

Questions for discussion

Episode 4
1st March 2016

Voting Changes

1. Briefly explain the BtN *Voting Changes* story to another student.
2. What does the Senate vote on?
3. The Prime Minister says that voters aren't getting their say because the most popular candidates aren't always voted in. True or false?
4. What is a 'Group Voting Ticket'?
5. Lots of smaller political parties often make preference deals. What does that mean?
6. Which senator was elected to the Senate with just 0.51% of the vote?
7. Which party does he represent?
8. What changes does the Government want to make to the Senate voting system?
9. Why are some people against changing the voting system?
10. Do you agree with the Senate voting changes? Why or why not?

Vote in the Behind the News [online poll](#)

Syria Ceasefire

1. Briefly summarise the *Syria Ceasefire* story.
2. Why was Milad forced to flee his home in Syria?
3. When did the war in Syria start?
4. Who was Milad separated from when he left Syria?
5. Where in Greece did he go?
6. Where in Europe did Milad's brother go?
7. Why has ending the war in Syria proven to be difficult?
8. Describe the breakthrough that has occurred in Syria recently.
9. What could the ceasefire mean for Milad?
10. How did this story make you feel?

Write a message about the story and post it in the comments section on the story page.

Endeavour Tour

1. Who led the voyage of discovery on the Endeavour?
2. What rare event was the Endeavour crew aiming to observe?
3. What was their secret mission?
4. How long was the journey?
5. What happened to the Endeavour?
6. When was the replica of the Endeavour built?

7. What is the cat o' nine tails and when was it used?
8. Who was Joseph Banks?
9. Name three facts you learnt about the Endeavour.
10. Imagine you were on Cook's voyage of discovery on the Endeavour. Write a paragraph describing what it was like.

Check out the [Endeavour Tour resource](#) on the Teachers page.

Do the [quiz](#) on the BtN website

Space Programmers

1. Working in pairs, discuss the *Space Programmers* story and record the main points of your discussion.
2. What is the name of the competition the students are entering?
3. Where is the competition happening?
4. Explain what the students are doing.
5. How many teams competed in the Zero Robotics competition?
6. Record what you know about the International Space Station.
7. How do the students feel about being involved in the competition?
8. Illustrate an aspect of the BtN story.
9. What did you learn watching the *Space Programmers* story?
10. Why do you think BtN reported on this story?

Check out the [Space Programmers resource](#) on the Teachers page

Challenge: The name of the team that featured in the BtN story is called Apoapsis. Find out what that means.

Penguin Protection Dogs

1. Where is Middle Island? Locate using Google Maps.
2. What is the breed of dog that's protecting the penguins?
3. Finish the following sentence: The dogs are generally used in Australia as...
4. Why are the penguins in danger?
5. What film told the story of the penguin protection dogs?
6. How long have Eudy and Tula protected the penguins?
7. What has happened to the penguin population since the dogs arrived on the island?
8. Why are they introducing new penguin protection dogs?
9. How are they training the puppies?
10. What was surprising about this story?

Enter the competition to name a Maremma puppy. Make your suggestion [here](#)

Endeavour Tour

FOCUS QUESTIONS

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ACTIVITY

Discuss the BtN *Endeavour Tour* story as a class. What questions were raised in the discussion (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 know?</i>	<i>What do I want to know?</i>	<i>What have I learnt?</i>	<i>How will I find out?</i>

Students will develop their own question/s for inquiry, collecting and recording information from a wide variety of sources (internet, books, newspaper and magazines).

- Captain Cook is known as the 'discoverer of Australia'. What does this mean?
- What were some of the changes to the lives of Aboriginal people after Captains Cook's discovery of Australia? Give two examples.
- How might Captain Cook's journey be similar or different to journeys undertaken today?

KEY LEARNING

Students will investigate Captain Cook's voyage to Australia aboard the Endeavour.

AC AUSTRALIAN CURRICULUM

HASS / Historical Knowledge and Understanding/ History

The journey(s) of AT LEAST ONE world navigator, explorer or trader up to the late eighteenth century, including their contacts with other societies and any impacts ([ACHASSK084](#))

The nature of contact between Aboriginal and Torres Strait Islander Peoples and others, for example, the Macassans and the Europeans, and the effects of these interactions on, for example, people and environments ([ACHASSK086](#))

HASS / Inquiry and Skills / Research

Locate and collect information and data from different sources, including observations ([ACHASSI074](#))

Examine information to identify different points of view and distinguish facts from opinions ([ACHASSI077](#))

ACTIVITY

Glossary

Develop a glossary of words and terms that relate to Captains Cook's voyage aboard the Endeavour. Below are some words to get you started. Add words and meanings to your glossary as you come across unfamiliar words throughout your research. Consider using pictures and diagrams to illustrate meanings.

Navigate	Botanist	Expedition	Crew
Provisions	Exploration	Captain	Rations
Scurvy	Mapping	Charting	Docked

Challenge students by asking them to use words from their class glossary to write their own sentences. Alternatively, students can make their own crossword puzzle or word find.

ACTIVITY

Timeline

Create a timeline of Captain Cook's voyage that can be tracked on a map. Using the internet (including resources on the BtN *Endeavour Tour* story page) students will find out more about Captain Cook's voyage on the Endeavour and then respond to the following questions:

- When did the voyage start and finish?
- Which countries did the Endeavour visit?
- Describe a significant event that occurred in each place? Describe something interesting that occurred in each place. Refer to Captain Cook's journal for a personal account of events.

ACTIVITY

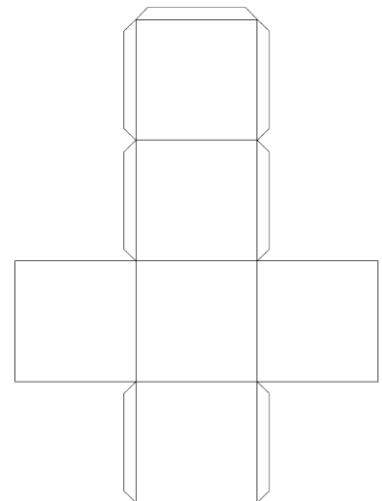
Cook's Endeavour journal

Choose an entry in [Cook's journal](#), and read aloud as a class.

- Discuss the language
- List any unfamiliar words and find meanings
- What did the journal make you wonder?
- Why was it important for explorers to keep journals during their travels and record information about the places they saw?

What questions do you have for Captain Cook? Imagine you could travel back in time to the 1700s and interview Captain Cook. Find out about his life and achievements. Present your findings in an interesting way.

- Give a presentation on their achievements
- Create a portrait
- Design a poster
- Make a "Did you know?" for other students
- Using the [Bio-Cube template](#), design and create a 3D model to present their biographical information. Each side of the cube will include a different aspect of your research.
- Write a Bio Poem. Use the Read Write Think Bio Poem [template](#).

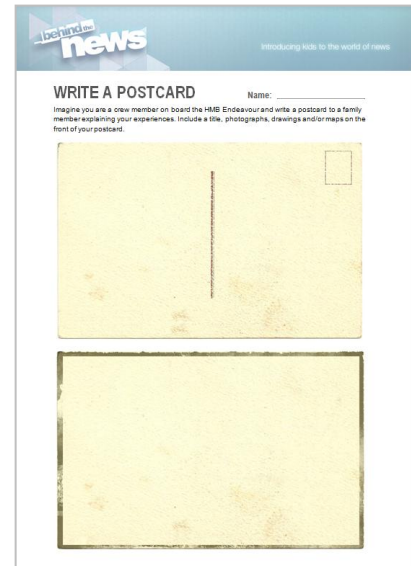


ACTIVITY

Postcard writing

Students will imagine what life was like for the crew aboard the Endeavour and write a postcard to a family member explaining their experiences (including what they are doing, the living conditions and how they feel). Students will use their research findings to support their writing. Include photographs, drawings and or maps to decorate the front of the postcard.

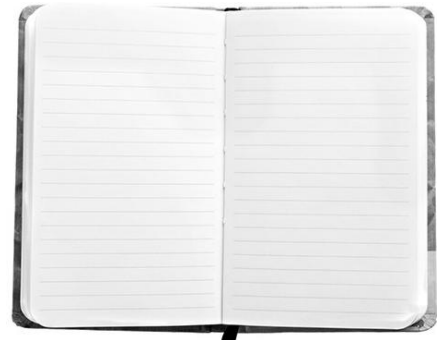
Students can download this [Write a Postcard template](#) to assist them with their design.



Journal writing

Students will imagine they are a crew member aboard the Endeavour. Write a journal describing your first week aboard the ship.

- Explain why you are aboard the Endeavour. What is your role aboard the ship?
- What can you see? What can you eat? What can you smell? How do things feel? What can you hear?
- What are some of the challenges or dangers?
- What are your daily activities (for example, research, eating, sleeping)?
- What is exciting about being part of the voyage?



Students will reflect on their learning during this activity and respond to the following questions.

- How did you feel about this activity?
- How do primary sources (for example photos, letters, diaries and official documents) help you understand what might have happened at a place in time?
- What questions do you have about (the topic) at the moment?

ACTIVITY

Steps to becoming a great explorer

James Cook was one of the greatest explorers of his time. However you do not have to travel far or need large amounts of time to be an explorer of the world.

As a class brainstorm what it takes to be an explorer of the world. Here are some tips to get you started:

- always be looking
- collect and document your findings – take field notes
- use all of your senses when you are investigating
- be curious – everything is interesting if you look closer

Visit this [ABC Splash website](#) for more steps to becoming a great explorer



Be an explorer

Captain Cook took botanists and artists on his voyage to Australia in the 1770s and these people discovered and drew new species of plants. Many of these specimens and illustrations survive today as a heritage of the botanical discovery of Australia. You can see the coloured illustrations of plants collected on Cook's voyage at the [web site of the British Natural History Museum](#).

A good scientific record of a plant requires a botanical drawing as well as a written description. Botanical drawing combines art and science, where the artists draw a plant exactly as it looks.

Your task is to explore your school yard for a plant specimen and then create a botanical drawing. Follow this step-by-step method:

- Explore your school yard for a botanical specimen.
- Collect a specimen that interests you. Make sure you respect the plants in your school yard when taking a specimen.
- Get to know your specimen – look at the plant's details including, the plant's surface, leaf veins, shapes and colours. The connections between stem and leaf, and the size of the different parts of the plant. Does the plant have a flower, fruit or seeds? Notice any patterns. Write down what you see.
- Sketch what you can see using a lead pencil on paper.
- Now look at your plant with a microscope or magnifying glass. Draw your plant again as accurately as you can now that you can see more detail. Use cartridge paper and coloured pencils or paint. Work out how to show the texture of the different surfaces of the plant.
- Can you identify what type of plant it is? Find its botanical name and label your drawing.



Source: Wikipedia, Taxonomy of Banksia. A 1770s watercolour of *Banksia serrata*. One of the first ever drawings of a *Banksia* species, it was produced by one of Sir Joseph Banks' London artists, based on original drawings by Sydney Parkinson, who was present when the genus was first collected at Botany Bay.



USEFUL WEBSITES

Australian National Maritime Museum – HMB Endeavour
<http://www.anmm.gov.au/whats-on/vessels/hmb-endeavour>

National Library of Australia – Cook's Endeavour journal
<http://treasure-explorer.nla.gov.au/treasure/cooks-endeavour-journal#journal-hms-endeavour-1768-1771>

National Museum of Australia – Cook Timeline
http://www.nma.gov.au/online_features/cook_forster/background/timeline

South Seas – Cook's daily entries in his journal
<http://southseas.nla.gov.au/journals/cook/contents.html>

HMB Endeavour – Virtual tour
<http://embed.panedia.com/vtplayer2/pmbmcslj>

ABC Splash – Explorers in Australia
<http://splash.abc.net.au/home#!topic/494962/explorers-in-australia>

Australian Dictionary of Biography – James Cook (1728-1779)
<http://adb.anu.edu.au/biography/cook-james-1917>

Behind the News – First Fleet
<http://www.abc.net.au/btn/story/s3934600.htm>

Behind the News – Maritime Past
<http://www.abc.net.au/btn/story/s4076178.htm>



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Encourage your students to be active and informed citizens by watching our 10 minute news program each day. Go to the BtN homepage and click on the 3News link.



Teacher Resource

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Space Programmers

FOCUS QUESTIONS

1. Working in pairs, discuss the *Space Programmers* story and record the main points of your discussion.
2. What is the name of the competition the students are entering?
3. Where is the competition happening?
4. Explain what the students are doing.
5. How many teams competed in the Zero Robotics competition?
6. Record what you know about the International Space Station.
7. How do the students feel about being involved in the competition?
8. Illustrate an aspect of the BtN story.
9. What did you learn watching the *Space Programmers* story?
10. Why do you think BtN reported on this story?

ACTIVITY

What do you see, think and wonder?

After watching the BtN *Space Programmers* story, respond to the following questions:

- What did you SEE in this video?
- What do you THINK about what you saw in this video?
- What does this video make your WONDER?
- What did you LEARN from this story?
- How did this story make you FEEL?
- What was SURPRISING about this story?

Think of three questions you would like to ask an astronaut aboard the International Space Station (ISS). Find answers to your questions.

Quick fact and quiz

The International Space Stations takes 90 minutes to orbit Earth. Calculate how many sunsets and sunrises astronauts aboard the ISS see each day?

KEY LEARNING

Students will explore what life is like on the International Space Station.

AUSTRALIAN CURRICULUM

Science – Year 5

Scientific knowledge is used to solve problems and inform personal and community decisions ([ACSSU083](#))

The Earth is part of a system of planets orbiting around a star (the sun) ([ACSSU078](#))

Science – Year 7

Scientific knowledge has changed peoples' understanding of the world and is refined as new evidence becomes available ([ACSSU119](#))

People use science understanding and skills in their occupations and these have influenced the development of practices in areas of human activity ([ACSSU121](#))

ACTIVITY

Living in Space

Students will explore what life is like on the International Space Station (ISS). Questions to investigate include:

- What is the ISS? (Brief history of the ISS)
- What do astronauts do on the ISS? (Give an example of an experiment astronauts might do).
- How long do they stay on the ISS?
- What is it like living in microgravity? (Eating, sleeping, having a shower, going to the toilet).
- What impact does microgravity have on the human body? (Bones and muscles, sense of taste).
- What food do astronauts eat?
- What do you think the challenges of living in space would be?
- If you lived in space for a month, what foods do you think you would miss the most? Why?

Use these fun activities to investigate how astronauts [Taste in Space](#) and discover the challenges for an astronaut [living on the International Space Station](#). Spot the ISS from your home town, [enter your location](#) to learn when the space station will be flying overhead.

ACTIVITY

Robots in space

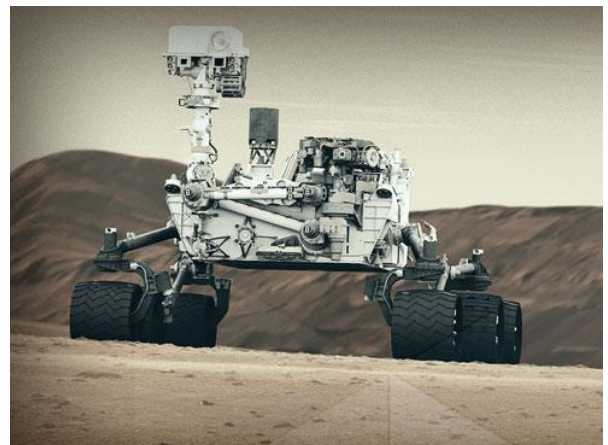
Ask students to discuss with a partner how and why robots are used in space exploration.

- What is a robot?
- What is the difference between a robot and a machine? Use a Venn diagram to record your ideas.
- What can robots in space do that humans can't?

Mars rover

Students find out more about how NASA's robotic spacecraft, Curiosity, is exploring the surface of Mars.

Briefly describe what Curiosity's mission is, then find out more about the components. Go to this [website](#) and choose 3 components and describe their function and how the information collected helps scientists.



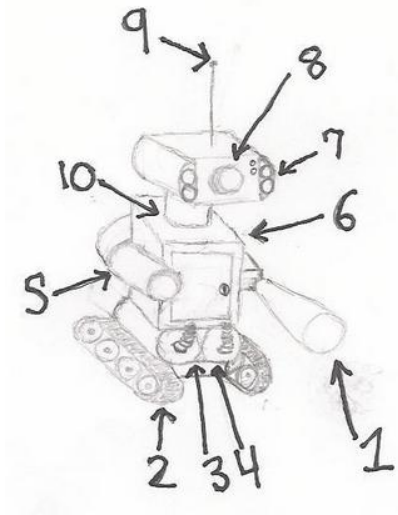
ACTIVITY

Design a robot

If you could build a robot what kind of robot would you build? What would you make it do? Would it make your breakfast or clean your bedroom? Brainstorm ideas in pairs and then share your ideas as a class.

Students will design a robot that performs a specific task. When thinking about their design, ask them to consider:

- What problem or challenge does the robot solve?
- What are some of the functions your program will carry out?
- Is it a function that a human could perform?
- Does the robot need any special features? If so, what are they?
- What will your robot look like?
- How will your robot function? Consider the following:
 - How will it be controlled?
 - How does it move?
 - How will it detect the environment around it?
 - How will it be powered? (energy source)
- Draw a design of your robot and present it to the class. Include a detailed diagram of each component and a description of how it works.



USEFUL WEBSITES

ABC News – Zero Robotics competition sees Sydney teens pilot robots aboard International Space Station

<http://www.abc.net.au/news/2016-02-11/sydney-teens-pilot-robots-aboard-the-international-space-station/7156872>

Behind the News – Space School

<http://www.abc.net.au/btn/story/s4102608.htm>

Behind the News – Coding

<http://www.abc.net.au/btn/story/s4301073.htm>

NASA – What is the International Space Station?

<http://www.nasa.gov/audience/forstudents/k-4/stories/nasa-knows/what-is-the-iss-k4.html>

NASA – What is robotics?

http://www.nasa.gov/audience/forstudents/k-4/stories/nasa-knows/what_is_robotics_k4.html

ABC Splash – Want to collect space rocks? Direct a Robot: Collector

<http://splash.abc.net.au/home#!/media/32444/direct-a-robot-collector>

BtN: Episode 04 Transcript 01/03/16

Coming up on Behind the News:

Meet the young boy trying to find his brother after they both fled Syria.

Take a tour on the ship that brought Captain Cook to Australia.

And Mattman is back to explain why the Senate will be getting a shakeup in this year's election.

Hello I am Nathan and this is BtN. Stay with us for all that and more. But first let's find out what had people talking this week.

The Wire

The Australian government has released its plan for the future of our country's national security in its Defence White Paper.

The plan includes an extra \$30 billion dollars to spend on defence over the next ten years. It'll be spent on extra personnel in the navy, army and air force.

Along with a fleet of 12 submarines plus new drones, helicopters and other vehicles and equipment. PM Malcolm Turnbull says all of these things are important to keep our country safe and secure.

In Hollywood, it was all about this little golden statue at the 88th annual Academy Awards, featuring a whole lot of A-list guests and presenters.

MINIONS: Thank you, thank you.

C-3PO: Actually, I do not look like him, he happens to look rather like me.

Pixar's 'Inside Out' was awarded Best Animated Movie. Best Actress award went to Brie Larson for Room and the film Spotlight won Best Picture. While Leonardo Di Caprio finally won his first Best Actor Oscar for his leading role in The Revenant.

Leo was nominated for his first Oscar as a teenager back in the 1990s and has missed out five times since!

And meet Atlas, the latest humanoid robot creation from engineers in the US.

He can open doors, walk through the snow and even lift heavy objects. Even when he's really put to the test or just flat out being bullied by his creators, Atlas has proven there's no stopping him from taking over the world!

Just kidding but researchers reckon he could be used for all sorts of jobs in the future!

Voting Changes

Reporter: Matt Holbrook

INTRO: Now to our top story and the federal Government has announced changes to how the Senate is elected. Right now it says some senators are able to be elected with very few people actually voting for them. But the move has upset some smaller political parties who say the changes will leave them out of contention.

Sometimes making choices can be difficult. And some can be a lot more difficult than that, like deciding who the leaders of our country should be.

It's a choice Aussies have to make at election time. And as well as helping decide the government, we also have to elect the Senate. But now, the Prime Minister wants to make some changes to how the Senate is elected. He says voters aren't really getting their say because the most popular candidates aren't always voted in.

MALCOLM TURNBULL, PRIME MINISTER: Australians were astonished to see people elected to the Senate whose primary votes were a fraction in the case of one senator from Victoria, about half of 1% of the vote.

But how could that happen? See, at the moment, people get to order their favourite senate candidates from one, to, well, however long it takes to get to get to the end. Anyway, the list of senate candidates can be massive, more than a hundred. Most people don't want to fill out all those numbers, so instead they can just vote for their number one and let that candidate decide what order the rest of their preferences should go in. That's known as a group voting ticket.

The thing is, sometimes, group voting tickets can lead to some surprising candidates winning a seat!

MATT: I'm Mattman.

MATT: What are you doing here? I didn't vote for you.

MATT: I'm Mattman. Senator Mattman.

See, lots of smaller political parties often make "preference deals". That's when one small party agrees to preference another small party, even if they don't really agree with them on much, just to increase their chances of getting elected.

That's what many people think happened in the last federal election. Ricky Muir from the Motoring Enthusiasts Party was elected with just 0.51 per cent of the vote, even though nine other parties got more votes than him. Like the Palmer United Party, which got nearly eight times more votes, but still didn't get elected. Because of the way senate preferences work, and the deals made behind the scenes, Ricky got the gig.

MALCOLM TURNBULL: The system has been taken advantage of.

To make sure that doesn't happen again, and this doesn't happen again.

MATT: I'm Mattman

MATT: Why do you keep saying that?

The government's planning to get rid of group voting tickets. So if you only vote for one candidate that's your entire vote. You won't accidentally end up with Mattman. Or if you want to order your favourites, the new ballot will let you vote for up to six candidates without having to order all of them. The government says this way it gives a much more accurate picture of who voters want to represent them.

But some people have spoken out against the changes. They say a system like this will make it much harder for people from small parties to ever be elected. And that means fewer people with different opinions representing different types of people in parliament. If the senate voting changes go ahead, it could make a huge difference come election time.

But either way, we probably won't be seeing any more of this particular candidate.

MATT: I'm Mattman.

Poll

Join us for that, but in the meantime we have a question for you.

Do you agree with the senate voting changes? Let us know what you think on our website.

Now to last week's poll results. We asked you if Australia should have a nuclear waste dump. And most of you went with no.

Thanks for voting!

Syria Ceasefire

Reporter: Carl Smith

INTRO: Next up we're heading to Syria where a temporary ceasefire came into effect over the weekend. Some reports say it's already been broken but at the very least it has led to an ease in the fighting there. It's good news for the Syrian people. And it's also a positive

sign for the many thousands of Syrians who have fled the country like the boy you're about to meet.

My name is Milad and I am from Syria. I have travelling 10 days. I left because in our country there are a war.

Milad is one millions of refugees forced to flee their homes in Syria because of a violent civil war. The war started in 2011, because many people in Syria were upset with their government. They began protesting for change. But then the government hit back.

Many Syrian people like Milad have been forced to run ever since, leaving their homes behind and sometimes losing loved ones along the way.

MILAD: I am separated from my brother Bashar, he have to go to some place safety and I didn't see him for nearly a year. Feel like I will never see him again.

Milad made the dangerous journey from his home country to the island of Lesbos in Greece. He heard his brother made it to Germany and he's trying to find him.

MILAD: I miss him very much, I like everything in my brother, he is my brother.

Many Syrians like Milad have been hoping for an end to the fighting in their country. So they can return to their homes and their families. But ending the war in Syria has proved to be tricky. Over the past five years other countries including Russia and the US have stepped in to support opposite sides there.

That's made things pretty complicated. Another problem is that extreme terrorist groups like Islamic State have joined the fighting, attacking both sides and civilians.

That's made things more complicated again. But now there's been a breakthrough. The US and Russia have said they'll work together to try to stop the fighting between the Syrian government and the Syrian people.

And they've started by negotiating a ceasefire. It means aid groups will be able to come in to help more people, and supplies like food and water will be able to come in more easily too. Both of these things should help the Syrian people in the short term.

Unfortunately it's only temporary, and some say the ceasefire has been broken in parts of the country. But it is a start. And for Milad, it could mean he'll get to go home sooner.

For now though, there's been some good news for Milad. He's finally found out where his brother is.

MILAD: Finally I arrive and my brother is coming to meet me. The brother is like the heart. It's the happiest moment in my life. A brother's love is special kind of love.

Endeavour Tour

Reporter: Amelia Moseley

INTRO: Two hundred and forty-six years ago, James Cook landed on the east coast of Australia for the first time. The ship that brought him here was the HMS Endeavour, a British Royal Navy research vessel. But what was life like for the 94 people aboard that long journey to the other side of the world? Take a look.

It was the year 1768, first Lieutenant James Cook and his men set sail aboard the HMS Endeavour.

NARRATOR: At 2 p.m. we got under sail and put to sea, having on board 94 persons near 18 months' provisions and stores of all kinds.

Their aim was to observe a rare event when the planet Venus moved across the sun, but they also had a secret mission to find the rumoured Great South Land and claim it for England. It was an epic three year journey that shaped our country's history, but the ship that made it possible sank years later and its full wreckage has never been found. So in the 1980s, historians helped build this - a replica of the Endeavour in all its 18th century glory.

MIKE, FIRST MATE: The ship itself is sailed exactly the same way, is exactly the same. So we still play the same game if you like as Cook's men did all those years ago.

Now the ship's docked at port so kids can hop aboard and explore what it would've been like to be on Cook's famous voyage. Above deck, the ship is just like it would've been more than 200 years ago, right down to the toilets.

GUIDE: This was their toilet paper! Into the bucket of saltwater, wipe their bottoms and that was it.

Down below, the ship is also decked out like the 1700s; from an old school oven, to canons, even the ship's cat! There was also another kind of cat that kept the crew in order, the dreaded cat-o-nine-tails!

MIKE, FIRST MATE: If someone was going to be punished for say, disobeying an order that an officer gave them, they'd probably get 12 lashes with this cat across their bareback.

JESSICA: It'd probably be pretty annoying 'cause you'd have to follow everybody's rules, like the Captain's rules cause you don't want to get whipped.

Something else that would have been tough on the crew was the food.

REPORTER: So this is where the crew would've eaten all their meals, breakfast, lunch and dinner. Things like porridge, maybe a thin boiled soup with some meat in it and even this - a biscuit called Hard Tack. Hmm, maybe not.

The kitchen area doubled as another room too.

REPORTER: And this is where the crew would've slept. Pretty comfy really, not bad.

JAKE: I actually can't believe how many people could fit on this boat. And how humid it is and really hot it would've been.

But for some crew members things weren't so bad.

REPORTER: And this would've been a luxury cabin. Top class. It's a little small, but not bad!

It's the kind of room the gentlemen onboard like James Cook and botanist Joseph Banks would've had.

REPORTER: And this is where Captain Cook would've spent most of his time, sitting right here on the original Endeavour, most of the time charting his maps and eating his meals.

GIRL: I thought everything was really cool, but I really liked going into Captain Cook's like cabin, I thought that was really cool.

BOY: I think it was great, like how it shows, like what it was like, how many ropes there were, how much they had to do.

So it seems James Cook and the Endeavour have inspired some of us to take the helm and sail the high seas on a voyage of discovery! Well, maybe one day.

Quiz

Okay let's test you on your Endeavour knowledge now. What was the Endeavour used for before it travelled to Australia?

- Transporting coal
- Guarding Britain
- Or a floating amusement park

The answer is: Transporting coal

Space Programmers

Reporter: Matt Holbrook

INTRO: A team of Aussie school kids has taken part in a competition on the International Space Station. Their task was to program a robot to do some complex manoeuvres in zero gravity. But how did they go? Take a look.

JASH: We got together, we're a group of friends, we had this feeling of untouchableness.

Meet team Apoapsis.

They're from Normanhurst Boys High School, and they've been battling it out against 170 teams from across eighteen countries to earn a spot in a competition happening on the International Space Station.

It's a competition called Zero Robotics, where teams program SPHERE satellite robots to complete a range of different tasks all on their own.

PETER DAVIS: The boys, along with other teams around the world, have been uploading their code to have a virtual competition where they play against other teams to see how those spheres interact and how they collect points.

It's all with the hope of being selected to compete for real on the ISS.

DECLAN: It's quite a weird feeling. Usually when you write code, you write it, you compile it on your own computer which is sitting right there in front of you. But to have it, like, sent up to the International Space Station and have it run on a - like, a small robot up there is quite a strange feeling and I'm almost worried I'm going to break something.

After months of hard work, they've made it to the finals where they'll see their programmed sphere in action live from the International Space station!

STUDENT: At the Seymour Centre tonight there'll be a broadcast of the finals. So what's going to happen, on the International Space Station, they're going to get the actual SPHERES, the robots themselves, and load our code onto them and then they'll put the SPHERES, like, just floating there in zero gravity and they're gonna set them off and the SPHERES are going to compete against each other for the most points in the game.

Finally, in the early hours of the morning, it's their turn.

ASTRONAUT: This is six versus four, Apocalypse, which is from Australia. Hello to a new continent involved in this competition. Hello, Australia.

DECLAN: The higher up the ranking from the previous rounds are, the sort of more scary they are to us.

ASTRONAUT II: Just confirming that we are getting thruster and gas firing from blue. We've seen a couple of simulations that the teams in group three were pretty aggressive and sometimes they go out of bounds.

Unfortunately, their strategy doesn't pay off.

ANNOUNCER: OK, final score: one point to Apocalypse, nine points to Team Tesla.

But the boys are more than happy to have made it this far, and a couple of months on from the competition, they say it helped them in a big way, especially in the classroom.

BOY 1: It was very good for a lot of physics. It really helped extend what you learn in the classroom and actually gives students a thing that they can apply their knowledge to.

And they want to encourage other kids at their school to compete, too.

BOY 2: What we'll do is help to train a team of students in the year below us because now we've got this understanding of how the competition works. Hopefully they can do as well as or better than we've done.

Quiz 2

Okay that brings us to another quiz question. Which of the following can happen to the human body after months in zero gravity?

- It shrinks
- It grows taller
- It starts glowing

The answer is it grows taller. Astronauts can grow by about 3 percent because their spine isn't compressed by gravity.

The Score

INTRO: Right it's sport time now. Here's some of the biggest moments from this week.

FIFA, the organisation in charge of world football has voted in a new president! Switzerland's Gianni Infantino will replace Sepp Blatter who was given the boot for dodgy dealings. Infantino says he'll help kick the corruption out of FIFA.

INFANTINO: And I want to tell all of you you will be proud of FIFA you will be proud of what FIFA will do for football.

Aussie officials say even though they didn't vote for him they're happy with the choice.

Eleni Glouftsis made history on the weekend as the first female field umpire to officiate an AFL game.

ELENI GLOUFTSIS: finding out was really exciting - a bit of surprise.

It was a preseason match between Essendon and Carlton and while Eleni's not officially on the seniors umpiring list this season the AFL says there's a chance she'll be called on to fill in.

To the NBA now where this massive three from Steph Curry in the final seconds of overtime has given the Golden State Warriors a dramatic win.

The game winning three to beat Oklahoma City was Curry's twelfth of the night equalling an NBA record.

During the game he also broke the record for most threes in a season with 288.

Penguin Protection Dogs

Reporter: Carl Smith

INTRO: Finally today they say dogs are man's best friend, but on Middle Island in Victoria, dogs and penguins are even closer than that. Some specially trained Maremma dogs have the job of protecting local penguins from foxes there. We caught up with them as a new puppy recruit joined the team.

PETER ABBOTT, WARRNAMBOOL CITY COUNCIL: The first puppy has arrived. He's a bit of a handful at the moment.

This new four-legged recruit has a very important job.

PHIL ROOT, DOG TRAINER: First time in the world they've used Maremma dogs to look after native species so we're really lucky to be involved in that.

Yep, you heard right. This Maremma dog is here to protect native Australian animals.

In fact, he's a penguin protection puppy! And his job will be to protect a colony of Little Penguins on Middle Island just off the southern coast of Victoria.

PETER ABBOTT: He'll be living on the island, through the summer breeding season, looking after penguins. So the dogs are generally used in Australia as stock protectors, free range chickens and farms and those sorts of things. So our dogs and our program uses these dogs' natural ability to protect things.

But hang on how come these poor little penguins need protecting? Well this movie about the story explains it pretty well.

ODDBALL FILM: In a remote part of the world, there's a magical island where thousands of the littlest penguins all make their home. But foxes found the island. And in just a few short years there were hardly any penguins left.

Thankfully that was when this local chicken farmer Swampy Marsh, yep that's his real name, came up with a brilliant idea to help.

SWAMPY MARSH, CHICKEN FARMER: Well, the short story is, the penguin colony was being predated on by foxes. I knew that these dogs would protect my chooks, and on other properties they protect sheep and goats as well. The thing we said was why not use a European guard dog to fight a European predator?

SWAMPY MARSH: All Maremmas have a very strong sense of territory in the same way that a wolf does. He's saying to the fox 'Go away, I'm here, this is my territory'.

So in 2006 these two white knights were brought in to begin guarding penguins on the island. And over the past 10 years sisters Eudy and Tula have done an amazing job. Before the program started, there were only 10 penguins left on Middle island. But by 2013 there were 180!

But these days Eudy and Tula are getting a little old for fox chasing. And that's why this little guy is here. But it will take a lot of training to get him up to speed including starting work with some chickens!

PHIL ROOT: The famous story is that penguins are just chooks in dinner suits, so if we can train him to look after the chooks, low to the ground feathered variety, then it should be transferred over to the penguins.

It might not be the most obvious idea.

PETER ABBOTT: I think like anything involving penguins, dogs, people, islands, water, you're never going to get it perfect.

But it may very well be the cutest way we've heard of to protect some very special native Aussie animals.

CLOSER

And that's it from us!

See you next week!