict what you might find on your exploration. What do you want to investigate on your exploration?
- Explore** Visit the koala enclosure and carry out your exploration. Choose a spot to sit or stand so that you can observe the koala/s. Look and listen for evidence that koalas live in the area. What do you see? Consider meeting and interviewing one of the zookeepers who specialises in koalas to find out more.
- Collect** Collect as much data as you can about what you see and record what you find. Write notes and sketch what you see to help in your investigation. Record what you see with a stills or video camera.
- What does the koala look like? Take photos and draw pictures.
 - Can you identify the species of koala? Look for signage which may help determine the species. If not, you can identify the species back in the classroom.
 - What is the koala doing? How does the koala interact with the environment? Record the behaviour of the koala.
 - What does the environment look like? Describe. Can you identify any plants?
- Share** Return to the classroom and share/compare your findings.
- Analyse** Analyse your findings and write a short summary of your investigation. Did you find any koalas during your investigation? If yes, identify, describe and classify what you found. If you didn't see any koalas, did you find any evidence that animals live in the area?
- Research** Develop your own question/s for inquiry about koalas, for example:
- Where do koalas live in the wild? Explore their habitat and mark where they live on a map.
 - How are koala populations measured? Investigate what citizen science projects are happening to help monitor and count koalas.
 - What might you notice if you visit the koala's habitat at different times of the day or year?
 - How have koalas adapted over time to survive in their environment? Research some specific adaptations koalas have made to survive in their habitat. E.g., their large ears and sharp claws or why they sleep so much.
 - Where are koalas on the food chain? Predict what might happen if koalas are removed from the food chain.

- Explore the taxonomy of koalas and categorise the information you find using the classification system.

Reflect Reflect on the investigation by responding to one or more of the following questions:

- What did you enjoy about this investigation?
- What did you find surprising?
- What would you do differently next time?

Activity: Animal factsheets

Students will learn more about koalas! Students will research the following and then share their research findings with the class or create a display in the classroom.

- Name (common and scientific name)
- Biological illustration or photo
- Classification (class, family, genus)
- Description (size, colour, physical features)
- Habitat
- Diet
- Behaviours
- Adaptations
- Conservation status
- Threats



Students will then choose one of the following activities to complete:

- **Model** – Create a 3D model of a koala or another Australian animal using recycled materials. Display your model in the classroom.
- **Campaign** – Design a public education campaign to raise awareness about koalas. Think about your campaign's aim, your target audience, and the value of raising awareness. Think of a creative way to spread the message, for example you could design a new postage stamp, a t-shirt or street art.
- **Haiku** – Write a haiku poem about koalas.
- **Children's book or comic** – Write and illustrate either a children's book or comic which tells the story of a koala.
- **True or false?** – Find out as much as you can about koalas. Create a true or false quiz and test your classmates. Alternatively, create a word find or crossword about koalas.
- **Geography** – Draw a map of Australia and use it to plot where koalas can be found.
- **Citizen science** – Become a citizen scientist and take part in a koala survey! There are various koala surveys, including these in [NSW](#).

Activity: Taxonomy

Students will explore the classification system used to identify animals. Teachers will explain that every animal can be identified using the classification system. As a class, look at the seven levels which make up the classification system. Look at each level and an example animal.

1. Kingdom
2. Phylum
3. Class
4. Order
5. Family
6. Genus
7. Species

Students will then explore the taxonomy of two or more Australian animals (including a koala) and classify them into categories. Students will use a chart to categorise the taxonomic information they find.

Name	Phylum	Class	Order	Family	Genus	Species

Once completing their taxonomic research, students will respond to the following:

- Analyse the different names used to classify the animal. Do you notice anything interesting?
- How are the animals similar or different?
- Do you notice any patterns in the information?
- Compare your findings with your classmates.

Useful Websites

- [Koalas wearing Fitbits in the Adelaide Hills as researchers develop facial recognition software](#) – ABC News
- [Koala Threat](#) – BTN
- [Koala Carer](#) – BTN
- [Koala Tracker](#) – BTN
- [10 Facts about Koalas](#) – National Geographic Kids
- [Koalas](#) – NSW Government, Dept of Environment
- [10 interesting facts about koalas](#) – WWF Australia



Teacher Resource

BTN Transcript: Episode 33- 16/11/2021

Hey, I'm Amelia Moseley and you're watching BTN. Here's what's coming up. How Pacific Islanders are feeling the effects of climate change, the challenges of life in space and why these koalas are wearing fitness trackers.

EV Charging Stations

Reporter: Olivia Mason

INTRO: All that soon, but first up to some big news about electric vehicles. The government's planning to spend 250 million dollars on things like charging stations to help encourage more people to buy EVs. Liv checked it out.

OLIVIA MASON: Get in, quick. Woohoo. Do you like my new wheels? They're electric. Why would you drive anything else? Woohoo, electric.

Maybe I'm getting a little carried away, but for most of us, electric cars are still a novelty. They're few and far between on our roads. In fact, they make up less than 1 percent of new car sales in Australia. But that's something the government wants to change.

SCOTT MORRISON, PRIME MINISTER: A quarter of a billion dollars is being invested in this to ensure that we're doing the practical things.

OLIVIA: To try to encourage more people to buy electric cars, they're planning on spending big on putting in more of these at least another thousand in public spaces.

And they want big businesses and government departments to switch their work cars to electric vehicles or EVs for short. There's been a fair bit of pressure on the government to do more to address climate change, especially after COP26. Transport makes up almost 20 percent of Australia's carbon emissions, so moving away from cars that use fossil fuels is probably a good place to start. But while EVs have been around for a while, the switch to electric has been a slow process. For a long time, people have had some worries about their performance. Our PM even said this back in 2019.

SCOTT MORRISON: It's not gonna tow your trailer, it's not gonna tow your boat, it's not gonna get you out to your favourite camping spot with your family, Bill Shorten wants to end the weekend when it comes to his policy on electric vehicles.

Others say they're just too expensive in Australia and there aren't enough models available. But while there are some legitimate concerns, they're things experts say are improving as the tech becomes more advanced and more available. And there's no doubt that they're better for the planet. The Government reckons it's 250-million-dollar plan will help boost sales and get around 1.7 million EVs on Aussie roads by 2030. But compared to some other countries, we're already way behind, both in overall numbers and incentives for people to make the switch. In France you can get around 18 thousand bucks off a new electric car if you trade in a petrol or diesel one. While Norway and South Korea both have plans to

completely ban the sale of new petrol and diesel cars by 2025.

BEHYAD JAFARI, CEO ELECTRIC VEHICLE COUNCIL: You can look right around the world, North America, United States, Canada, European Union, all across Asia, right across the developed world, we're one of the few countries that don't have these incentives in place.

Those who've switched to an EV here in Oz say they've made the right choice.

EV OWNER: I've driven this car for a year in Canberra and it cost me approximately 15 dollars.

EV OWNER: It's a 1997 Porsche that we converted 4 years ago.

But it could still be a while before these are the most common sight on our roads.

LIV: Feel free to put some music on, connect to the Bluetooth, whatever you like.

MATT, CAR SALES: So, will you be purchasing the car today.

LIV: Oh umm, yeah, I'll definitely think about it.

News Quiz

The COP 26 summit in Glasgow has wrapped up and all countries have signed a new agreement on climate action. World leaders are hoping to cap global warming to 1.5 degrees, but there was a last minute change to the agreement over coal. Was it that coal power will be phased up, phased out or phased down? It's phased down. The agreement originally called for countries to "phase out" the use of coal but after pressure from India and China, the language was watered down. A move that upset COP26 president Alok Sharma.

ALOK SHARMA, COP26 PRESIDENT: I apologise for the way this process has unfolded, umm, and I'm deeply sorry.

NASA's mission to send astronauts back to the Moon has been delayed. But for how long? Until 2024, 2025 or 2030? It's 2025. NASA were hoping to send the first woman and a 13th man to the Moon by 2024 as part of their Artemis mission. But it's since been delayed because of COVID-19 and funding issues including a legal battle with Amazon founder, Jeff Bezos.

And who is this famous Australian? It's tennis star Dylan Alcott. The fifteen-time Grand Slam champion and four-time Paralympic gold medallist has announced he's retiring after next year's Australian Open.

Pacific Island Climate Change

Reporter: Amelia Moseley

INTRO: At COP26, there was a lot of talk about what wealthy nations should be doing to support the countries that are most at risk from climate change. So, let's meet three kids from the Pacific Islands to find out more about their experiences and why they're worried about their future.

They're some of the most beautiful places on Earth, the Pacific Islands.

AIYANNA, FIJIAN RESIDENT: How lovely that I can go outside and play and so much space, I could go to the

beach and swim and scuba diving.

While that all sounds pretty nice right now, there is a problem. Like many islands around the world these ones are under threat from an enemy we know all too well.

SHANNON, SOLOMON ISLANDS RESIDENT: Climate change is an issue that these countries have been facing for years up until now.

Shannon lives in the Solomon Islands. She says places she used to visit as a kid are now literally underwater.

SHANNON, SOLOMON ISLANDS RESIDENT: I never get to see the whole island. The middle part of the island with 100 plus houses are now covered with the sea. And it's separated the whole island of Nuatambu into two different islands.

Scientists say sea levels have risen by 30 centimetres in the past 30 years threatening many island countries and warming oceans aren't helping the weather either.

TANYA, VANUATU RESIDENT: What I think about is what happened when Cyclone Pam hit us here.

Tanya lives in Vanuatu and has already experienced some devastating storms.

TANYA, VANUATU RESIDENT: We could hear the glass shattering and the water came up to that kind of point that the glass shattered so hard. I felt very scared.

A recent climate report says kids in the Pacific are 10 times more likely to experience extreme weather events than their parents.

AIYANNA, FIJIAN RESIDENT: When the first cyclone hit with thunder and lightning, I looked outside the window and I was scared.

Aiyanna lives in Fiji. At school she has lessons about what to do if there's a cyclone.

AIYANNA, FIJIAN RESIDENT: We learn that you should board up the windows because strong winds can come.

SHANNON, SOLOMON ISLANDS RESIDENT: By looking at how the climate patterns are changing, and how climate change is affected, my family, my village, my home, I don't actually know how my future will turn out to be.

They're not the only ones worried about the future. At the recent COP26 climate conference in Scotland, some wealthy countries, including Australia, promised to put more money towards helping poorer countries deal with the effects of climate change. But many leaders of island nations, say more needs to be done to stop temperatures rising.

MIA MOTTLEY, PRIME MINISTER OF BARBADOS: Two degrees is a death sentence for the people of Antigua and Barbuda, for the people of the Maldives, for the people of Dominica and Fiji, for the people of Kenya and Mozambique and we have come here today to say, 'try harder'.

With so much on the line some young activists even travelled across the world to have their say.

SALOME, PACIFIC CLIMATE WARRIORS: We contribute the least to climate change, but we are on the front lines of climate change, so we are feeling the effects the most.

MOEMOANA, PACIFIC CLIMATE WARRIORS: I am very hopeful that in the near future that if our youth, if we work together, we can be better leaders.

Back in the Pacific, Shannon, Aiyanna and Tanya say they hope the world won't forget them and their island homes.

SHANNON, SOLOMON ISLANDS RESIDENT: I want the world leaders to sympathise with us Pacific Island countries and to see how my people are suffering and how they are struggling to survive due to climate change. My future and my family's future, my own country's future is at stake here.

Life in Space

Reporter: Jack Evans

INTRO: Last week returning astronauts from the ISS had a slightly uncomfortable trip back to Earth. Because the toilet on their spacecraft was broken, the crew all had to wear nappies. Yes, nappies. It got us thinking about what life is like living aboard the ISS and some of the awkward challenges astronauts have to overcome. Take a look.

ASTRO-NOT: Hello there, I'm an astronaut but you probably worked that out already from my smile.

JACK: Oh. Yes, I did.

ASTRO-NOT: So, you want to go to space?

JACK: Yes, I do.

ASTRO-NOT: Let me guide you through all the do's and don'ts you'll need to know on your space adventure.

JACK: Yes, just what I need.

ASTRO-NOT: I'm sorry but are you going to talk the whole way through?

JACK: Yes probably, sorry.

ASTRO-NOT: OK. Lesson One: Rise & Shine.

It probably makes sense to start at the start of the day. Although a day on the ISS is a little different to the one here on Earth. In 24 hours, the space station makes 16 orbits of Earth travelling through 16 sunrises and 16 sunsets. To make sure everyone is on the same page, or rather the same time zone, the ISS follows the Coordinated Universal Time. And after spending a night in this sort of cocoon thing that stops you from floating around whilst you get some z's, you'll get up or down or side to side at 6am and then work until 9:30 that night.

ASTRO-NOT: Lesson Two: What's Cooking, Good Looking? Just like Earth humans, space humans need to eat too. But unfortunately jam on toast is not on the menu.

JACK: Oh, what about peanut butter?

ASTRO-NOT: No.

When it comes to what you can eat in space there are some definite don'ts. Like anything that might float away and clog an air vent or contaminate equipment or get stuck in your eyes, mouth or nose. But don't worry, things like spaghetti, fajitas and pizza are still on the menu. Just as long as it can be stored in something air tight, cause the food needs to be able to last a while.

You can still heat things up or use water to restore dehydrated food. Oh, and thanks to this SpaceX crew, we now know it's also possible to grow and eat chillies in space. Something that might be useful on longer missions or if you're just looking to spice up a dish.

ASTRO-NOT: Lesson Three: If You Look Good, You Feel Good. Now that we're awake and fed it's time to get ready for the day with a nice warm...

JACK: Shower.

ASTRO-NOT: Ha. Good Luck.

You might want to pack some wet wipes because the closest thing astronauts get to a shower on the ISS is a cloth with a bit of soap on it. Brushing your teeth is still fine, although you might have to swallow the toothpaste, and thanks to a rinse-less shampoo you can even wash your hair.

ASTRO-NOT: Lesson Four: When You Gotta Go, You Gotta Go. Naturally during your space quest you'll need to relieve yourself.

Each crew member is assigned their very own personal urinal nozzle thingy that sucks your number 1's through a hose and into a wastewater tank. As for those numbers 2's, well astronauts position themselves over this tiny toilet seat and just like a vacuum their unmentionables are sucked away into the toilets chamber pot.

ASTRO-NOT: And there's the option of chucking on a pair of these bad boys and going wherever and whenever you please.

Something these guys are familiar with after the toilet on their space capsule sprung a leak.

ASTRO-NOT: And finally Lesson Five: Work Hard, Play Hard. Of course, being on board the ISS isn't all missions, research and experiments. I mean it mostly is, but there is always time for leisure.

Whether it's getting in some exercise, playing ping pong or with a yo-yo. Or maybe someone will come up and film an actual movie up there like these guys did, I mean that's pretty cool.

ASTRO-NOT: And there you have it, everything you need to know about life in space.

JACK: Oh, thank you. It'll be a blast, get it, a blast. Cause I'll be blasting off into space.

ASTRO-NOT: No, I got it, it just wasn't very funny.

JACK: Oh.

Ask a Reporter

Do you have a question about that story? Well, you can ask me live on Friday during Ask a Reporter. Just head to our website for all the details.

Did You Know?

Did you know astronauts actually get taller in space? Without gravity compressing their bodies they can grow up to 3 percent taller. For someone my height that's around 5 centimetres. But after heading back home it only takes a few days for astronauts' spines to compress to their regular "Earth heights".

Koala Fitness Trackers

Reporter: Amelia Moseley

INTRO: Now, have you ever seen a koala working out? No, me neither. But researchers at a wildlife park in Adelaide are putting fitness devices on the iconic Aussie creatures. I went along to meet some koalas and find out why.

Koalas. They're pretty relaxed animals really. They eat. They sleep. They eat some more.

ASHLEIGH HUNTER, CLELAND WILDLIFE PARK: A happy koala is a koala that's sort of settled, and left to itself to mind its own business, with a belly full of leaves.

Hmm, sounds quite nice really.

AMELIA, REPORTER: But some researchers are worried these chilled out creatures might be getting a bit stressed out about something.

Drones. They're used in parts of Australia as a non-invasive way to keep track of koala populations, instead of catching and tagging. Experts say it's really important to monitor koalas, because many are being threatened by diseases and habitat loss. But they are quite noisy. No, not the koalas, the drones.

ASHLEIGH HUNTER, CLELAND WILDLIFE PARK: Koalas have got an exceptional sense of hearing, their sense of smell is really good as well, but their eyesight is quite poor. So, to have something sort of mechanical sounding buzzing around, I think could be quite frightening for them.

AMELIA, REPORTER: Luckily, they've come up with a way to work out how these guys might be feeling and it involves an accessory that a lot of humans wear kinda like this one.

AMELIA, REPORTER: Diane, why would you put a fitness tracker on a koala?

DR DIANE COLOMBELLI-NÉGREL, LECTURER IN ANIMAL BEHAVIOUR: Well it's very simple, it's cause we want to measure their heartrate. If the heart rate is going up, that could be that the koala is stressed by something in his environment.

AMELIA, REPORTER: So, you're not trying to work out how many steps they're taking, they're not trying to hit their 10 thousand a day?

DR DIANE COLOMBELLI-NÉGREL, LECTURER IN ANIMAL BEHAVIOUR: No, it's not about how many steps. I don't think they would be doing many steps.

Nah, probably not. The fitness trackers are actual human ones. Only fit for a koala.

ASHLEIGH HUNTER, CLELAND WILDLIFE PARK: It's not like a regular strap like we would wear. We use

actually a non-adhesive piece of fabric strap. So just like this. And we just wrap that gently around their wrist so that they don't really notice that it's on there at all.

And as for the colour choice?

ASHLEIGH HUNTER, CLELAND WILDLIFE PARK: They've never complained about the colour we've used; we just use black, it goes well with their white and grey patterning that they've got going on.

Very koala chic. So far, the study shows this bunch aren't too bothered by their mechanical visitors.

DR DIANE COLOMBELLI-NÉGREL, LECTURER IN ANIMAL BEHAVIOUR: So far, their heart rate is going down, so they don't show an immediate stress response, but they are being vigilant and deciding what's the next move.

But the research doesn't stop there. Diane's working on another very human tracking technology for koalas.

DR DIANE COLOMBELLI-NÉGREL, LECTURER IN ANIMAL BEHAVIOUR: We actually use facial recognition, same way as we do with humans. And for that, we need to take photos, so we take photos of their face.

AMELIA, REPORTER: So, what makes a koala's face unique?

DR DIANE COLOMBELLI-NÉGREL, LECTURER IN ANIMAL BEHAVIOUR: It's all about their nostrils really, it's a little bit like fingerprint for us. So, it's unique to each individual.

And while the software could help koalas, it could also help koala keepers.

ASHLEIGH HUNTER, CLELAND WILDLIFE PARK: We have about 80 or so koalas on park. And it's really important that we can tell each and every one of those koalas apart. So basically, when you start out as a keeper, you just end up with a camera album on your phone, just full of koala noses.

AMELIA, REPORTER: You weren't kidding about how many photos you have?

ASHLEIGH HUNTER, CLELAND WILDLIFE PARK: No, I take it very seriously.

AMELIA, REPORTER: She's pretty cute, Holly. She's pretty adorable. I think she maybe knows it.

And I'm sure Holly appreciates all the effort to keep her species safe. Wait that's not Holly. Wait, isn't that Daisy? Oh, I don't know.

ASHLEIGH HUNTER, CLELAND WILDLIFE PARK: Everyone does love a good koala. So, it's really important that we protect them so that for generations to come they can also enjoy and love koalas.

Sport

And the winners of the men's T20 World Cup, for the first time ever, Australia. The Aussies faced our New Zealand neighbours on the world stage, and it was action packed. New Zealand batted first and managed a pretty imposing 172 runs. But when Mitch Marsh arrived at the crease the win never looked in doubt. He smashed a whopping 77 not out while David Warner made 53 as the Aussies cruised to victory with 7 balls to spare.

Nine-time world champ and motorcycling great Valentino Rossi is calling time on his racing career.

Fans got to watch him race for the final time at the Valencia Grand Prix and even though he came 10th Rossi was still the star of the show.

23-year-old Aussie Remy Gardner's just become the Moto2 World Champion. He finished tenth in the final race of the season but finished on top overall. His dad Wayne Gardner was also a world champ. Now they've made history as only the second ever father-son combo to win motorcycle world titles.

Kangaroo Island Dunnarts

Rookie Reporters: Elka, Harley and Bellen

INTRO: Staying in South Australia, now, we're going to meet some kids from Kangaroo Island who have helped set up a wildlife refuge to protect native species from feral predators. And now, their hard work is paying off.

HARLEY, ELKE AND BELLEN: Hi BTN. My name's Harley, I'm Elke and I'm Bellen.

HARLEY: We live in South Australia on Kangaroo Island, and this is the Western River Refuge.

ELKE: The Western River Refuge is a patch of land that's fenced off and feral-predator free. It was set up to keep native wildlife safe after the Kangaroo Island bushfires in 2019 and 2020. And we've been helping out along the way.

HARLEY: KI was burned pretty bad in the fires. Two thirds of the island got burned.

BELLEN: We were really worried about the native wildlife, especially the Kangaroo Island Dunnarts.

HARLEY: The KI Dunnart is a little carnivore marsupial. It's very rare after five years of trying to catch them, KI Land for Wildlife has only ever caught one. After the fires we went looking for maybe some places where there could still be Dunnarts and we found these little patches of vegetation and we thought that all the Dunnarts would've been killed but somehow they buried under the ground.

BELLEN: We are really happy there are unburnt patches for the Dunnarts to live in.

ELKE: But the Dunnarts that survived were in danger from the feral cats which is why we got to work building the feral predator proof fence. It keeps out all the feral animals that are gonna kill the Dunnarts.

HARLEY: And keeps the Dunnarts in and bandicoots and lots of other endangered animals. So, we've got the Dunnart, the Southern Brown Bandicoot, the Western Whipbird, the Heath goanna, the KI echidnas. We keep the cats outside with this floppy top. They can try to get over, if they somehow do get up it'll just fling back on them, and they'll fall off but it's also electric, these ones here, so if they try to climb up it, they'll get electrocuted.

BELLEN: We also had to make sure there were no feral cats inside the refuge. We use cat traps to catch feral cats.

HARLEY: A few months ago, the refuge was officially declared feral cat free. That's great news for all the native wildlife in here and means the fence is working to keep out the cats.

BELLEN: We have been recording Dunnarts all through the refuge on cameras.

HARLEY: In April we were lucky enough to catch one and we measured it and saw how old it was and it was a female. I just caught a Western pygmy possum.

ELKE: We at Kangaroo Island Land for Wildlife are so thankful to the local landholders and Australian Wildlife Conservancy for helping us protect our precious wildlife.

HARLEY: Hopefully all of our hard work means that these little critters and their native friends can safely live on Kangaroo Island.

Closer

Great work. Keep at it. Well, that's all for today, but don't worry we'll be back with more news for you soon. In the meantime, you can head to our website or check out our YouTube channel if you're 13 or over. You can also keep up to date with Newsbreak every weeknight. Thanks for watching and I'll catch you soon. Bye.