

Statues Debate

1. Discuss the BTN story as a class. What issues were raised in the discussion?
2. What recently happened to a statue of Edward Colston from Bristol?
3. Complete the following sentence. A lot of the money that Edward Colston donated to charity was made by selling people to _____.
4. Why have there been calls for some statues to be removed in Australia?
5. What year did the White Australia Policy begin?
6. What was the White Australia Policy?
7. Many statues in Australia depict British colonial leaders and not nearly as many honour Indigenous Australians. Give an example.
8. What happened to statues in Sydney of Captain Cook?
9. What are some solutions to the problem?
10. How did this story make you feel?

Community TV

1. Discuss the BTN story with another student and record the main points of your discussion.
2. What is Ethan's TV show called?
3. What is Ethan's TV show about?
4. How did Channel 44 help Ethan?
5. What decade were Australia's community TV stations set up?
6. Australia's community TV stations are not-for-profit groups. True or false?
7. Community TV has helped launch the careers of which famous Aussies? Name one.
8. Why might community broadcasters have to give up their space on the broadcast spectrum?
9. What Australian cities currently have a community TV station?
10. What do you understand more clearly since watching the BTN story?

Measuring Everest

1. Before watching the BTN story, discuss how you think scientists measure the height of a mountain.
2. Mount Everest is the 2nd highest mountain on Earth. True or false?
3. How tall is Mount Everest?
 - a. 888 metres
 - b. 4,448 metres
 - c. 8,848 metres
4. What shape do scientists use to measure the height of a mountain?
5. Explain how scientists used trigonometry to measure mountains.
6. Who was the first person to measure Mount Everest?
7. What did he use to measure the angles of Mount Everest in 1856? Describe.
8. How did photogrammetry help surveyors measure Mount Everest?
9. What does GPS stand for?
10. What natural events may have affected the height of Mount Everest?

Check out the [Measuring Everest resource](#) on the Teachers page.

Aquaponics School

1. What are the main elements in an aquaponics system?
2. The plants in an aquaponics system are grown in soil. True or false?
3. What waste is used to help fertilise the plants?
4. Compared to most farms how much water does an aquaponics system use?
 - a. 10% less
 - b. 19% less
 - c. 90% less
5. Draw the cycle of an aquaponics system.
6. What type of fish did the kids use in their aquaponics system?
7. How often do they feed the fish?
8. What plants are they growing? Name two.
9. What do the kids do with the produce?
10. What did you learn watching the BTN story?

Check out the [Aquaponics School resource](#) on the Teachers page.

COVID Reflections

1. Discuss the BTN *COVID Reflections* story in pairs and then share your thoughts as a class.
2. What has term 2 been like for you?
3. Did you have to attend school online? Discuss in pairs.
4. What has been your favourite thing about COVID restrictions lifting?
5. What positive things have you seen people do to get through this difficult situation?
6. Share your thoughts in the comments section on the BTN *COVID Reflections* story page.

Teacher Resource

Measuring Everest

Focus Questions

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- What did he use to measure the angles of Mount Everest in 1856? Describe.
- How did photogrammetry help surveyors measure Mount Everest?
- What does GPS stand for?
- What natural events may have affected the height of Mount Everest?

Activity

What do you see, think and wonder?

Students watch the BTN *Measuring Everest* story, then respond to the following questions:

- What did you SEE in this video?
- What do you THINK about what you saw in this video?
- What did you LEARN from this story?
- What was SURPRISING about this story?
- What QUESTIONS do you have?

Activity

Brainstorm

As a class, discuss the BTN *Measuring Everest* story. On a mind map, record what students know about Mount Everest. Use the following questions to help guide discussion:

- Where is Mount Everest? Locate on a map.
- Which mountain range is Mount Everest part of?
- Why did a group of scientists measure Mount Everest?
- How are they measuring it?

Key Learning

Students learn more about the different methods used to measure mountains and create a profile of Mount Everest.

Curriculum

Geography – Year 6

The geographical diversity of the Asia region and the location of its major countries in relation to Australia.

Geography – Year 8

Different types of landscapes and their distinctive landform features.

Geography – Year 7 & 8

Develop geographically significant questions and plan an inquiry, using appropriate geographical methodologies and concepts.

Science – Year 6

Sudden geological changes and extreme weather events can affect Earth's surface.



Activity

Glossary

Students will brainstorm a list of key words and terms that relate to the BTN *Measuring Everest* story. Here are some words to get you started.

Tectonic plates	Measure	Satellites
Summit	Trigonometry	Global Positioning System

Activity

Inquiry Questions

After watching and discussing the BTN *Measuring Everest* 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>know</u>?</i>	<i>What do I <u>want</u> to know?</i>	<i>What have I <u>learnt</u>?</i>	<i><u>How</u> will I find out?</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 or more of the questions below.

- How can mountains grow and shrink?
- How was Mount Everest formed?
- Describe the steps of mountain formation over time.
- Why do mountains in different areas have different shapes?
- What are the different methods for measuring a mountain? Explore one method in detail.

Activity

How do you measure a mountain?

Watch this [Newsround video](#) to learn more about the different methods used to measure mountains.

Method 1 – Using Maths

How can trigonometry be used to measure a mountain?
How accurate is it?

Method 2 – GPS

How does the GPS method work? How accurate is it?
What are the disadvantages of this method?

Method 3 – Photogrammetry

How does this method work? What does it mean for mapping mountains in harder to reach areas?
Can mountain measurement ever be accurate? Give reasons for your answer.



Activity

Understanding Tectonic Plates

Movement of tectonic plates can change the height of a mountain. Watch the [BTN Nepal Earthquake](#) story to find out more about the 2015 earthquake. Students will explore what tectonic plates are and how they work. Some questions to investigate include:

- What is the top layer of the earth called?
- What are tectonic plates?
- What are the edges of tectonic plates called?
- What are the types of tectonic plate movement?

Watch these videos to help understand more about tectonic plates.

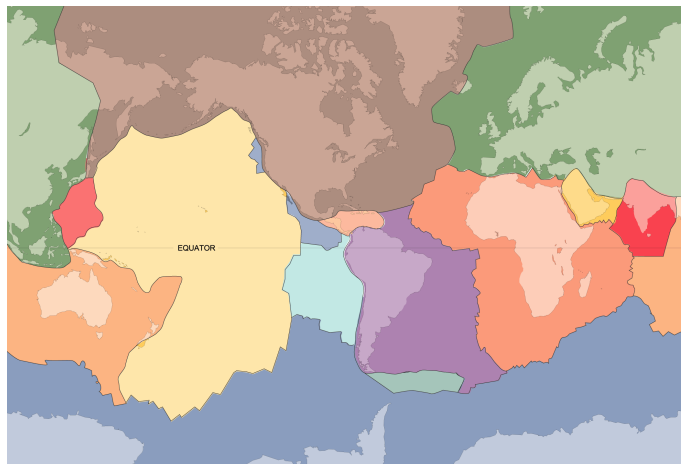
[Introduction to tectonic plates](#)

[Why is Everest so tall?](#)

Use the tectonic plates map at the end of this activity to locate and label the 15 major tectonic plates. Locate Mount Everest on the map

Further investigation

Using an enlarged version of the tectonic plates map, create a class jigsaw puzzle of tectonic plates. Paste your map onto foam or thick card and cut along the tectonic plate lines. Sit the pieces in a small inflatable pool or trough of water and observe how they move. Respond to the following questions about tectonic plates: How do the pieces interact with one another? Are they still or constantly moving? What direction and speed are they moving? Investigate how your jigsaw puzzle experiment reflects how tectonic plates move.



Activity

Profile of Mount Everest

Students will create a profile of Mount Everest using a range of sources of information. Students will use the following questions to help guide their research and use the template at the end of this activity to record their findings.

- Where is Mount Everest?
- How high is Mount Everest?
- Describe the landscape and illustrate an aspect of the mountain.
- What is the weather like?
- What are the climbing conditions like on Mount Everest?
- List 10 interesting facts about Mount Everest.
- Use a Venn diagram to compare and contrast Mount Everest with other mountains around the world. Compare the size of the mountains and other physical features.



Activity

Create a Kahoot Quiz

Use [Kahoot!](#) to test students' knowledge about Mount Everest. Quizzes can be created to recap learning or test personal knowledge. There is also the option to connect with classrooms around the world and play kahoot in real time.



Useful Websites

How do you measure a mountain? – Newsround

<https://www.bbc.co.uk/newsround/41679797>

Mount Everest: Chinese team summit during pandemic – BBC News

<https://www.bbc.com/news/world-asia-52819738>

Nepal Earthquake – BTN

<https://www.abc.net.au/btn/classroom/nepal-earthquake/10526664>

Everest Danger – BTN

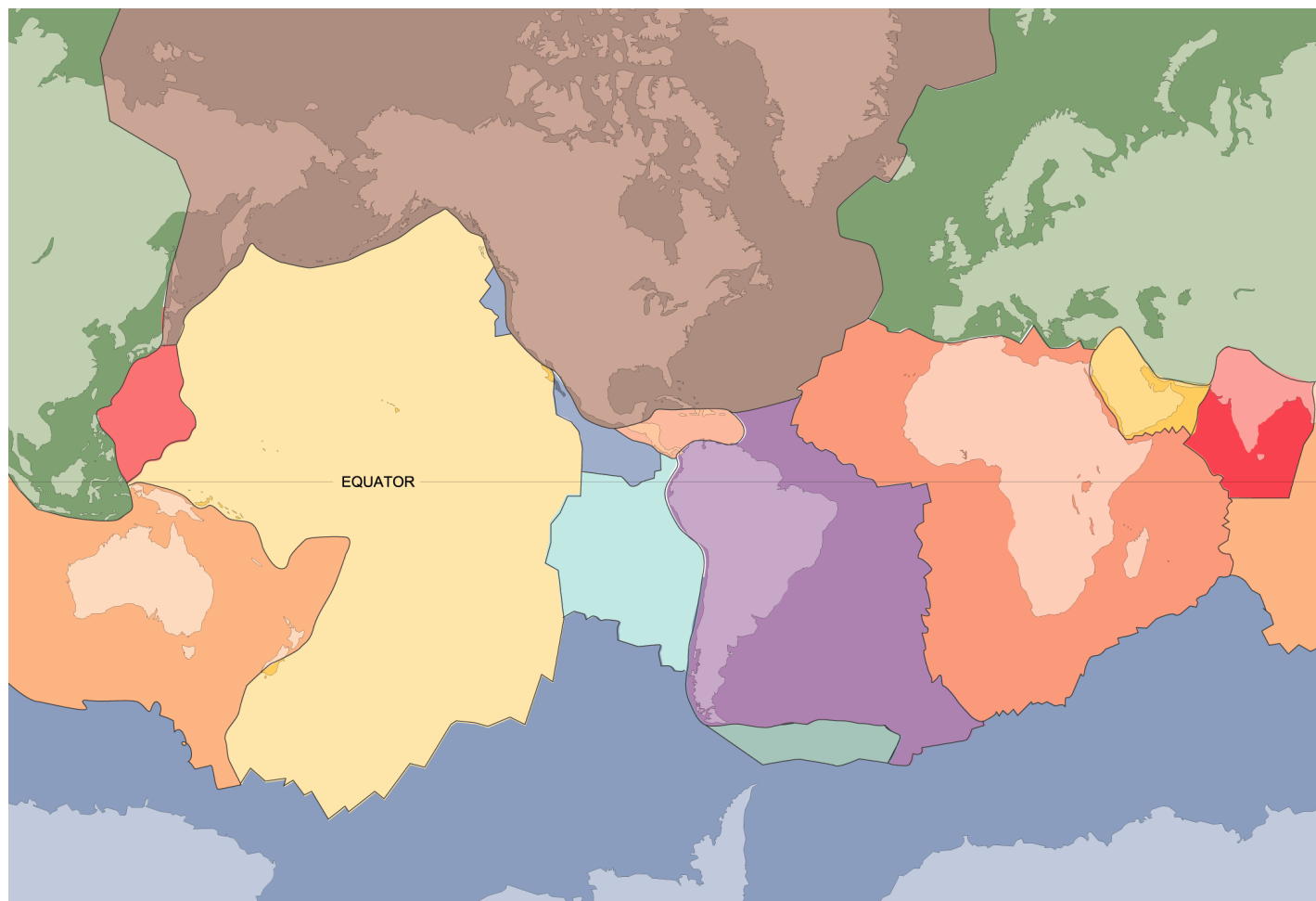
<https://www.abc.net.au/btn/classroom/everest-danger/11164010>

Sherpas – BTN

<https://www.abc.net.au/btn/classroom/sherpas/10528476>

Tectonic Plates

Locate and label the 15 major tectonic plates on the map below.



1. Antarctic plate
2. Indian plate
3. Scotia plate
4. Caribbean plate
5. Filipino plate
6. North American plate
7. Pacific plate
8. Australian plate
9. Cocos plate
10. Nazca plate
11. South American plate
12. African plate
13. Eurasian plate
14. Juan De Fuca plate
15. Arabian plate

Aquaponics School

Focus Questions

1. What are the main elements in an aquaponics system?
2. The plants in an aquaponics system are grown in soil. True or false?
3. What waste is used to help fertilise the plants?
4. Compared to most farms how much water does an aquaponics system use?
 - a. 10% less
 - b. 19% less
 - c. 90% less
5. Draw the cycle of an aquaponics system.
6. What type of fish did the kids use in their aquaponics system?
7. How often do they feed the fish?
8. What plants are they growing? Name two.
9. What do the kids do with the produce?
10. What did you learn watching the BTN story?

Activity

Class discussion

Students will discuss the BTN *Aquaponics School* story in pairs and then share their thoughts with the class.

- What do you THINK about what you saw in this video?
- What does this video make you WONDER?
- Where is the food you eat grown?
- Think of three questions you would like to ask the kids in the BTN *Aquaponics School* story.

Activity

Glossary

Students will brainstorm a list of key words that relate to the BTN *Aquaponics School* story. Students may want to use pictures and diagrams to illustrate the meaning and create their own glossary. Here are some words to get them started.

Aquaculture	Aquaponics	Hydroponics
Waste	Species	Nitrogen
Cycle	Oxygen	Fertiliser

Key Learning

Students will learn about the basics of aquaponics and investigate the biological and chemical mechanisms behind it.

Curriculum

Science – Year 4

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

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

Science – Year 5

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

Science – Year 6

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

Science – Year 7

Interactions between organisms, including the effects of human activities can be represented by food chains and food webs.

Classification helps organise the diverse group of organisms.

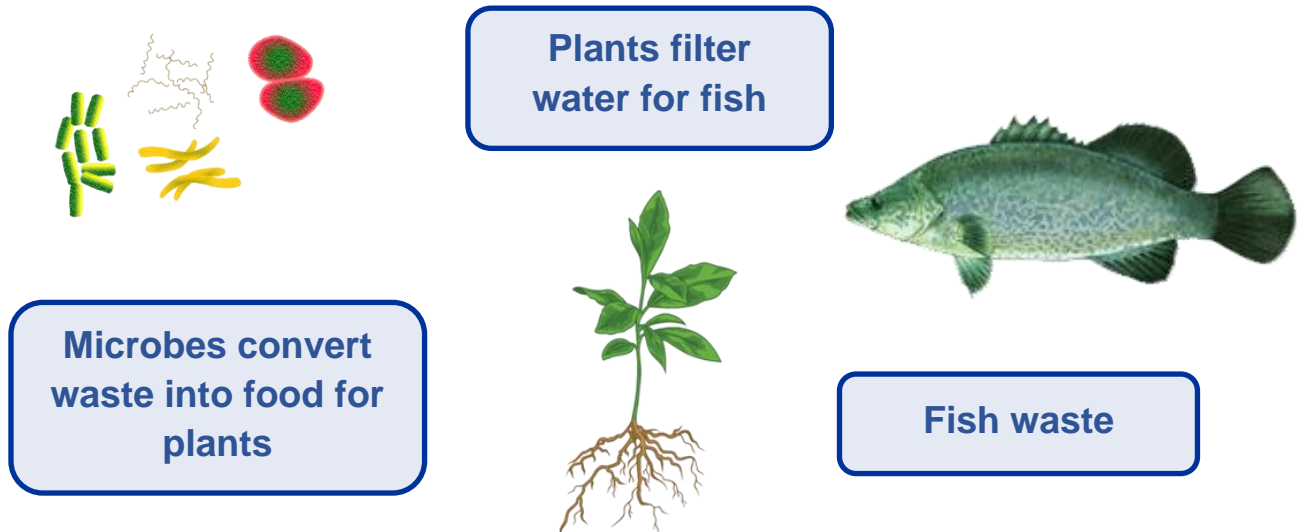
Geography - Year 4

The use and management of natural resources and waste, and the different views on how to do this sustainably.

Activity

Aquaponics cycle

After watching the BTN *Aquaponics School* story students will arrange the following images and processes and add arrows to create a diagram demonstrating the cycle of aquaponics. Students will then investigate each step of the cycle in more detail explaining the biological and chemical mechanisms behind it.



Activity

KWLH

The KWLH organiser provides students with a framework to explore their knowledge on the topic of aquaponics 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>

Questions for inquiry

Students will develop their own question/s for inquiry about aquaponics practice. Students will collect and record information from a wide variety of sources. Students may develop their own question for inquiry or select one of the questions below.

- What is aquaponics? Include the terms aquaculture and hydroponics in your explanation.
- What are the advantages and disadvantages of aquaponics for food production?
- What are the benefits of aquaponics compared to traditional farming?
- What is the aquaponics cycle? Include as many of the following words in your description as possible: animal waste, bacteria, absorb, nutrients, oxygen, nitrogen and ammonia. Draw a diagram to demonstrate the cycle in aquaponics.
- What do plants need to grow? What are the four main basic needs of a plant? If you have ever taken care of plant, describe what you have done to care for your plant.
- What do fish need to survive?

Activity

Research Project

There are many fish that can be successfully raised in aquaponics systems which are suited to the climate in Australia. These include Barramundi, Silver Perch, Trout, Golden Perch, Catfish, Murray Cod, Jade Perch, Australian Bass, Black Bream, Eels and Yabbies.

Students will choose a fish that can be raised in an aquaponics system in Australia and create a profile on that fish. Students can use the following structure to help guide their research.

Research project	
Scientific and common name	
Classification	
Describe its appearance What does it look like (shape, size, colour, special features)?	
Locate where this species can be found. Describe its natural habitat.	
What conditions does this fish need to survive in an aquaponics system? (pH levels, climate, water temperature, tank size, life span).	
What type of food does it eat (in an aquaponics system)?	
Interesting facts <ul style="list-style-type: none">What is your favourite thing about this species?What surprised you about your research?	
Photograph or illustration	

Activity

Aquaponics in your school

Aquaponics is a great teaching tool for core STEM subjects like Maths, Biology, Chemistry and Engineering. Consider whether your class could set up its own school aquaponics system, a hands-on learning experience to learn more about what aquaponics is, how it works, and the biological and chemical mechanisms behind it. Your class could then teach other students in the school about what they have learnt.

Project based learning

Watch one of the following BTN stories to learn about other hands-on projects that kids are working on at home and in their classrooms around Australia.



[BTN Worm Wee](#) – Meet some school kids who've made a business out of collecting and selling worm wee.



[BTN Bee Business](#) – Learn more about how this 10-year-old is keeping bees and collecting honey.



[BTN Endangered Seeds](#) – Meet some school kids who are working with scientists to save Australia's endangered plants by harvesting their seeds.



[BTN Bush Tucker Garden](#) – This school is growing its own Indigenous edible garden and then teaching kids how to cook with the plants they harvest.



[BTN Barra School](#) – Meet some students who breed barramundi at school that are then sold on to a restaurant for their award-winning menu.

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.

Instruction manual

Write an instruction manual with steps on how to make and care for an aquaponics system at your school. Consider using illustrations or photos to demonstrate steps in your instruction manual.

DIY Seed paper

Make your own plantable seed paper. Visit Gardening Australia for [instructions](#) on DIY Seed Paper. Think of different types of stationery you could make – for example – school notices or gift wrap!

Dirty water project

Experiment with a range of materials to turn dirty water into clean water.
Materials: dirt, water, rocks, cotton balls, cup, kitty litter, coffee filter and a plastic bottle cut in half. What worked well and what didn't work so well?

pH: acids & bases

In the safety of your [virtual lab](#), test an acid, a base and a neutral substance and use pH to identify their properties. Test solutions (e.g. vinegar) to find out whether they are acidic, basic or neutral.

Useful Websites

School aquaponics – ABC Gardening Australia

<https://www.abc.net.au/gardening/factsheets/schools-in/9433892>

Build your own aquaponics garden – Gardening Australia

<https://www.youtube.com/watch?v=HTq364RwH44>

Aquaponics Girraween Primary – ABC News

<https://www.abc.net.au/news/rural/2016-06-22/aquaponics-girraween-primary/7532704>



BTN Transcript: Episode 18 – 23/6/20

Hey, I'm Amelia Moseley and you're watching BTN. Here's what's coming up. We meet a community TV star and find out about the fight to save his channel, get a lesson on aquaculture from these school kids and find out how you go about measuring the world's highest mountain.

Statues Debate

Reporter: Cale Matthews

INTRO: But first today, to the debate over statues. All around the world, statues are being vandalised or taken down in response to the Black Lives Matter movement. It's really controversial but some say we need to have big think about the people and events that we choose to celebrate. Here's Cale.

Right now, it doesn't seem to be a good time to be a statue. Around the world some are being taken down, going swimming, or getting an involuntary makeover. So, what is it about these bronze and marble figures from the past, that's making people in the present so upset? Well for thousands of years statues have been a popular way of celebrating the things, people, or ideas that we think are important.

PROFESSOR CLARE WRIGHT, LA TROBE UNIVERSITY: Statue making or memorialising tends to say more about the people and the time and the place when the statue was erected than the person in the first place.

Professor Clare Wright is a historian, and she says statues can be a fascinating window into history. The trouble is history can be complicated. Take this statue from Bristol for example. It depicts Edward Colston, an extremely wealthy man from the 17th century who donated heaps of money to charity. The trouble is most of that money was made by selling people into slavery. There are examples like this all around the world and many say they're a constant reminder of past and present racial injustice.

PROTESTER: We remain oppressed by the police and we remain oppressed by the establishment and such monuments remain to oppress us and they remain to celebrate black oppression.

Here in Australia there have also been calls to remove statues. Like this one. This guy Charles Kingston was the premier of South Australia, but he's also known as the father of the White Australia Policy. That was a law brought in in 1901 to try and keep non-white people out of the country. And then there's John Batman who founded Melbourne, but was also involved in the murder of Aboriginal people.

MCHAE MANSELL, ABORIGINAL LAND COUNCIL: Why should Aboriginal people have to suffer the indignity of seeing these racist murderers being honoured in a statue.

Across Australia there are lots and lots and lots of statues depicting British colonial leaders, and not nearly as many honouring Indigenous Australians. For example next to many statues of explorer Matthew Flinders sits a statue of his cat, while Bungaree, a Kuringgai man who helped him circumnavigate Australia, is nowhere to be seen.

PROFESSOR CLARE WRIGHT, LA TROBE UNIVERSITY: The statues that we see dotted through our landscape right now represent ideas of power of control.

GEORGE WALLEY, ABORIGINAL COMMUNITY LEADER: I guess all we want is to have an equal say to have the right to say "listen to our story as well".

Last week protestors in Sydney defaced two statues of Captain James Cook. The vandalism made lots of people angry.

GLADYS BEREJIKLIAN, NSW PREMIER: It's very un-Australian, it's disrespectful and it's wrong.

Some say our statues represent an important part of the country's history and tearing them down would be like trying to erase the past. One solution that some have suggested is adding plaques to statues which explain the history, the good and the bad.

PROFESSOR CLARE WRIGHT, LA TROBE UNIVERSITY: And then people can come along and they make up their own minds.

Others say we could move them to museums, where people can learn more about the time period they represent, and some reckon the answer is to build more statues that represent all Australians.

PROFESSOR CLARE WRIGHT, LA TROBE UNIVERSITY: Why can't we have more statues of people who we consider to be important to the nation that we are now, a tolerant nation, an inclusive nation, a multicultural nation.

But whether you see them as monuments to history, or relics best forgotten. Some say we need to have a discussion about our statues and what they say about who we were then and who we are now.

News Quiz

Which Aussie state has had to tighten restrictions again after a spike in COVID-19 cases? It's Victoria. It's got some experts worried about a second wave of coronavirus cases.

Can you name this Aussie sports star? It's Dylan Alcott. He was less than happy with the organisers of the US Open last week when they announced there'd be no wheelchair tennis at the tournament this year because of Coronavirus restrictions.

DYLAN ALCOTT: There's obviously a lot going on in the world and they've decided to go ahead with the tournament, but they've just decided not to go ahead with the wheelchair part of the tournament with no explanation why. And to be honest, now I'm really sad.

This enormous backbone washed up on a beach in New South Wales. What does it belong to? A dinosaur, a sea snake or a whale? It's a whale. Researchers are going to do some tests to find out what sort of whale it belonged to, but it sure was a big one.

And this amazing green fireball appeared in the sky above which part of Australia last week? Was it seen in the NT, Tasmania or in Western Australia? It was spotted in Western Australia. Experts say it might have been a piece of rock or even some space junk burning up.

Community TV

Reporter: Jack Evans

INTRO: Now if you live in Melbourne or Adelaide, you might have come across Channel 31 or 44. They're Australia's last two community TV stations. But for years now they've been fighting to stay on air. Jack caught up with a young Community TV star to find out what's going on.

Meet Ethan he's like any other teenager - oh except he has with his own TV show. And today he's joining me on the couch to chat all about it!

ETHAN: My show is called Off the Couch with Ethan and it's a travel type program all about trying to get young people and their families off the couch and into the great outdoors to go and see all the great places that Australia has to offer.

JACK: You film, you present, you edit, you do everything!

ETHAN: It's pretty much a one man show. I say that but I have had a lot of help and support from so many people that have been there every step of the way. Channel 44 have really kick started my career and my passion into the media industry. They've given me this tremendous platform to show off my work. They've really given me the opportunity to experience what it's like to be involved in the TV industry because I always say that Channel 44 is like the learners plates of TV and a lot of people,

myself included, start off at community TV before they go into more commercial stations.

Channel 44 is a community TV Station that broadcasts in Adelaide. Melbourne has one too, C31, which is full of local TV shows and movies and of course the strangely popular Fish Cam. In fact, there used to be community Stations right around the country. They were set up in the 90s when the government decided to give a spare channel, UHF 31, to not-for-profit groups that wanted to give local content makers a chance to get their stuff out there on the box. Over the years they've helped to launch the careers of some famous Aussies like Hamish and Andy and Peter Helliar.

But in 2014 community broadcasters were told they had to give up their space on the broadcast spectrum. TV channels are broadcast using certain frequencies of radio waves, just like radio and 4G and Wi-Fi. But there's a limited number of frequencies and it's up to the Government to decide who gets what. The Government said it wanted to use the extra channel to test new technologies or even make space for new TV stations. It led to community stations in Sydney, Brisbane and Perth closing down.

As for Adelaide and Melbourne, they managed to extend their contracts for a few more years. But now they have been told they'll be switched off at midnight on the 30th of June. And while the station will continue online, they say it just won't be the same.

EMAN, BROADCAST MANAGER: It'll be the end of community television in Australia. It's been a thing since 1994 and has been a really good boosting place and a platform for many industry people. We lose that, we lose the ability for anybody to produce content we lose the ability for people to have a ladder into the industry and essentially I think it's going to be a really sad loss if it does come to this.

Eman and many others are still hoping the Government might have a last minute change of mind and they're getting a lot of support from their viewers. As for Ethan he says he'll continue to make TV no matter what.

ETHAN: I won't lie I'm pretty upset I really am. I've been airing my shows on there for 2 years now. If it did go through and the station closed down, I guess I'll move my work online. So, the future off the couch with Ethan is still strong. I've got big dreams and I feel like I can go out and achieve them, so yeah, stick around you never know where you might see me next.

Did You Know?

When did colour TV first come to Australia? Was it in:

1950
1965
or 1975

It was March 1st, 1975, an event known as 'C-Day' which changed viewing experiences forever.

Measuring Everest

Reporter: Olivia Mason

INTRO: Recently a group of Chinese climbers became the first this year to reach the top of Mount Everest. They were up there to measure the height of the world's highest mountain. So how do you do that, exactly – and why don't we know the height already? Here's Liv to explain.

It's the roof of the world, the highest mountain on Earth. Its snowy peak piercing the clouds at an incredible height of, wait, how tall is Mount Everest again?

GOOGLE: It's 8,848 metres tall.

OLIVIA: Thanks.

GOOGLE: You're welcome.

Alright, so it definitely seems like the height of Everest is something we should know by now right? But believe it or not, it's actually a matter of serious scientific debate. So how do you measure a mountain? Maybe you could count your steps or use a really big tape measure? No, that's not it.

The main technique that's been used for hundreds of years is maths, or trigonometry to be precise. Comes in handy after all. Surveyors measure two points on the ground and from each point they measure the angle between them and the top of the mountain to give them a triangle. Using those triangles and the laws of trigonometry they can calculate the height of the mountain. The first person to measure Everest using that method was, drumroll, George Everest back in 1856. To get the angles he had to use these things, theodolites, which weighed about 500 kilos. Fast forward to the 1950s and surveyors got a bit of help from photogrammetry; detailed photos taken from the air that they could use to measure heights and distances. Now we have even fancier technology to measure mountains, the global positioning system, or GPS. Surveyors can bring a GPS receiver to the top of the mountain where satellites in space can pick up their location and work out the height, again using triangles.

So there you go, height sorted, right? Well not quite, that 8,848 metre measurement that Google gave me actually came from an Indian survey from way back in 1955. Since then there have been a bunch of other surveys which found slightly different measurements. There's debate over whether you should count the snow on top or just the rock underneath, and there's a possibility that the height has actually changed because of erosion and earthquakes. In fact, scientists reckon this earthquake in Nepal in 2015 might've knocked some height off this very high mountain. So, with no climbers around because of COVID-19, the Chinese government decided it was time for a re-measure.

Recently, a group of surveyors made it to the summit with satellite receivers that they're hoping will give the most accurate measurement of Everest yet. They're also the first, and probably the only group to summit Everest this year thanks to COVID-19. It'll be a little while before they publish the details and while it may not totally end the debate, it might help us to agree on the height of this massive mountain. Well, at least for now.

Did You Know?

Mount Everest may not be the world's tallest mountain depending on how you measure it. While Everest is the highest above sea level if you measure from base to peak then Hawaii's Mauna Kea is higher. It's 10,210 metres from its base, although less than half of it sits above the ocean.

Aquaponics School

Rookie Reporters

INTRO: Speaking of things that are under the water, you're about to learn some more about fish and how they can help grow fresh fruit and veggies. The kids from Good Shepherd Lutheran College have their very own aquaculture set-up and they've given us a tour. Check it out.

ALL: Hi BTN.

KID 1: We're from Good Shepherd Lutheran School in South Australia.

KID 2: And today we're going to teach you about aquaponics.

KID 3: So, aquaponics is basically our system that we have here. It's where we grow a lot of plants but instead of using your normal ground and soil, we use the water and fish to fertilise like fish poo and then we sell it to our community.

KID 1: We grow veggies hydroponically which means with water instead soil with a bit of help from the fish poo.

KID 4: Fish poo has lots of nutrients in it which is good for the plants. It uses 90% less water than most farms because it is recycled through the plants and tanks.

KID 1: The plants are helping filter the water which means it is clean by the time it gets to the fish.

KID 4: So, it's like a little cycle. The fish help the plants and the plants help the fish.

KID 5: So this is where it all begins, we've got some goldfish in here, small perch in here.

KID 2: They start off very small but some of them like the rainbow trout they grow very quick, very fast. And the perch they grow a little bit slower, but yeah they can get quite big and heavy. We have to make sure that they're fed every day and we do quite a lot of tests to make sure that the water is the right temperature and it's not too toxic for the fish so they can stay nice and healthy.

KID 6: The fish group is basically the roots of it because if the fish group fails then the whole project fails. So the fish group, we need to make sure the fish stay alive so they can help the produce grow.

KID 3: When we first get our seedlings they're extremely small but then we just take them out of their pots that they come in which is really easy and then we put them in the cups and then a few weeks later they're really big and they're ready to harvest. Right now, we are growing spring onions, chives, butter lettuce, regular lettuce, English spinach, snow peas, and rocket. So, this is a bok choy and we can tell it's really healthy because it's just really big and it has no wilting leaves on it.

KID 2: We've learnt a lot about taking care of things especially the fish and how to test the water and how to feed them and handling them safely.

KID 2: I've also learnt how to plant and harvest a lot of things so that's a lot of fun.

KID 6: My favourite thing about aquaponics is crunching down the numbers because I'm a bit of a maths geek. I like looking at the difference between selling and making.

KID 2: It's just a great opportunity to try something new and it's really fun and it's become a hobby that I really enjoy.

KID 3: I think it's really just that we get to all come together and play a part in this amazing thing that we do but I do also just really like gardening. It's really fun.

KID 1: Thanks for letting us teach you about aquaponics. Bye.

Sport

The AFL has had a major hiccup. Essendon defender Connor McKenna tested positive for COVID-19 on the weekend forcing their clash with Melbourne to be postponed. The Victorian Chief Health Officer has said some of McKenna's teammates will probably have to quarantine. The AFL aren't exactly sure if Essendon will play next week and the whole team will have to undergo more testing to make sure they're good to go.

Alright let's get to some games that were played. In the NRL the Sydney Roosters have toppled the Parramatta Eels' five game winning streak. The Roosters looked to be in a bit of strife when Maika Sivo absolutely poleaxed James Tedesco, but a late try from Daniel Tupou sealed the deal for the reigning premiers.

And we'll leave you with a world first from gymnastics superstar Simone Biles. She took to twitter to unveil a brand-new trick, a triple-twist double back off the beam. But you won't be seeing it in comps any time soon. The Gymnastics International governing body says the trick is too dangerous for competition. So, kids, do not try this at home.

COVID Reflections

Rookie Reporters

INTRO: Well this is our last episode for the term, and it's been a pretty strange few months, right? So, before we go today, we thought we'd check in with some kids around the country to see how they've

been coping with life under lock-down like and how they're feeling now. Take a look.

CARA: Hi BTN I'm Cara and I'm here from Hallett Cove.

ARYAN: Hi BTN, my name is Aryan and I am from Bundoora Melbourne.

ALICE: Hi BTN, my name is Alice and I'm from Sydney.

AVA: Hi BTN, I'm my name is Ava and I'm from Adelaide.

ELSHA: The past few months have been weird and unexpected. It wasn't like super scary, but it was kinda like scary to think it was affecting so many people.

FRANKIE: When the lockdown restrictions started I kinda felt sad. I thought it would only go on for a week or so. It went on for much longer.

MAX: All my sport competitions were cancelled; it was hard, I couldn't see my best friends and if one of my family had a birthday we couldn't go out and have cake and celebrate it, we had to stay inside and do it via zoom.

FRANKIE: Life became boring-er because we couldn't see our friends and like I really missed them.

CHARLOTTE: Yeah it got very lonely, I mean sure you like got to like see everyone on Zoom but it's not really like the same.

CARA: I found it challenging learning from home because we can't ask the teacher direct questions and I can't concentrate too well.

ARYAN: During remote learning I have more leisure time because I didn't have to get dressed, pack my lunch in the morning drive to school and back and more.

ALICE: Because I've been given the timetable of what we needed to do I could like manage my own time and I could pretty much eat when I wanted which was good for me because I love eating.

CHARLOTTE: What has been your favourite thing about restrictions lifting?

FRANKIE: Seeing you guys again like seeing friends and like teachers and like being able to get outside of your house, without being worried.

ELLIE: Yeah, I never believed that I'd be excited to go back to school.

AVA: Very happy because I can catch up with my family and friends face to face again. Now that we're allowed to go camping again, that's pretty awesome as well.

CARA: I'm looking forward to getting used to normal routine and getting back to normal stuff and looking forward and seeing what's next.

MAX: We need to make sure we continue to wash our hands.

AVA: Keep social distancing and keep wiping down surfaces.

ALICE: All I can say is hang in there you're all doing good and no matter what we're all in this together. So, keep up the good work.

Closer

Thanks so much for that everyone. Remember to look after each other, wash your hands and have a great holiday. We're going to be off for a few weeks, but BTN Newsbreak will be on every weeknight as

usual all through the holidays. There's also heaps to see and do on the website and if you're 13 or over, you can subscribe to our YouTube channel, so you never miss a thing. I'll catch you soon. Bye!.