

BtN: Episode 23 Transcript 18/08/15

Coming up.

- Aussie kids maths results in the spotlight after NAPLAN. We find out why.
- For Science Week we check in with two the two finalists of the Sleek Geeks Video prize.
- And meet the kids singing and dancing their way around Australia for a very good cause.

Hi, I'm Nathan and welcome to BtN. Good to have you with us. You can see all of those stories later but first today.

Carbon Target

Reporter: Carl Smith

INTRO: The Federal Government has announced a new carbon target. It's aiming to reduce greenhouse gas emissions in Australia by 26 percent over the next 5 years. Some say it's a responsible decision, others say it's not enough. Here's Carl to explain.

CARL SMITH, REPORTING: Most of us have thought about how to save energy.

KID: Using a power-board so you can turn multiple things off.

KID: You could walk to school or ride your bike, maybe even catching the train.

KID: I save energy by turning the lights off when I'm not in my room.

But while every little change we make helps scientists say we need to do even more. They say we've got to cut back our greenhouse gases, like carbon dioxide, or else risk changing our climate. So to help stay on track governments around the world have been setting targets. Last week it was Australia's turn.

The Prime Minister announced Australia will aim to cut the amount of carbon we release by 26 to 28 percent by the year 2030, which is lower than lots of other places, like the European Union, the US and the UK.

TONY ABBOTT: We're not leading but we're certainly not lagging.

But many people reckon we should be leading or at least doing better, because we're a rich country with the means to cut our emissions more successfully. But the Government says it has to weigh up the benefit of reducing the carbon we release with the effect it will have on our economy. Because large parts of it, like the resource and mining sectors, will find it hard to cut back. And any changes to how

we generate energy will cost all of us more money. But even getting to a 26% target by 2030 is going to be a challenge.

So how will we get there? The Government says better technology like new batteries and cleaner power plants will help us cut back. Another way to reduce our greenhouse gas emissions is to use electricity more efficiently. Switching to renewable energy options, like the solar panels on this school, is a good way to lower our emissions too.

Kid: They get the energy from the sun and they're not using as much greenhouse gases which clog up the atmosphere

And if the goal is to reduce carbon dioxide then we can also ask our leafy green friends to lend a branch.

Kid: Trees help because they take in the carbon dioxide and give us oxygen.

So that's the target and the plan to get there, but what do you think?

Kid: Australia could do a lot more, for the planet.

Kid: I think we should do more planting of trees and putting solar panels on roofs and timers on plugs and motion sensors.

Kid: I think we could do more things to help the environment and make sure we're just using energy wisely.

The Wire

To other news now and Australia's marriage laws have been another hot topic this week. The Liberal party and the National party had a big meeting and decided they wouldn't support any changes to allow same sex couples to get married.

Prime Minister Tony Abbott says it should be up to the whole country to decide if they should change - not just politicians. So he says he'll put it to a big national vote after the next election.

At least two massive explosions have ripped through the Chinese city of Tianjin killing more than a hundred people and injuring many more. Investigators still aren't sure what caused the blasts but they're worried victims might have been exposed to a deadly chemical stored in a warehouse nearby. If it rains, it could create a cloud of toxic gas so authorities are evacuating all homes and schools within three km just to be safe.

In the US, Tens of millions of black, plastic balls have been rolled into lakes and dams around Los Angeles. They're known as Shade Balls because they help block out sunlight to stop water from evaporating so quickly. Experts hope the project will

help save about 1.1 billion litres of water every year in the drought affected area. Some even reckon we could give it a go in Australia.

And finally, this viral video is kind of ruining the koala's cute and cuddly reputation!

A South Australian farmer got a bit freaked out when this one started chasing her quad bike.

“Far out, it's coming! Get away, get away!”

It didn't let up and when the farmer jumped off it grabbed the tyre. Experts say that's pretty unusual behaviour although koalas can be aggressive when it's mating season. While some people reckon it just wanted a ride.

Maths Careers

Rookie Reporter: Amaya

INTRO: Now last week in the wire we told you about the release of this year's NAPLAN results. One of the big worries in there for experts was that Australian kids' maths scores don't seem to be improving. That comes on top of recent reports that say fewer kids are studying advanced maths in their senior years. It's got some industries really worried. So we sent Rookie Reporter Amaya out to take a look at just some of the amazing jobs that rely on maths each and every day.

AMAYA, ROOKIE REPORTER: That's maths. That's maths. There's maths going on there too.

Maths helps us to live our lives every day. To figure out how things work; to build and create and understand. And if you figure out its secrets, it's anything but boring! Come with me and I'll prove it!

Welcome to the world of fashion. It's colourful and glamorous but along with the silk and sequins, there are calculators, measuring tape and a whole bunch of equations, as Cristina knows well.

AMAYA: Your job doesn't really seem like the most obvious to use maths for, but do you have any examples of where you do use it?

CRISTINA: For sure, yeah I use maths in everyday life so I guess the process for, this is fashion design, but I do couture which is made to measure formal wear and things like that. To specifically fit that client, I need to take their measurements and from that adapt my patterns to fit them so there's a lot of maths involved to making sure that it's going to fit them perfectly because that's the service that they're paying for at the end of the day.

This is the brand new SAHMRI building in Adelaide. Thomas is one of the architects that worked on it.

THOMAS: You can see from this diagram though how we set the building out in particular. It's all based on mathematics and geometry.

AMAYA: If someone wanted your job would you suggest sticking with maths through school?

THOMAS: Absolutely. I see mathematics as a second language. There's very much mathematics in everything we do.

Paul spends his life working in some pretty impressive works of engineering.

AMAYA: Wow this is cool.

PAUL: This is a Boeing F18 hornet.

AMAYA: Um, how fast does it go?

PAUL: The top speed of this aircraft is Mach 1.8 or 1.8 times the speed of sound.

He's a test pilot for the Army's Aircraft Research and Development Unit. It's a job that takes a fair bit of nerve, a thirst for adventure and maths!

PAUL: Pilots use maths quite a bit, we primarily use it mentally doing mental maths calculations and we do that all the time while we're flying. So there are a couple of things that we're really concerned about. One is fuel so that we actually have enough fuel to get back because as you can imagine unlike a car you can't just pull up on the side of the road. The other one is to navigate.

You see, it's like I said! Maths is all around us!

AMAYA: Hi, I'm Amaya.

KEVIN: Hi, I'm Kevin. Welcome to Rising Sun.

AMAYA: This is cool!

These guys make computer generated animations for movies. You might have heard of some of them. Harry Potter? The Hunger Games? X-Men?

AMAYA: How do you use maths in your work?

KEVIN: Well we use a lot of different types of maths, we use a lot of physics so how objects, solid objects hit each other and how they bounce off each other and particularly how they're destroyed, how they break up, but then also fluid dynamics which is how gases and liquids move, things like smoke, things like explosions.

It's pretty clear that some of the coolest jobs around depend on maths.

AMAYA: So why are so many kids turning away from it when they reach high school and uni?

KEVIN: Maths has a reputation of being hard.

CRISTINA: I think they think it's you know it is a hard subject and it can really be a hard subject, but I think a lot of kids as well don't see that it can be used in everyday life and especially after school they think I'm never going to use this again. In fact, maths comes into play with every job.

Maths isn't easy. But hard doesn't mean boring. Just like any language, learning maths takes time and hard work and practice. But it's worth it!

Online Poll

Okay, so the stats say kids aren't loving maths.

But let's find out if it's true.

Do you enjoy studying maths?

Head to our website to place your vote.

Now last week we asked you if trophy hunting should be banned. And we had a massive turnout of voters. Out of more than 6000 votes cast, most want trophy hunting gone. Thanks for having your say!

Science Week Films

Reporter: Carl Smith

INTRO: Now, this week is Science Week. So next, we're going to celebrate by meeting the primary school kids who've been shortlisted as finalists for the Sleek Geeks Eureka video prize. Carl starts this story with a look at one of their videos.

Eureka film: One case, two detectives, one suspect, CRY STOPPERS.

Detective: Ma'am please try to stay calm, we've dealt with situations like this before. Just point us out the culprit.

Chef: 'It was the onion!'

Gigi and Ella had a simple question: how come onions make you cry?

Detective: Yes Ella, we have reports of him all around the world. This guy has a shocking record, and is always leaving his victims in tears!

CARL SMITH, REPORTING: To answer their question the primary school friends from Brisbane got creative. In fact they became movie makers, actors and scientists just to get to the bottom of the case!

Detective: Once the gas reaches our eyes, it stimulates the neurons to create the familiar burning feeling. The brain sends a message to the eyes to wash the irritant away with tears.

They even conducted some experiments in the kitchen on how to stop onions making you tear up!

Gigi and Ella: We tried using chewing gum while we were chopping the onion itself, and it didn't really work. We found that water helps - yes running it under water, if you chop it underneath the tap. You could put it in the fridge, yes, it deactivates it or slows down the process of the onions wafting towards your eyes. And then putting it in boiling water.

And all their hard work making the video has paid off. Gigi and Ella are now finalists for the Eureka Prize for School Science. The other finalist this year is William, and his story also started with a question.

William: Have you ever wondered why seaweed is brown, and not green like plenty of other plants?

He waded through swamps, did his own experiments and collected lots of stinky seaweed to solve the riddle.

William: Light colours absorb far less light than dark colours. Seaweed is brown so it can absorb as much light as possible to make food and keep alive.

Both groups say they had a lot of fun making their movies and thinking about creative ways to get the ideas across to kids.

William: First thing was using the Lego, because what kid doesn't like Lego!? And I know that I like Lego. And the second thing was I very much simplified the scientific concepts so kids could understand it as well.

Ella and Gigi: We always found science story-like, and we thought it was a great opportunity to turn it into a playful way to capture younger viewers' attention, but also explain the onions. And so that's why we used detectives!

Later this month they'll find out who'll win the top prize. But they say making the video has already inspired them to tackle more of science's trickiest questions.

Ella and Gigi: I think it would be cool to be a scientist, but not really one of the white coat people, more of the experimenting for fun sort of people. Yeah, same with me, it would be fun to be a scientist and I know I definitely want to do something to do with science, but I'm not sure where in the medical field yet. So yeah!

Quiz 1

Reporter: Amelia Moseley

Okay, quiz time now.

Where do onions grow?

On a tree

On a bush

Or Underground?

The answer is: Underground

Bee Issues

Reporter: Amelia Moseley

INTRO: We hate when they sting and love it when they make honey. But did you know bees also deserve credit for having a hand in creating the majority of the food we eat? Unfortunately that role is now under threat though because of a tiny mite that attacks bee populations. But all is not lost. Amelia met up with some kids hoping to help protect bees right around the country.

AMELIA MOSELY, REPORTING: These kids aren't miss-bee-having. They're busy bumbling about to raise money to buy their very own bee hive. But it's not just because they like honey. They've been learning how bees are a very important part of Australia's agriculture industry.

GIRL 4: Bees pollinate 65% of what we eat and pollinate the food animals eat as well.

You see bees make honey by collecting the nectar in flowers and storing it in special honey stomachs. But as bees go around from plant to plant, they also spread pollen which helps plants produce seeds and fruit.

REPORTER: So besides this sweet, sticky stuff a lot of us love, we can thank bees and their pollination for all of these tasty foods too! In fact, experts reckon at least three out of every five things we eat can be linked back to bees. Mmm buzz, buzz.

BOY 4: We couldn't have pizza without them, or coffee, a lot of different vegetables.

GIRL 2: If we didn't have them our diet would drop down to mainly corn, wheat and rice.

In fact about 35 industries in Australia rely on bees. It's not just food either, it's things like cotton clothing, make-up, even some medicines.

BOY 3: So if they got killed or went extinct, we'd be in a bit of trouble.

The problem is bees around the world are in a lot of trouble. Mainly because of this: the Varroa Destructor; also known as the Varroa mite. These parasites attach themselves to bees and infect them with viruses which eventually kill them.

BOY 3: The Varroa mite is a mite that is sucking out the bee's blood then puts in a virus, and once it goes back to the hive it spreads it around and basically the whole hive dies.

It's been destroying bee populations in many countries and while Australia is the only continent that's still Varroa mite free, some bee keepers are worried it won't stay that

way. That's why these kids are buzzing to the rescue. They're raising money to buy a special type of hive that'll trap infected bees before they can spread.

GIRL 1: If a Varroa mite gets on one of the bees, it can shut down the bee and keep the bee inside the hive so it won't affect the bees outside in Australia.

The hive will be placed near a port like this and it'll automatically catch any problem bees that might arrive on ships from overseas. But it'll take more than one hive, on one port, to keep the Varroa mite away. So these guys want all kids around Australia to help save the humble bee from this seriously sticky situation.

BOY 3: I think a lot of schools should get onto this because it's very important, and if they all go, they're gone.

KIDS Save the bees!

Quiz 2

Okay, I think it might beeeeeee time for another quiz.

Sorry!

Which part of their body do bees use to collect nectar?

Is it :

Tongue

Feet

Wings

The answer is: Tongue.

The Score

Time for the biggest plays of the week now! Here's sport.

The Diamonds have become world netball champions for the 11th time!

They beat New Zealand 58 to 55 in the final, making it their third world cup win in a row!

“To win on home soil with obviously so much expectation around it from the outside and yeah it was just icing on the cake. You wanna bottle that feeling.”

Awesome work!

To more good news now and Aussie golfer Jason Day has won the U-S PGA Championship! It's one of the biggest golf tournaments in the world. And Day's just the fifth Aussie in history to take top spot!

While the Australian men's cricket side has been struggling, the Aussie women's cricket team are on top in their Ashes series in England. They thrashed England by 161 runs in their test at Canterbury. And are now just one win away from taking home the Ashes.

And our national basketball teams are one step closer to qualifying for the Olympic Games. The Boomers got up over New Zealand's Tall Blacks 71 to 59 in the first of a two game series. While the Opals won against the Tall Ferns 61 to 41.

If they win their next matches they'll qualify for the Rio Olympics.

Orphan Choir

Reporter: Matthew Holbrook

INTRO: Finally today, meet the Watoto Children's Choir! They're in Australia to perform for thousands of their Aussie fans. But their visit is not just about singing and dancing. They're also here to raise awareness about some of the difficulties facing kids like them in Africa. Here's Matt.

JACKSON: My name is Jackson and I'm 13.

PRISCILLA: My name is Priscilla and I'm 11 years old.

ESTHER: My name is Esther and I am 11 years old.

This is the Watoto Children's choir. And right now, they're travelling around Australia, sharing their songs, and telling their stories.

JACKSON: When you sing you feel good.

PRISCILLA: It makes me feel good because most of the time people join us when we're singing.

But while they're clearly having a lot of fun on stage, they're also helping to spread a serious message. They're from the African country of Uganda, and they're orphans.

PHILLIP MUGERWA, CHOIR TEAM LEADER: Most of the children we have, have lost their parents to HIV/AIDs and due to war and different circumstances in life. What we do is rescue them, place them in a home with a loving mother who cares for them. We make sure they have clothes, make sure they have food. In doing this we believe will raise the next generation of Ugandan and African leaders.

Phillip's the team leader of the choir. He says while these guys are being looked after, there are millions of orphaned kids in Africa who still need help.

PHILLIP: As the choir travels we share the plight of the orphan child in Africa, and as we do it, we raise awareness and support.

That support's helping fund villages in Uganda, so more kids like these have somewhere to live, learn, and play.

PRISCILLA: We help our mothers to do work at home. We play games. The teachers teach us English, literacy, maths, reading.

The choir's here in Australia for 6 months. And as they travel around performing, it's an opportunity for all of these guys to see and learn more about different cultures. And even try some Aussie food!

PRISCILLA: Tell me how you feel about Vegemite. It is salty. Do you like it? No. Would you eat it again? No.

ESTHER: It was not nice.

OK, Vegemite wasn't a hit, but they say they really do like it here. And they've loved sharing their music.

ESTHER: They're smiling and they're clapping with us, they'll stand up before we tell them to stand.

PRISCILLA: Sometimes they clap, sometimes they sing and dance with us and they smile when they're singing and dancing.

CHOIR: Bye, bye, BtN we love you.

Closer

Right, that's it from us for this week. But, please join me on Friday for our weekly #AskaReporter session! Next week's topic will be on our Science Week Filmmakers. So if you'd like your school to get involved there are instructions on our website. Thanks and bye for now!