



Teacher Resource

## Focus Questions

As a class, discuss the stories featured in the episode of BTN Classroom and record the main points of the discussion. Students will then respond to the following focus questions.

### Fake News Fight

1. Discuss the BTN story as a class. Record the main points of your discussion.
2. Give an example of a fake news story.
3. Complete the following sentence. Some tech companies have a signed up to a new code of \_\_\_\_\_ to stop the spread of fake news.
4. Signing up to the code is voluntary. True or false?
5. Give some examples of things social media companies can do to help stop the spread of fake news.
6. The Australian government will be closely watching a similar code of conduct in the European Union to see if it...
7. What can readers do to be more aware of fake news?
8. Why is it important to question everything you read online?
9. What questions do you still have about this story?
10. What did you learn watching this story?

### Fantastic Forests

1. Where in Australia does Yindali live?
2. Which rainforest does she live near?
3. Yindali is the Guugu Yalanji word for...
4. Why is the Daintree important to the Kuku Yalanji people?
5. The Daintree Rainforest is the oldest rainforest in the world. True or false?
6. The rainforest is home to heaps of different plants and animals. Give an example of one.
7. What is Yindali's favourite thing about living near the Daintree?
8. Why are forests important to people around the world?
9. What impact does cutting down forests have on the environment?
10. What can people do to protect forests?

Check out the [Fantastic Forests](#) resource on the Teachers page.

### Cloned Ferret

1. What was the main point of the BTN story?

#### EPISODE 5

2<sup>nd</sup> March 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. Why is Elizabeth Ann special?
3. Complete the following sentence. Cloning is a process of copying living things to make something that is genetically \_\_\_\_\_ to another.
4. Dolly was a...
  - a. Ferret
  - b. Sheep
  - c. Mouse
5. How did scientists create Dolly?
6. What are some reasons to clone an animal?
7. Why was the black-footed ferret cloned?
8. Where was Elizabeth Ann's DNA taken from?
9. Why can cloning be controversial?
10. What do you understand more clearly about the issue of cloning since watching the BTN story?

## Life on Mars

1. What did the BTN Life on Mars story explain?
2. Travelling at about 77,000 km per hour, how long does it take to get to Mars?
3. Why is the soil red on Mars?
4. What is the name of the NASA Mars rover?
5. What is the average temperature on Mars?
  - a. -23 °C
  - b. -43 °C
  - c. -63 °C
6. Why can't humans breathe on Mars?
7. What is the problem with growing food in Martian soil?
8. What are some possible sources of food on Mars?
9. Why is returning home after a Mars mission difficult?
10. Name three facts you learnt watching the BTN story.

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

## Plastic Supermarket

1. Before you watch the BTN Plastic Supermarket story, predict what you think it will be about.
2. The Plastic Supermarket is part of which festival?
3. Why did Robin create the plastic supermarket?
4. How did Robin make all of the items in the supermarket?
5. In which decade did plastic become popular?
6. Plastic doesn't take very long to break down. True or false?
7. Experts say that if we don't do something about it, there'll be more plastic than fish in the ocean by...
  - a. 2030
  - b. 2040
  - c. 2050
8. Which state has become the first to ban single use plastics?
9. What does Robin want people to think about when they visit the plastic supermarket?
10. How did this story make you feel?



Teacher Resource

# Fantastic Forests

## 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. Where in Australia does Yindali leave?
2. Which rainforest does she live near?
3. Yindali is the Guugu Yalanji word for...
4. Why is the Daintree important to the Kuku Yalanji people?
5. The Daintree Rainforest is the oldest rainforest in the world. True or false?
6. The rainforest is home to heaps of different plants and animals. Give an example of one.
7. What is Yindali's favourite thing about living near the Daintree?
8. Why are forests important to people around the world?
9. What impact does cutting down forests have on the environment?
10. What can people do to protect forests?

## Activity: Class Discussion

Before watching the BTN Fantastic Forests story facilitate a class discussion, using the following questions to get the discussion started...

- How would you describe a forest? Can you think of a simple definition?
- What does a forest look like?
- Where can you find forests?
- What or who depends on forests?
- What do you know about the Daintree Rainforest? Brainstorm and record your thoughts as a class.
- What do you want to learn about forests?

After watching the BTN story hold a class discussion. Use a mind map to record your student's responses.



### EPISODE 5

2nd March 2021

### KEY LEARNING

Students will investigate the importance of forests and explore what makes the Daintree Rainforest unique.

### CURRICULUM

#### Science – Year 3

Science knowledge helps people to understand the effect of their actions.

#### Science – Year 4

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.

#### Science – Years 5 & 6

With guidance, pose clarifying questions and make predictions about scientific investigations.

#### Science – Year 7

Identify questions and problems that can be investigated scientifically and make predictions based on scientific knowledge.

## Activity: Glossary

Students will brainstorm a list of key words that relate to the BTN Fantastic Forests story. Students will then use the words to write their own sentences about the topic. Students may want to use pictures and diagrams to illustrate the meaning and create their own glossary. Here are some words to get you started.

ECOSYSTEM	CLIMATE	RAINFOREST
SPECIES	CONSERVATION	HABITAT
BIODIVERSITY	CANOPY	BIOME

## Inquiry Questions

After watching and discussing the BTN Fantastic Forests story, what questions do students have and what are the gaps in their knowledge? The following KWLH organiser provides students with a framework to explore their knowledge on this topic and consider what they would like to know and learn.

<i><b>What do I know?</b></i>	<i><b>What do I want to know?</b></i>	<i><b>What have I learnt?</b></i>	<i><b>How will I find out?</b></i>

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.

- What is a forest? List some of the main characteristics? Think of adjectives to describe the forest environment.
- Australia's forests are categorised into different categories. Choose one forest type to explore in more detail. What are the characteristics of that type of forest?
- What is the difference between a eucalypt forest and a rainforest? Compare and contrast.
- Why are rainforests important? Think about the social, cultural, economic and ecological importance of rainforests.
- What can be done to protect forests? Identify some of the threats to forests and then suggest some ways that people can help protect our forests.
- Who are the traditional owners of the Daintree Rainforest? Explore how the Daintree has provided Aboriginal people with spirituality, identity, social order, shelter, food and medicine.
- What makes the Daintree Rainforest unique?
- How can individuals make a difference and help protect our forests?
- Where is the Daintree Rainforest? Find on a map. What is the size of the rainforest? How old is the rainforest? How does it compare to other rainforests around the world? Compare the geography and climate (including rainfall, cyclones, mountains).

## Activity – Cassowary habitat

This literacy activity demonstrates students active listening and interpreting skills. Students will listen to a description of a Southern cassowary's habitat and create a simple black and white artwork illustrating its habitat. Teachers will use the following as a guide for this activity.

- Find a description of a [Southern cassowary's](#) habitat to read aloud to your students. Alternatively, choose another animal that can be found only in the tropical rainforests of north-east Queensland. Visit the [Westland Info](#) website to explore a range of animals that live in the Daintree.
- Read the description of the Southern cassowary habitat aloud to your class as a whole, reading the description 2 or 3 times.
- Students will take notes and write down key words as they listen.
- Students will illustrate the habitat using only a black felt—tip pen (0.4 or 0.6) on a piece of A4 art paper. Students will include as much detail as they can. Label the animal using its English and Indigenous names.
- Display the student's artwork in a school exhibition.
- We would love to see your students' artwork! Send your artwork to us at [btn@abc.net.au](mailto:btn@abc.net.au)
- Challenge students by asking them to recreate the habitat as a diorama or a virtual reality experience using Minecraft.



## Activity: Species profile

Students will choose one animal that lives in the Daintree Rainforest and create a profile about the animal. For example:

- [Southern cassowary](#)
- [Forest Kingfisher](#)
- [Tree kangaroo](#)
- [Northern bettong](#)
- [Kuranda tree frog](#)
- [Ulysses butterfly](#)

Refer to this list for a range of [native animals of Daintree National Park](#). Students will research the following and then share their research findings with the class or create a display in the classroom.

- Biological illustration or photo
- Name (common and scientific name)
- What is its indigenous name?
- Classification (class, family, genus)
- Description
- Habitat
- Conservation status
- Threats

## Activity: Australian Animal Competition

For World Wildlife Day (3 March), encourage students to [choose a native animal](#) and write about its significance. It could be a night-time pollinator like a fruit bat, a quirky looking monotreme or the herbivorous koala! ABC competition closes: 12 March 2021, 5pm (AEDT). [Enter now.](#)



## Activity: Choose a project

Individually or in small groups, students will choose one of the following projects to work on and then present their findings to the class.

### Bush tucker species

Choose a bush tucker plant that can be found in the Daintree Rainforest. What is the plant's Indigenous name? How is the plant used? What does it look like (shape, size, colour, special features)?

### Model

Create a 3D model of an animal that lives in the Daintree Rainforest. Make the model using materials found around your school or home. Display your model in the classroom.

### True or false?

Find out as much as you can about forests. Create a true or false quiz and test your classmates. Alternatively, create a word find or crossword about forests.

### World Wildlife Day

Think of a way that your class or school can get involved and celebrate World Wildlife Day. Find an expert to talk at your school.

## Useful Websites

- [Australia's Forests](#) – Dept of Agriculture, Water and the Environment
- [Forest Habitat](#) – WWF
- [Rainforest glossary](#) – Wet Tropics Management Authority
- [Rainforest Aboriginal People](#) – Wet Tropics Management Authority
- [World Wildlife Day](#) – ABC Education
- [Amazon Fires](#) – BTN
- [World Wildlife Day](#) – UN



Teacher Resource

# Life on Mars

## 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. What did the BTN Life on Mars story explain?
2. Travelling at about 77,000 km per hour, how long does it take to get to Mars?
3. Why is the soil red on Mars?
4. What is the name of the NASA Mars rover?
5. What is the average temperature on Mars?
  - a. -23 °C
  - b. -43 °C
  - c. -63 °C
6. Why can't humans breathe on Mars?
7. What is the problem with growing food in Martian soil?
8. What are some possible sources of food on Mars?
9. Why is returning home after a Mars mission difficult?
10. Name three facts you learnt watching the BTN story.

## Activity: Quick Mars Quiz

Begin the Life on Mars activity with a quick true or false quiz. Circle the correct answer.

1. Mars is the 4 <sup>th</sup> planet from the sun	<b>True</b>	<b>False</b>
2. Mars is bigger than Earth	<b>True</b>	<b>False</b>
3. The average temp on Mars is about -63 degrees C	<b>True</b>	<b>False</b>
4. The name of the Mars rover is Procrastination	<b>True</b>	<b>False</b>
5. The rover was named by a NASA astronaut	<b>True</b>	<b>False</b>
6. Scientists have found evidence of water on Mars	<b>True</b>	<b>False</b>
7. Carbon dioxide makes up 95% of the atmosphere on Mars	<b>True</b>	<b>False</b>

Answers: 1 True, 2 False, 3 True, 4 False, the name of the rover is Perseverance, 5 False It was named by a 13-year-old, 6 True, 7 True.

### EPISODE 5

2<sup>nd</sup> March 2021

### KEY LEARNING

Students will develop a deeper understanding of Mars and the rover, Perseverance, sent to explore the planet. They will investigate what life would be like on Mars.

### CURRICULUM

#### Science – Year 5

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

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

#### Science – Years 5 & 6

With guidance, pose clarifying questions and make predictions about scientific investigations.

Science involves testing predictions by gathering data and using evidence to develop explanations of events and phenomena and reflects historical and cultural contributions.

## Activity: Class Discussion

Discuss the BTN Life on Mars story as a class. Ask students to record what they know about Mars. What questions do they have? Use the following questions to help guide discussion:

- Make a list of all the things you know about Mars.
- What does Mars look like?
- How similar are Mars and Earth?
- Describe the location of Mars in relation to Earth and the Sun.
- Why do you think scientists want to explore Mars?
- What might be some of the challenges of exploring it?
- Think of three unanswered questions you have about Mars. Share them with the class.



## Activity: Glossary

Students will brainstorm a list of key words that relate to the BTN Life on Mars story. Here are some words to get them started.

ROVER	MISSION	MARTIAN
SOLAR SYSTEM	ATMOSPHERE	RADIATION

## Activity: Mars Research

After watching and discussing the BTN Life on Mars story, what questions do students have and what are the gaps in their knowledge? The following KWLH organiser provides students with a framework to explore their knowledge on this topic and consider what they would like to know and learn.

<i>What do I <u>k</u>now?</i>	<i>What do I <u>w</u>ant to know?</i>	<i>What have I <u>l</u>earnt?</i>	<i><u>H</u>ow will I find out?</i>

Students will develop their own question/s to research, collecting and recording information from a wide variety of sources. Students may develop their own question to investigate or select one of the questions below.

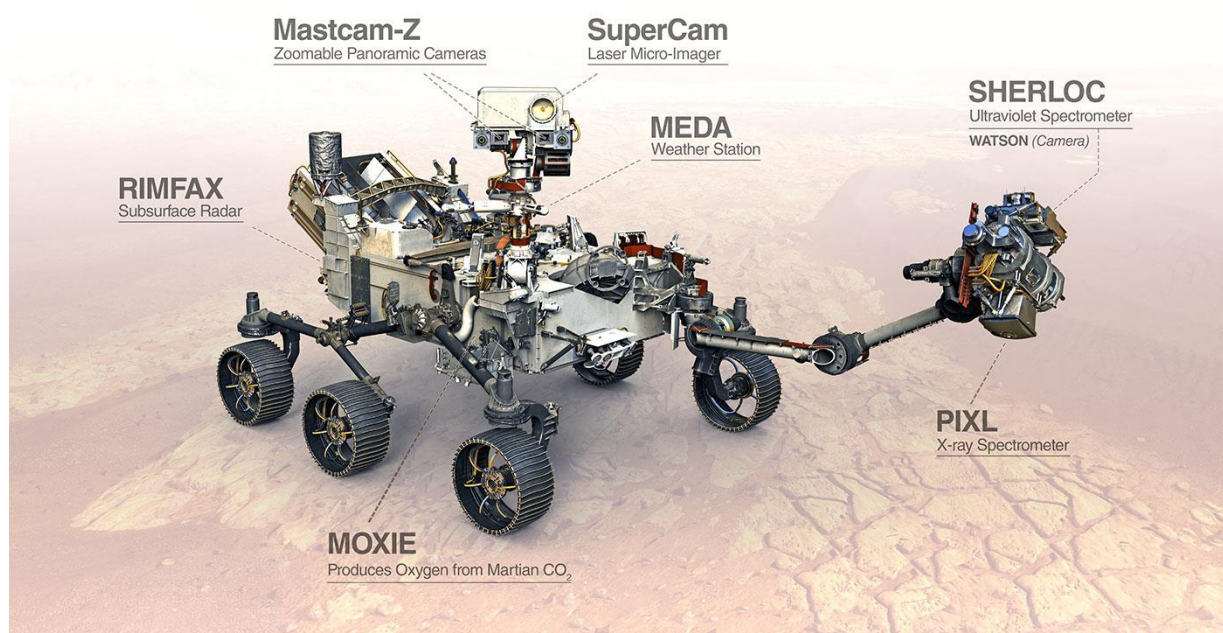
- What are the challenges of landing a rover on Mars? What is the '7 minutes of terror'? Watch the landing of the [Perseverance rover](#) on Mars.
- Should we put humans on Mars? Explore the pros and cons.
- Using a Venn diagram, explore the similarities and differences between Mars and Earth.
- What have previous space missions discovered about Mars?



## Activity: Perseverance Rover – Science Instruments

Students will investigate how the Perseverance rover is collecting information about Mars. Begin by exploring [the rover in 3D](#). They can then look at the rover's science instruments in more detail. They are tools for collecting data about Martian geology, atmosphere and environmental conditions. Ask students to look at the [different instruments](#) on the Mars Perseverance rover and choose one to explore in more detail. Record information about the instrument:

- Main job of the instrument
- Location on the rover
- Size and weight
- Draw a picture of the instrument



## Activity: Mars Helicopter

Students will learn more about the [Mars helicopter](#) and its purpose on the mission. They can also explore the [3D model](#) of the helicopter. Here are some questions for them to respond to:

- What is the name of the helicopter?
- The helicopter rode to Mars attached to the \_\_\_\_\_ of the Perseverance rover.
- Why was Ingenuity included in the mission to Mars?



### Further learning

[Make a paper Mars helicopter](#)

[Code a Mars helicopter video game](#)

## Activity: Sounds of Mars

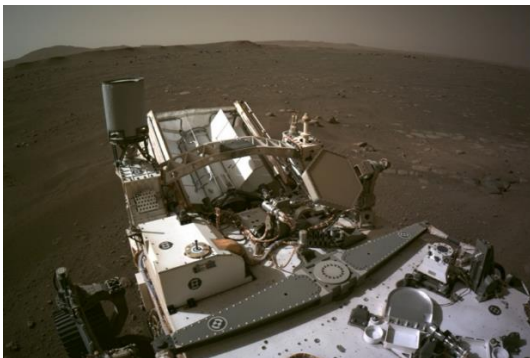
What does Mars actually sound like? The Perseverance rover carries two microphones, that records the sounds of Mars for the first time. The [NASA Sound of Mars](#) playlist allows students to listen to the differences between sounds on Earth versus how they would sound on Mars. Students can [record a greeting](#) and hear how they would sound on Mars. They can explore how sound works and why sound is different on Mars.



## Activity: Images of Mars

Students look at the images taken by the Mars rover Perseverance, on its mission, then respond to the following questions:

- Describe the image. What can you see?
- What does the image tell you about Mars?
- How is it similar to Earth?
- What was surprising about the image?
- What questions do you have about the image?
- Create a caption for the image.



## Activity: Life on Mars

Students will plan and design a settlement on Mars that will sustain human life. The following questions can help guide students' research:

- What are the conditions like on Mars?
- What needs to be considered when planning a colony on Mars? For example:
  - Water supply
  - Atmosphere (air supply)
  - Temperature
  - Food production
  - Gravity
  - Waste management
- What materials could be used to build a space settlement?
- Create an advertisement or poster to advertise your colony.



### Further Learning

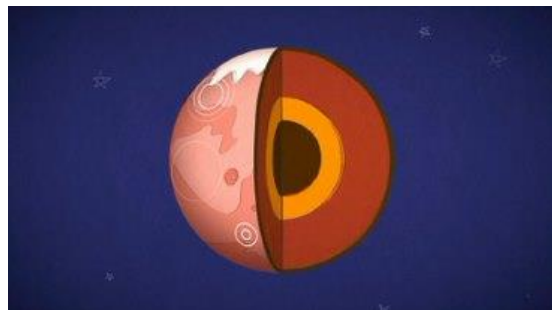
- Write a science fiction story about your journey to Mars and what you found when you arrived.
- Design a system of government for your Mars colony.
- Calculate the cost of a colony on Mars.

## BTN Mars Stories

Students can watch one or more of the BTN stories below to learn more about Mars.



[Mars Rovers](#)



[Mars Insight](#)



[Mars Class](#)



[Space Future](#)

## Useful Websites

- [Mars 2020 Mission Perseverance Rover](#) – NASA
- [Mars 2020 Mission Overview](#) – NASA
- [Mars touchdown by Perseverance rover shown in thrilling video released by NASA](#) – ABC News
- [Mars rover Perseverance's giant parachute carried a secret message from NASA](#) – ABC News
- [Can life from Earth survive on Mars?](#) – Newsround
- [Mars Rovers](#) – BTN
- [Mars Class](#) - BTN
- [Mars Insight](#) – BTN



Teacher Resource

# BTN Transcript: Episode 5- 2/3/2021

Hey, I'm Amelia Moseley and you're watching BTN. Here's what's coming up. We get a tour of the world's most ancient forest, take a trip to Mars and go shopping in a plastic bag supermarket.

## Fake News Fight

Reporter: Amelia Moseley

*INTRO: But before all that, let's go online. Last week some big tech companies released a long-awaited industry code, designed to tackle fake news in Australia. Let's find out why that's a problem and what they're planning to do about it. Take a look.*

IVY: Hey Angel, I heard that vegans don't get COVID.

ANGEL: What?

IVY: Yeah, it's true, I saw it.

HUGO: I was reading on social media that the Earth is flat and the Moon doesn't exist.

KID: What?

REIKA: Kiana, look at this. They found this triceratops in Indonesia.

KIANA: No way.

Okay, you might think those stories sound a little farfetched and you'd be right. They're real fake news stories that have been spread around online.

AMELIA, REPORTER: Huh, that's pretty convincing actually, but while some of this stuff can be kind of funny or just downright silly; fake news, conspiracy theories and misinformation can cause big problems in the real world.

BROCK: I heard that the prime minister faked his COVID vaccine, so he didn't actually get it.

ANGEL: I've heard that the US election was rigged.

IVY: I saw on social media that people would boil orange peels and they would drink the water and it was the cure for coronavirus.

REIKA: One that I heard was that coronavirus was fake, and 5G created coronavirus.

AMELIA, REPORTER: What did you think about that conspiracy theory?

REIKA: I don't think it's real.

Some social media companies have been trying to stop the spread of fake news with warnings or by taking

down posts and now a bunch of tech companies have signed up to a new code of conduct, agreeing to do more to stop the spread of fake news and misinformation here in Australia. It's something the Australian Government asked them to do back in 2019. Signing up to the code is voluntary and companies that do get to decide how they're going to tackle fake news. Whether that's by adding more pop-up warnings and labels on posts, taking down fake content, suspending or disabling accounts, promoting more credible news sources and demoting others or making it easier for people to report fake news when they see it.

It's similar to a code that already exists in the European Union and the Australia Government says it'll be watching closely to see how tech companies follow the code and if it makes a difference. While some say it's a good start; others reckon there's way more social media companies could be doing about a problem they helped to create.

AMELIA, REPORTER: Of course, there are a few things we can do too to fight fake news.

Like, check where a story came from and if it's being reported on other reliable news sites, like BTN's (shameless plug). Think about why someone might've shared the news and if it sounds too good to be true or too bad to be true, the chances are, it is. Don't assume that pictures are always real, they can easily be altered or taken out of context and if in doubt just do some more research.

REIKA: Ohhh.

KIANA: What?

REIKA: It seems like triceratops have been extinct for 66 million years.

KIANA: I know.

## News Quiz

Do you know who this is? It's Mark Zuckerberg, the head of Facebook who was back in the treasurer's good books last week.

JOSH FRYDENBERG: Facebook has re-friended Australia.

It lifted its controversial ban on sharing news after negotiating with the government over new laws which will force Facebook and Google to pay news organisations to use their content. The government says that'll help to pay for real journalism.

Which Aussie city is leading the race to host the 2032 Olympics? Melbourne, Perth or Brisbane? It's Brisbane. It's been named the IOC's preferred city, and while nothing's for certain yet, many locals were celebrating.

ANNASTACIA PALASZCZUK, QLD PREMIER: It puts Queensland in the box seat.

What awards were held virtually in the US this week? The Oscars, the Golden Globes or the Emmys? It was the Golden Globes. The awards were presented from two different cities and nominees got all dressed up to tune in via video link.

And meet Baarack, a very, very woolly sheep who was given a new fleece on life after being found wandering around the bush in Victoria. Can you guess how much wool came off him? 15 kilograms, 25

kilograms or 35 kilograms? It was 35 kilos. While it's not quite a record it is a lot of wool. I bet he's feeling much more comfortable.

## Fantastic Forests

Rookie Reporter: Yindali

*INTRO: Wednesday the 3rd of March is World Wildlife Day, which was created by the UN to celebrate all of the plants and animals of the world and this year the focus is on forests. To find out why they're so important we've checked in with our rookie reporter, Yindali. She's 11 and lives right on the doorstep of the Daintree Rainforest. Take a look.*

YINDALI: Hi BTN, which means hello my name is Yindali in the Guugu Yalandji language. I'm 11 years old and I live in Far North Queensland. I'm part of the Kuku Yalanji People. Yindali is the Guugu Yalandji word for forest kingfisher, that's a type of bird with bright blue and white feathers, similar to a kookaburra but smaller. It's my animal totem. The forest kingfisher is one of many animals that you can find in the Daintree Rainforest. It's in Far North Queensland and it's really big, about the size of Sydney. The Kuku Yalanji people have lived in this area for thousands of years, their songs and legends continue to give this place a special meaning.

The forest is very important to us because water can always be found. When there was no food, my family would move to the forest to find it. We know which special plants to use for our foods and medicines, how to hunt animals to eat and where the sacred spots are. My family have told me never take a rock from the rainforest or waterways. Always introduce yourself to the land when you arrive. We always throw a rock into the river to tell the Rainbow Serpent that we are from this land or we are just passing through.

The Daintree Rainforest is actually the oldest rainforest in the world. It is a 180 million years old. It's called a rainforest because it gets a lot of rain every year and it's home to heaps and heaps of different plants and animals, like the biggest tree frog in the world, 60 per cent of all of Australia's butterflies, and 131 different types of reptiles, yep, even crocodiles. There are also lots and lots of different birds including some really strange looking ones like cassowaries. My favourite thing about living near the Daintree is walking through the rainforest, swinging from vines, swimming in safe freshwater creeks and going down natural water slides. But forests aren't just important to me, they're important to millions of people all around the world. They provide animals and people with food, water and shelter and they help soak up greenhouse gases.

But humans are destroying forests. Did you know, every minute, about 36 football fields of forest around the world are chopped down for wood, or to make room for houses or farming? That's having a big effect on our planet. It's why we need to learn about forests and protect them. When Australia was colonised a lot of our native forest was cleared and while some forests like the Daintree are now protected, it still faces a threat from things like climate change, weeds and feral animals.

Australians need to protect forests by buying food in a sustainable way, use less paper, reduce your carbon footprint so future generations can keep admiring and enjoying our forests. Most of all respect our beautiful land. If you wish to visit a rainforest, you should make sure you do not leave any rubbish behind, do not feed the animals and most importantly, leave nothing but footprints and take nothing but memories. I hope I've taught you something about the rainforest and maybe one day you can visit the Daintree too. Bye.

## Quiz

Can you name the world's biggest rainforest? It's in South America and it covers more than 6 million square kilometres. It's the Amazon.

## Cloned Ferret

Reporter: Cale Matthews

*INTRO: Now to a story about a very special ferret that was born recently in the US. This little girl is a black-footed ferret, which is an endangered species and believe it or not her mother died 30 years ago. How is that even possible? Well, the answer is cloning. Here are a few Cale's to tell you all about it.*

CALE: Drink please.

CALE 2: Yes, Cale. anything for you, I mean me, I mean. Hmm.

CALE: Whatever, is dinner ready?

CALE: We're working on it.

Yeah, while it might be a fun idea, my army of clone servants is just science fiction, but cloning animals well that is science fact. Meet Elizabeth Ann. She's a black-footed ferret who was born in the US a couple of weeks ago. They're an endangered species which makes her pretty special, but what's even specialer is she's a clone. Cloning is the process of copying living things, making something that is genetically identical to another. You might have heard of Dolly.

DOLLY PARTON: Jolene, Jolene, Jolene, Jolene.

No not that one.

DOLLY THE SHEEP: Baaah.

Yeah, that one. In the late 90s Dolly became the world's first mammal to be cloned from adult cells. See, a baby is usually a mix of DNA from its mum and its dad, which makes it unique. But in Dolly's case scientists took DNA from one sheep and put it inside an egg that had had its DNA removed, which means the baby sheep is an exact copy of this sheep over here.

Since Dolly scientists have cloned more than 20 species, from cows, to dogs, to monkeys and there are all sorts of reasons to clone an animal. For instance, from just a few cells you could clone the perfect horse or breed a copy of your favourite dog or clone mice to study how diseases develop.

In this case it was to save a species from the brink of extinction. You see until 1981 these black-footed ferrets were thought to be extinct, until a handful were discovered on a farm and taken into a captive breeding program. Since then, they've had lots of babies, the trouble is all of them are closely related. So, to try and bring some new DNA into the family scientists created a clone. Elizabeth Ann's DNA was taken from a wild female named Willa, who died in the mid-1980s. Willa was preserved at the Frozen Zoo, a place in San Diego that has frozen samples of more than 1,000 rare and endangered species. It's got a lot of people excited at the potential for cloning to save endangered species and even bring animals back from the dead. Maybe, one day.

But it's not all sunshine and dinosaurs, cloning animals is controversial. It doesn't always work, and clones will sometimes have deformities or serious health issues throughout their life. It's why there's been criticism of companies that offer to clone people's pets overseas. As far as humans are concerned many reckon the risks are just too high and in many countries, including Australia, there are laws against cloning us.



CALE: Which is a shame because a thousand walking talking Cale's could be a treat for us all.

ALL CALES: I agree Cale. I agree Cale.

## Life on Mars

Reporter: Cale Matthews

*INTRO: Now we're going to leave planet Earth for a while and take trip to our big red neighbour, Mars. Last week NASA's Perseverance rover let us look at and even listen to the surface in more detail than ever and it got us thinking, what would it be like to follow in its tyre tracks and step foot on Mars? Cale found out more.*

Transmission from Earth incoming.

CALE: If you're watching this then the Earth is no more...

CALE: No more than a speck in the rear-view mirror. Now you 1, 2, all of you lucky souls have been chosen as the first humans to colonise Mars. Well done. But let me be the first to tell you that it won't be easy. Mars is a cold, desolate, radioactive wasteland, with barely any liquid water.

CALE: No, you at the back, don't push the eject button. I don't recommend it. We have put together for you a 'Guide to Surviving Life on Mars'.

### 1. The Journey.

CALE: Now I really hope you're all friends because it's going to be a long journey. 54.6 million kilometres long to be precise and travelling at about 77,000 kilometres an hour, it's gonna take us 7 months to arrive. I hope you brought some music.

BLAKE: Is there life on maaa...ooh sorry.

CALE: For those with a window seat, you'll start see your new home about 2 million kilometres from touchdown. It's here you'll see the red soil coloured by iron oxide, big volcanoes higher than Mt Everest, and colossal canyons that make Arizona look like a skatepark.

### 2. Arrival.

CALE: When we land, we kind of know what to expect. It'll look a little something like this. These pictures were captured by NASA's Perseverance rover in February 2021.

NASA MISSION CONTROL: Tango Delta. Touchdown confirmed. Perseverance safely on the surface of Mars.

CALE: This 1-ton rover sent us high-definition sights and even sounds of Mars. But don't all rush to the door. Average temperatures are minus 63, and there's not much atmosphere which means you can't breathe and all the water in your body will evaporate when you step foot on the surface making your blood literally boil. Also, Mars doesn't have a magnetic field to keep away radiation from the Sun so you could be exposed to lethal solar flares. So, that's fun.

### 3. Daily Life.

Luckily for you guys we have been practicing for this for a long time, watch your step. And figuring out the best ways to keep you guys alive. If you do want to go outside, you'll have to wear specially designed space suits. Our little friend Perseverance helped to test them out too to see which material worked the best.

#### 4. Food.

While we have brought a small supply of vacuum-packed food with us you guys will eventually have to grow your own. Unfortunately, Martian soil is full of toxic chemicals and heavy metals. Our best bet is a mix of greenhouses, lab grown meat and even farming insects. Is anyone scared of spiders?

Anyway thanks for being our human guinea pigs and remember, keep your arms and legs inside the vehicle at all times. Bon voyage.

## Ask a Reporter

If you want to know more about Mars, well, you can ask me live this Friday on Ask a Reporter. Just head to our website for all the details.

## Quiz

Which of these planets is the smallest? Mars, Earth or Neptune? It's Mars. It's nearly half the size of the Earth, which means there's less gravity and you won't weigh as much on the surface.

## Sport

Look out tennis world. Aussie Alexei Popyrin has taken out his first ATP Tournament. The 21-year-old won the Singapore Open overcoming Alexander Bublik in the final. It's the first time the young player has ever gone past the quarter finals in such a big tournament, putting him into the world's top 100. And who'd he thank for that? His family.

ALEXEI POPYRIN: To finally win a tournament just shows how much hard work they put in with me also, and this is for them 100 per cent.

And the West Coast Eagles celebrated their first win of the AFLW season beating Gold Coast by just one point in Perth. Meanwhile, the Magpies moved to top spot on the ladder with a fifth consecutive win, beating the Demons by 35 points. And Adelaide climbed to fourth spot after thrashing St Kilda.

## Plastic Supermarket

Reporter: Olivia Mason

*INTRO: Finally, today, we're going to head to the supermarket, but this one's a little different. It's been put together by an artist to teach us more about the impact of plastic on our environment. Check it out.*

OLIVIA MASON, REPORTING: Welcome to The Plastic Bag Store, looks like every other supermarket, right? You got your cans and bottles and fresh fruit and veg, except every single thing here is made out of plastic. Plastic bananas, plastic tomatoes, no, not the blueberries too. Yep, not an edible grocery in sight.

Now I know what you're thinking, why? Well, this is art. The installation is part of the Adelaide Festival and Robin is the artist behind it.

OLIVIA: So, Robin, why is everything here made out of plastic?

ROBIN FROHARDT, ARTIST: So, I wanted to highlight the amount of packaging and disposable plastic and single use plastic that we're using every day.

OLIVIA: So, how do you make all of this stuff?

ROBIN: So, I collected plastic bags and containers from people in my building my neighbours I pulled a lot of it out of the rubbish and cleaned it. And then we sewed it and sculpted it and taped it and turned it into all of these fruits and veggies.

OLIVIA: Wow. And did that take a really long time?

ROBIN: It did, it took quite a while.

Visitors get to wander around the supermarket and watch a virtual puppet performance about how future humans might interpret our plastic obsession.

ROBIN: We tell a story about people in the future, excavating our plastic and finding it because it hasn't decomposed and sort of misinterpreting what it does or what it means.

Plastic is actually quite a new thing, it first became popular in the 1950s but since then it's changed the world in a big way. Because it takes so long to break down, most of the plastic that's ever been created is still around. Either in landfill or worse. In fact, every year, millions of tonnes of plastic end up here. Experts reckon that if we don't do something about it, there'll be more plastic than fish in the ocean by 2050.

OLIVIA: So, this doesn't look very appetising.

ROBIN: No, so this is a salmon fillet made from trash and plastic bags.

The supermarket is super relevant in South Australia because it just became the first state in the country to ban single use plastics.

DAVID SPEIRS, SA MINISTER FOR ENVIRONMENT: Plastic straws, cutlery, and drink stirrers in the first instance will disappear from cafes, and restaurants.

Coffee cups and fruit and veg bags are also on the state government's hitlist and other states and territories are getting ready to follow with their own single use plastic bans. These guys reckon it's a great start.

KID 1: I think it's really good. Because if you just ban it all, then people are like, what? What happened? But if you ban it in stages, then you just kind of get used to using more like, organic things.

KID 2: I really hope other states and countries start doing that.

KID 3: I think it's a really good step into stopping plastic and helping the environment.

KID 4: You can find lots of different solutions, like bamboo or paper, like you can live without destroying. It's easy.

Robin hopes people will remember this supermarket the next time they visit a real one and hopefully we'll all work together to make the planet a little more organic.

KIDS: No more single use plastics.

## Closer

That's it for this week. We'll be back before you know it, but if you miss us in the meantime you can jump online and check out more stories and specials and all sorts of other stuff. You can also subscribe to our YouTube channel if you're 13 or over and don't forget BTN Newsbreak every single weeknight. I'll catch you next time. Bye.