

**EPISODE 13**
21st May 2024

**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.

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.

# Inflation

1. Approximately how much did a house cost in the 1960s?
2. What is inflation?
3. What can cause inflation? Give one example.
4. What can help reduce inflation?
5. What did you learn watching this story?

# Flu Season

1. Summarise the BTN Flu Season story.
2. The flu is caused by
	1. A type of bacteria
	2. A parasite
	3. A virus
3. What are some symptoms of the flu?
4. What can people do to prevent the flu from spreading?
5. What questions do you have about the BTN story?

Check out the [teacher](https://www.abc.net.au/btn/weekly-teacher-resources/10746906) resource on the Archives page.

# Doxxing

1. What is doxxing?
2. How many Australians have been doxxed?
	1. 1 in 10
	2. 1 in 20
	3. 1 in 50
3. What can you do if you’re being doxxed?
4. What can you do to avoid being doxxed?
5. What do you understand more clearly since watching the BTN story?

**Solar Storms**

1. What is another name for a solar storm?
	1. Aurora
	2. Eclipse
	3. Flare
2. What causes a solar storm?
3. What does a solar storm look like? Illustrate.
4. What protects the Earth from most of the sun’s energy?
5. What impact did a solar storm in 1859, called the Carrington event, have on people?

**Young Volunteers**

1. How are the kids in the BTN story helping others in their community?
2. Why did the community start the event?
3. What do the kids learn by volunteering?
4. Why do the kids in the BTN story think it’s important for kids their age to be volunteering?
5. How did this story make you feel?

Check out the [teacher](https://www.abc.net.au/btn/weekly-teacher-resources/10746906) resource on the Archives page.



**EPISODE 13**
21st May 2024

**KEY LEARNING**

Students will learn more about the influenza virus and the role vaccines play in controlling disease.

**CURRICULUM**

**Health and Physical Education – Year 3 and 4**Identify and practise strategies to promote health, safety, and wellbeing.

**Health and Physical Education – Year 5 and 6**Plan and practise strategies to promote health, safety and wellbeing.

**Health and Physical Education – Year 7 and 8**Investigate and select strategies to promote health, safety and wellbeing.

Plan and use health practices, behaviours and resources to enhance health, safety and wellbeing of their communities.

**Science – Year 5 and 6**Scientific knowledge is used to solve problems and inform personal and community decisions.

Teacher Resource

**Flu Season**

# 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. Summarise the BTN Flu Season story.
2. The flu is caused by
	1. A type of bacteria
	2. A parasite
	3. A virus
3. What are some symptoms of the flu?
4. What can people do to prevent the flu from spreading?
5. What questions do you have about the BTN story?

# A picture containing jelly fungus, orange, egg, colorful  Description automatically generatedActivity: Class Discussion

**Before watching**

Before watching the BTN Flu Season story students will discuss in pairs or small groups what they already know about the flu and how it impacts people. Have they ever had the flu? How did it make them feel? What symptoms did they have?

What do you know about the flu?

**After watching**

Students will respond to one or more of the following questions after watching the BTN story:

* What are some symptoms of the flu? Make a list.
* What are treatments for the flu? Make a list.
* What are health experts warning about the flu season this year?
* Why is vaccination considered important, particularly for those who are high-risk?
* Think of three questions you have about the story.

# Activity: Word Cloud

Students will brainstorm a list of key words that relate to the BTN Flu Season story and create a word cloud. A word cloud is a visual made up of important/key words relating to a topic. Ask students to think of words they associate with influenza. Create a word cloud using a free online word cloud creator such as [MonkeyLearn](https://monkeylearn.com/word-cloud/) or [Word It Out](https://worditout.com/word-cloud/create). Working in pairs, students can clarify the meanings of the words included in their word clouds.



# Activity: Flu Research

Discuss the information raised in the BTN Flu Season story. What questions were raised in the discussion and what are the gaps in students’ knowledge? Students will develop their own question/s to research or choose one or more of the questions below.

* What is a virus? How do they spread and why do they make us sick?
* What is influenza and how does it differ from the common cold? Create a Venn diagram to show the similarities and differences.
* How does influenza affect the body? Use the following scientific words in your description: symptom, virus, immune system, and antibodies.

Create a flow chart to show the body’s reaction to influenza. Include the virus entering the body, the immune system’s reaction, and the physical symptoms.

* How does the immune system respond to the flu and how do vaccines help to protect against it?
* How does the influenza virus spread? What can be done to prevent it spreading?
* How does the influenza virus change over time? Why do we need a new flu vaccine each year?
* What are some myths about influenza and colds? For example, you can catch colds and flu from cold weather or getting caught in the rain.
* What are some reasons why people choose not to get vaccinated?

# Activity: What are vaccines?

Students will investigate what a vaccine is and the impact they have had on controlling disease. They will then research the impact a particular vaccine has had.

* What is a vaccine?
* What vaccines do you know about?
* What vaccines have you received?
* How do vaccines work?
* What impact have vaccines had on controlling disease?
* Why are most vaccinations given in the early years of a person’s life?
* Why is it important to vaccinate against rare disease?
* What is the future of vaccinations? Predict what vaccines may be available during your lifetime.

**Further Investigation:**

Investigate the impact a particular vaccine has had on controlling disease. Choose from one of the following: *Polio, MMR (measles, mumps, rubella), diphtheria, tetanus, whooping cough, Hepatitis B or Chicken Pox.*

# 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.



**Public Education Campaign**

Design a public education campaign to raise awareness about influenza and ways the public can protect themselves.

**History of Vaccines**

 Students match the scientist to the disease they helped prevent by playing the [Pioneer Breakthroughs matching game](http://www.historyofvaccines.org/content/pioneer-breakthroughs)

**Did you know?**

Using the information in the BTN story and your own research, create a *Did You Know* fact sheet to show what you have learnt. Publish using [Canva](https://www.canva.com/en_gb/)

**Quiz**

Create a true or false quiz to test your classmate’s knowledge about influenza.

# Useful Websites

* [NSW’s flu season is on track to arrive early. But who’s at risk, and should we be concerned?](https://www.abc.net.au/news/2024-05-13/nsw-flu-season-early-who-at-risk-should-we-be-concerned/103816646) – ABC News
* [Flu Season Concerns](https://www.abc.net.au/btn/classroom/flu-season-concerns/102485226) – BTN
* [Flu Season](https://www.abc.net.au/btn/classroom/flu-season/13912334) - BTN
* [Flu](https://www.healthdirect.gov.au/flu) – Health Direct
* [Influenza](https://www.betterhealth.vic.gov.au/health/conditionsandtreatments/flu-influenza) – Better Health Channel



**EPISODE 13**
21st May 2024

**KEY LEARNING**

Students will explore the benefits of volunteering and think of ways that kids can volunteer.

**CURRICULUM**

**HASS – Year 4**

Locate and collect information and data from different sources, including observations.

**HASS – Year 5**

How people with shared beliefs and values work together to achieve a civic goal.

**HASS – Year 6**

The obligations citizens may consider they have beyond their own national borders as active and informed global citizens.

**Health & PE – Years 5/6**

Investigate community resources and ways to seek help about health, safety and wellbeing.

**Health & PE – Years 7/8**

Practise and apply strategies to seek help for themselves or others.

Teacher Resource

**Young Volunteers**

# 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. How are the kids in the BTN story helping others in their community?
2. Why did the community start the event?
3. What do the kids learn by volunteering?
4. Why do the kids in the BTN story think it’s important for kids their age to be volunteering?
5. How did this story make you feel?

# Activity: What did you See, Feel and Learn?

As a class ask students to discuss their thoughts and feelings about the BTN Young Volunteers story. Use the following questions to guide discussion:

* What did you SEE in this video?
* How do you FEEL about what you saw in the story? Make of a list of words that describe how you felt after watching this story.
* What did you LEARN from the BTN story?
* What QUESTIONS do you have? Think of three (open-ended) questions you would like to ask about the story.

# Activity – Class Discussion

Discuss the BTN Young Volunteers story as a class, using the following questions to guide the discussion. Record the main points on a mind map with ‘VOLUNTEERING’ at the centre.

* What is a volunteer?
* What are some examples of volunteering?
* Why do people volunteer?
* What are the benefits of volunteering? (To themselves and the community).

# Activity – Kids Volunteering

In this activity students will understand the concept of volunteering, and then explore various ways they can get involved in volunteering activities. Begin by asking students to respond to the following questions:

* Do you want to volunteer? Give reasons.
* Have you ever done any volunteer work? If so, explain in more detail. Maybe you've helped on 'Clean Up Australia Day' or volunteered to be on the student representative council at your school.
* If you have volunteered, how did it feel? Is this an experience you'd like to have again?

Brainstorm ways that you or your class as a whole can get involved in volunteering. Make a list of organisations that offer opportunities for primary school aged children to volunteer. Before you approach a volunteer organisation, ask yourself:

* What sorts of things do they do?
* Is it something you’re passionate about?
* Will they need your help?
* Is there a reason they might not be able to use a student volunteer?

Lots of young people volunteer, but not every organisation can take on a younger person. Brainstorm some different ways that kids can volunteer. For example:

* You could volunteer with your class or your family and friends.
* If you love animals, you could help care for dogs, cats, bunnies and other animals at your local animal shelter.
* If you like being with people you could help at a local nursing home.
* If you like nature you could count wildlife or plants to help the planet.

# Activity – Jigsaw learning

In this activity students will work cooperatively to understand the importance of volunteering in the community. Each group will become experts and then share what they have learnt with other students. As a class brainstorm a list of organisations where people volunteer. It could be in a range of areas including health, welfare, environment and conservation, safety services, service clubs, heritage, sport, the arts, and culture!



# Form Groups

Divide the class into 4 x Focus Groups. Each Focus Group will be assigned a different organisation where people volunteer. Below are some examples of organisations where people volunteer:

* Foodbank volunteers ([BTN story](https://www.abc.net.au/btn/classroom/foodbank-volunteers/102332018))
* SES Volunteers ([BTN story](https://www.abc.net.au/btn/classroom/fire-season-warning/102841708))
* St John Cadets ([BTN story](https://www.abc.net.au/btn/classroom/st-john-cadets/13878428))

Each group will need to decide how they will collect and communicate the information they find during their research.

# Research

Students can search for news articles and other publications to help with their research. Each Focus Group will respond to one or more of the following questions to become experts:

* What is the purpose of the organisation?
* Who can volunteer? Can young people volunteer?
* What jobs do volunteers do?
* What people in the community benefit from this organisation?
* Think of an interesting way to teach other students about this organisation.

# Share

Mix the Focus Groups to form Task Groups (Tasks Groups include one student from each of the Focus Groups) to share the information they have collected. Students will share the information they have collected and learn from one another.

# Reflect

Students will reflect on the activity by responding to one or more of the following questions:

* What did you enjoy about this investigation?
* What did you find surprising?

# 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.



**Interview**

Identify an outstanding individual in your community who volunteers. Conduct an interview to learn about their experiences. Nominate them for a community award!

**Human Interest Story**

Highlight a person or group in your community that volunteers. Write a human interest story about them and the work they do and publish it in your school newsletter.

**Design a Poster**

Find out ways that people volunteer in your school community. Design and create a poster which celebrates volunteers in your school community.

**Persuasive Text**

Write a persuasive text urging kids in your community to volunteer. Highlight the benefits of volunteering and suggest ways kids can volunteer.

# Useful Websites

* [National Volunteer Week](https://www.volunteeringaustralia.org/get-involved/nvw/) – Volunteering Australia
* [Fire Season Warning](https://www.abc.net.au/btn/classroom/fire-season-warning/102841708) – BTN
* [St John Cadets](https://www.abc.net.au/btn/classroom/st-john-cadets/13878428) – BTN
* [Foodbank Volunteers](https://www.abc.net.au/btn/classroom/foodbank-volunteers/102332018) – BTN
* [Cooking with Kindness](https://www.abc.net.au/btn/classroom/cooking-with-kindness/13585730) – BTN
* [Young Cemetery Volunteer](https://www.abc.net.au/btn/classroom/young-cemetery-volunteer/13140870) – BTN
* [Heywire: Volunteers needed! Motivate your audience](https://www.abc.net.au/education/heywire-volunteers-needed-motivate-your-audience/13934158) – ABC Education



Teacher Resource

**BTN Transcript: Episode 13 - 21/5/2024**

Yaama, I'm Jack, and you're watching BTN. Here's what's coming up. We find out why the flu has made an early appearance this year, learn about plans to fight doxing and meet some young volunteers serving up lunch and laughs.

# Inflation

Reporter: Joe Baronio

*INTRO: But first today we're going to explain a word that you might have heard a lot recently and that's inflation. It's something the government has tried to fight in this year's budget. But as Joe found out, it's a delicate balancing act.*

RING MASTER: Ah! Roll up, roll up to Joe's Spectacular Economic Circus, featuring the bull market... the cost-of-living contortionists, the RB acrobat, the surplus strongman and, the main attraction, Australia's Treasurer, walking the inflation tightrope.

Joe Baronio, Reporter: Yep, inflation is the balancing act that has everyone on the edge of their seats right now.

RING MASTER: But to understand what it is, we need to go back in time.

If you go back to about the 1960s when your grandparents were kids things were much cheaper. A house would cost around 12,000 dollars, you could pick up a sweet new ride for about 2 to 3,000 bucks, and food was priced in cents. But, if we fast forward to today, all of these things cost a lot more, and that's because of inflation.

RING MASTER: But, ladies and gentlemen, you may be wondering, why does inflation happen?

Well, usually it's because demand outweighs supply. Basically, there are more people wanting to buy stuff than there is stuff to buy, which might seem familiar. It can happen for a few reasons like, say, a global pandemic which shut down a whole bunch of factories and led to empty shelves, a natural disaster like a flood, which turned an iceberg lettuce into a luxury item, or an increase in the cost of transport and raw materials because of human-made disasters.

RING MASTER: But it can also happen because there is too much money. Yes, that's a thing.

If people have more money, say, because unemployment is down and wages are up, they're more likely to spend it, and businesses are more likely to take advantage of that and jack up their prices. A little bit of inflation is good because it means the economy is growing, but too much means the economy can start to wobble. That's where the balancing act begins. One of the main counterweights to inflation is interest rates. The Reserve Bank can make it more expensive to borrow money in the hope it'll slow down spending and drive down prices, but that can have a big impact on families who are paying off their home, and it can lead to higher rent. That, combined with all those other high prices means lots of people are struggling right now.

RING MASTER: Now, ladies and gentlemen let's see what happens when we throw the budget into the mix.
One of the big challenges the government faced in this year's budget was balancing the need to help people deal with the cost-of-living crisis while bringing down inflation.

Jim Chalmers, Treasurer: The combination of providing a tax cut for every taxpayer, energy bill relief for every household, rent assistance for people who receive rent assistance, collectively we hope that takes some of the pressure off people and it will put downward pressure on inflation.

But not everyone thinks they've successfully walked that tightrope.

PETER DUTTON, OPPOSITION LEADER: This is an inflationary budget, and it will make it harder for interest rates to come back and it will make it more difficult for families and small businesses for longer.

Some are worried that the tax cuts and money being handed out in the budget will lead to increased spending and push inflation even higher, and while the government reckons it'll be back on track by next year, the Reserve Bank doesn't agree.

RING MASTER: There's no doubt about it folks, it's a difficult act to pull off. Will he stay sure-footed? Or will he stumble? We'll have to wait and see.

**News Quiz**

What unusual activity did the US Secretary of State do when he visited Ukraine last week? Did he, play soccer, play the guitar or act in a play? He played the guitar and sang in a bar. Anthony Blinken rocked out to the Neil Young song, Rocking in the Free World, after telling the crowd they were fighting not just for a free Ukraine but a free world.

What’s been stuck in this lady’s car for the past six weeks? It’s a snake. Lisa, who lives in Newcastle, called in snake catchers when she found the red-bellied black on her back seat, but no one has been able to catch the slithery passenger who she’s affectionately nicknamed Fluffy.

Which of these fancy furry finalists took out best in show at the Westminster dog show in New York? Was it, Louis the Afghan hound, Mercedes the German Shepherd, Comet the Shih Tzu, or Sage the miniature poodle? It was Sage the miniature poodle whose owner was very proud.

# Flu Season

Reporter: Jack Evans

*INTRO:* *Well, it's a good time to dust off the hand sanitiser and practice that old social distancing because flu season is here. Experts say it's arrived earlier than usual, and they're worried not enough people are being vaccinated. Take a look.*

*ANNOUNCER: We now return to The Tonight Show with George George.*

GEORGE: Give it up for our house band. Now, our next guest is back with a brand-new season that critics say will have you coughing and sneezing. It's influenza A.

FLU: Oh, come on now George George, just call me The Flu everybody does.

GEORGE: Alright The Flu, now your back with a new season and it's only May.

FLU: Look what can I say, I'm a little early this year but I'm just giving the fans what they want.

Yeah, while I'm not sure there are a lot of fans of the flu out there, it does look like flu season is a bit earlier this year than expected.

NEWS REPORT: We're being urged to roll up our sleeves now with the flu season coming really quickly.

NEWS REPORT: There are real fears our nation is heading into another horror flu season.

NEWS REPORT: Australia is experiencing an early wave of the flu season.

The flu or influenza is a virus. You can catch it through the spit or mucus of someone infected. Symptoms are pretty similar to a common cold. I'm talking runny nose, sore throat, headaches. But while colds usually fizzle out after a few days, the flu can be serious especially if you're very young, very old or have a medical problem.

GEORGE: This season is already rating very high.

FLU: Yeah well, they'd be higher, but whenever I enter a room everyone's like "Oh no, here comes the flu. Run." I mean get over yourselves.

AUDIENCE: Boo.

FLU: Oh, what do you expect I'm a virus.

In Australia flu season typically runs from May to September, the colder months. But for the past few years we've seen cases appearing earlier and earlier. Experts say one of the reasons why is another virus, Covid 19.

FLU: Oh, Covid that spotlight stealing diva.

Because Covid kept us inside for a long time our immune systems didn't have as much exposure to germs and viruses and got less practice fighting them off. We've also been doing a lot more socialising and travelling recently which helps to spread viruses like the flu. Oh, and err Covid, yes, it's still around too.

It's the reason health professionals are encouraging people to get vaccinated.

STEVEN MILES, PREMIER OF QUEENSLAND: Now is the time to get your flu shot.

GEORGE: Now what are your thoughts on vaccines?

FLU: Don't get me started, I can't stand them.

GEORGE: Then sit down.

FLU: I can't, I'm a floating microbe.

Vaccines work by basically introducing your body to a virus, it's not an active virus so it can't make you sick. But it does teach your body how to fight off the real thing if it comes along.

DR CATHERINE McDOUGALL, ACTING CHIEF HEALTH OFFICER: You get vaccinated to protect yourself, to protect your loved ones and to protect the community.

Unlike some other vaccines you have to get a flu shot every year.
GEORGE: Let's talk your wardrobe

FLU: Honey, I have more wardrobe changes than a BTN reporter. One day I'm H1N1, the next I'm H3N2 I can't keep up.

There are lots of different styles - I mean strains - of Influenza. And those strains can change slightly over time. It's the job of scientists like these to find out which strains are around so they can create new vaccines to help prevent them. But experts are worried that this year not as many people have been getting vaccinated.

ERIN KONG, PHARMACIST: I think everyone's feeling like the fatigue from vaccines. So definitely not as many people coming in for the flu shot this year

There are other things you can do to protect yourself.

FLU: You know I've always said laughter is the best medicine.

GEORGE: Oh, really? Well, I would have said to wash your hands regularly, keep away from people who are sick, and if you are sick, then make sure you cover that cough and keep away from others.

FLU: Oh, sure, George George. You're too much!

GEORGE: Oh, no, you're too much. Stay away! Seriously, stay away.

FLU: Not if I can help it.

**Doxxing**

Reporter: Amelia Moseley

*INTRO: The Federal Government is looking at bringing in new laws to target doxxing. It's something that's happened to a lot of Australians including many kids. Here's Amelia.*

PERSEPHONE: It happened last year, when I was still in year seven. Me and one of my friends were on like a server for a game in development and then one of the people friended me and I was, like, "oh yeah, OK". And then we got into like a bit of a fight in the server. I don't know how but he found out where I lived. And then he messaged my friend saying, "Hey, make her do this, or I'm going send her location out". He posted my location on the group. I was like, "Ok, what's going happen? Am I going to be okay?". But it was still very traumatic.

MASON: About two years ago, my friend was playing some game and he got the highest score. And about five minutes after that someone sent in the public chat, his IP address. And then about a day later a few of his accounts said they'd reported suspicious activity.

ALEX: When I was 15, I was playing Call of Duty online. And you know, me and another player got into a little bit of a heated argument. And from there, he found my IP address, which he used to find my actual address and start sending pizzas to my house and Uber Eats to my house. Family was distraught. They were just as, as worried and scared as I was. I was worried if my life might be in danger, if they'd send other people to my house. I never knew who was going to be there. I didn't know if they were going to show up.

AMELIA MOSELEY, REPORTER: What Alex, Mason and Persephone are talking about is doxxing.

DR JENNIFER BECKETT, University of Melbourne: So Doxxing is a shorthand term for basically a dump of documents. So, we might be searching through people's social media feeds to try and figure out where they work or where they live. It's the behavior of going and finding all of that information and collating it and putting it in one place and making it accessible to other people. And the thing that makes it doxing is about using it maliciously.

Stats show about one in 20 Australians have been doxxed. And younger Aussies are more likely to be affected by cybercrimes including doxxing.

PERSEPHONE: I do think a lot of people my age, and even younger, older would get doxxed because sometimes you can like, say yeah, okay, I'm gonna trust you, you seem really nice. And then you don't know who they are behind the screen.

Doxxing isn't exactly a new thing. But as we all put more and more info online, it's becoming easier for your average person to dox, often as retaliation or because someone doesn't like something someone else is saying or doing.

DR JENNIFER BECKETT: Sometimes, people do it because they genuinely think that they're doing the right thing. Sometimes it comes from a place of what we call moral outrage, which means you see something that you really don't like, it doesn't fit with your values and your view of the world. And so what you want to do is to call it out.

DR SIMON COPLAND, ANU School of Sociology: I think it's really important for anyone, when they're engaging online, to take a step back and think about what could be the consequences of what I post.

Recently the government announced it's looking into creating specific doxxing laws to try to tackle the issue more directly, after the details of a WhatsApp group involving hundreds of Jewish Australians was published online.

MARK DREYFUS, ATTORNEY-GENERAL: We want to protect all Australians. No one should be the subject of this kind of malicious activity because of who they are, or what they believe.

But some are worried that if the new laws are too general, they could get in the way of what's known as 'white hat doxxing'. That's done by professionals, like investigative journalists, some hackers and whistleblowers.

DR JENNIFER BECKETT: Because a lot of that has called out things like massive crime syndicates, human rights abuses.

DR SIMON COPLAND: I also think we have a bunch of harassment laws. Really doxxing is a form of harassment. We need more work actually in enforcing the rules that we've already got.

What would your advice be to people that want to avoid doxxing happening to them?

MASON: My advice would be to not put a bunch of information online and not talk to people you don't know.

PERSEPHONE: My advice would be not to let it get to you. Just make sure you block all these people. Tell your parents. Even if you think you might be in trouble it's better to be in trouble than to have someone possibly harm you in real life.

ALEX: And don't blame yourself for it. You know, it wasn't on you. It's another person doing very bad things.

**Solar Storms**

Reporter: Joe Baronio

*INTRO: Next up we're going to talk about storms but not the sort that cause rain or hail, the sort that cause these. Recently we were treated to some of the best Auroras that we've seen in more than 20 years, and it was thanks to a massive storm on the sun. Here's Joe.*

If you live near the north or the south of planet Earth, you might have been treated to a sight like this recently. But it's not the work of ET and a whole lot of intergalactic fireworks. It's an aurora and it's all thanks to the sun. You see, this old gas-ball of daylight is a nuclear furnace. Its core is a toasty fifteen million degrees Celsius. And that energy radiates slowly outwards, kind of like a pot boiling on a stove until it reaches the surface and is carried out into space as heat and light, along with millions of tonnes of charged particles every second. But…

Dr. Karl Kruszelnicki, ABC Science commentator: Every now and then it has a hissy fit, and instead of throwing out a million tonnes from its entire huge surface area, it throws out a billion, a thousand times more, or ten billion, and from just a little small area.

Those small areas are called sunspots which are cooler, darker patches on the surface, known to spit out flares of charged particles called solar storms or Coronal Mass Ejections, and recently one sunspot named AR 3664 had what Dr. Karl would call a major hissy fit. In just a couple of days, AR 3364 burped four huge bubbles of super-hot, geomagnetic plasma, which hurtled towards Earth at between 250 to 3,000 kays per second. Luckily, the earth has a magnetic field which protects us from most of the sun's energy, but as the solar storms pass around us the charged gas particles funnel down into our atmosphere at the north and south poles, reacting with gases and glowing in our upper atmosphere, painting the skies red, green, pink, blue, and violet.

Prof. Andrew Cole, University of Tasmania: This was the strongest event of this kind to hit the Earth in about 20 years because the sun goes through periods where it's quite active or it's very quiet, and we happen to be in an active phase at the moment.

Scientists around the world are always on the lookout for solar storms, and not just so they can spot auroras.

Prof. Andrew Cole: While it's a beautiful kind of thing to look at, it has a lot of consequences for a technological society.

Solar storms have the potential to damage technology in space that we rely on for things like communication and navigation and could even be risky for astronauts.

Dr. Karl Kruszelnicki, ABC Science commentator: There have been satellites that have died in orbit, at the moment we have about 7 and a half thousand working satellites in orbit, and we'll see - when we get the data back - how many of them died.

There was even a solar storm back in 1859 called the Carrington event, which interfered with telegraph communication here on Earth. As well as causing the brightest aurora in recorded history.

Dr. Karl Kruszelnicki, ABC Science commentator: It woke people up who thought it was sunrise, it was so bright you could read a newspaper by it.

While experts aren't expecting anything that big, they reckon we could see more auroras over the next few months. Unfortunately, they can't tell us exactly when they'll happen. So, we'll just have to find a comfy bush and keep our eyes peeled.

# Sport

It was a sea of blue here in Manchester as Man City beat West Ham 3-1, to claim yet another English Premier League title. This is the team's fourth title in a row which is something no other English football team has ever done before.

Now to another broken record - the opening game of the 2024 Women's State of Origin.

COMMENTATOR: The Blues take Origin one.

About 25,500 people went to the clash, which is nearly double the turnout for last year's series opener, and more than a whopping 940,000 people watched the game on TV, making it the most watched Women's State of Origin match on record.

COMMENTATOR 2: There's no bums left in seats after that.

# Young Volunteers

Reporter: Amelia Moseley

*INTRO: This week is National Volunteer Week which is all about celebrating the hard work and dedication of volunteers around the country. So, Amelia went to meet some schoolkids in the Adelaide Hills who help out at a community centre once a month and have lunch with the locals. Check it out.*

AMELIA: Hey Paige.

PAIGE: Hi Amelia, this is Karra Watta cafe, do you wanna come in?

AMELIA: Yeah, let's do it. OK. Lead the way.

PAIGE: So, we're going to set up all the tables. Then, we're going to do the chairs and then set up all the tablecloths and all the plates and cutlery and flowers and everything.

Paige, and her classmates, are here to help.

PAIGE: We like to volunteer here because we can give back to the community and help them out. Because of that, the stuff that they've done for us.

SOPHIA: Today we'll be serving elderly people and talking to them and having conversations. Helping them with their food.

And, unlike me, these kids know exactly what they're doing.

AMELIA: Have I done that properly, Paige?

PAIGE: Yup.

AMELIA: OK perfect.

This isn't the first time they've all volunteered at their local community centre. In fact, students from their school come here every month to help host this lunch for locals.

SOPHIA: I'm in my last year of school now, and I've been doing it for three years. This is my sixth time and I'm really enjoying it.

PAIGE: I've started this in year four. And every time we rotate.

SHAUN BARBER, Principal, Norton Summit Primary School: We have students who get quite excited when it's their turn, and then a little bit disappointed when it's not their turn.

It's not just about the providing a tasty lunch though, it's also about sitting down and having a chat - now, at least that is something I can do. The event actually started a few years ago to help tackle loneliness.

ASHTON: Older people think it's great to come here and have a good time chat with everybody.

SOPHIA: I've met one lady that came to our school, and she used to tell stories about all the teachers that had been there - was really nice.

HEATHER WEBB, CAFE CUSTOMER: If I think that people enjoy having the students around? I'd say definitely, yes. It's just more interaction with a different age group.

SANDY MACGREGOR, EVENT ORGANISER: The interaction is just fantastic. They usually love it. To coin a phrase, "It's a vibe."

But these young volunteers get a lot out of it too.

SOPHIA: You learn a lot of social skills and it's fun to talk to other elderly people and have conversations, you learn a lot.

GORDON TRESTRAIL, CAFE CUSTOMER: It's given them a bit of experience in mingling with people. It gives them something to do, and I'll bet every one of them like being here rather than at school.

Oh, and there is one other little perk.

PAIGE: Plus, we get some extra food on the side of it.

SOPHIA: The food is really great. We usually get free food. They treat us really, really well, so it's fun and enjoyable for everyone to come.

But whether your volunteering experience involves free food or not, these kids reckon you should get up and give it a go.

PAIGE: I think it's really important for our age to be volunteering, because so many of the other generations help out and like we should give back to them. I would, like, ask your local community, or just, even just helping out a neighbour or anyone who needs help, just help out them and maybe even in your school - do as much as volunteering as you can there.

**Closer**

That's it for now, but we'll be back next week with more news. Until then, you can catch Newsbreak, every weeknight, and head online for BTN Specials, BTN High, and a whole heap of resources for your teachers. Have a great week, and I'll see you next time. Bye-bye.