

Questions for discussion

Episode 11
5th May 2015

Nepal Earthquake

1. Before you watch this story record what you know about earthquakes.
2. What magnitude was the earthquake in Nepal?
3. Describe the devastation the earthquake caused.
4. What is the top layer of the earth called?
5. What are tectonic plates?
6. Where do most earthquakes occur?
7. Tectonic plates often move at a very _____ rate.
8. Why are big earthquakes not as likely to occur in Australia?
9. What do people in Nepal need help with?
10. How did this story make you feel? Visit BtN's [Upsetting News Page](#)

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

Check out the BtN *Nepal Earthquake* resource on the Teachers page

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

Hubble Birthday

1. In your own words, describe the images that the Hubble Space Telescope has captured.
2. How do telescopes work?
3. What is the problem with telescopes on the ground?
4. What are the benefits of a telescope up in space?
5. When was Hubble launched?
6. About how big is the telescope?
7. What has the Hubble Space Telescope enabled scientists to see?
8. When and why are they going to replace Hubble?
9. What are the advantages and disadvantages of space exploration?
10. What did you learn watching the *Hubble Birthday* story?

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

Minecrafting Parks

1. What was the main point of the BtN story?
2. Some kids in South Australia are using Minecraft to design...
3. Who is running the competition?
4. What features are they including in their design?
5. How does Minecraft help them design their park?
6. What are some of the challenges designing a national park?

7. How are games like Minecraft similar to the programs that landscape architects use?
8. What skills are the kids learning using Minecraft?
9. Why do the kids like being involved in the project?
10. What features would you include if you were designing a national park?

Check out the BtN *Minecrafting Parks* resource on the Teachers page
<http://www.abc.net.au/btn/teachers.htm>

Dinosaur Show

1. Briefly summarise the BtN *Dinosaur Show* story.
2. How many species of dinosaurs are in the show?
3. How tall was the Brachyosaurus?
4. What is a person who studies prehistoric life called?
5. A lot of work has gone into making the dinosaurs look as real as possible. What have the palaeontologists studied to do this?
6. What can trace fossils tell us about dinosaurs?
7. What sort of puppeteer is Ed?
8. Each puppet can weigh as much as a...
9. In your own words, describe how the puppeteers make the dinosaurs move.
10. What do you know about dinosaurs since watching the BtN story?

Vote in the BtN poll. Go to <http://www.abc.net.au/btn/polls.htm>
Do the quiz on the BtN website <http://www.abc.net.au/btn/quiz.htm>

DJ Kid

1. Who is Black Summer?
2. How old is he?
3. How long has Black Summer been making music?
4. What style of music does he produce?
5. How has Black Summer's teacher supported him?
6. How did he come up with the name Black Summer?
7. What advice did Flume give him?
8. How did he get his music discovered?
9. What surprised you about this story?
10. If you could ask Black Summer a question, what would it be?

Send a message of support to Black Summer. Go to the *DJ Kid* story page on the BtN website

Nepal Earthquake

? FOCUS QUESTIONS

1. Before you watch this story record what you know about earthquakes.
2. What magnitude was the earthquake in Nepal?
3. Describe the devastation the earthquake caused.
4. What is the top layer of the earth called?
5. What are tectonic plates?
6. Where do most earthquakes occur?
7. Tectonic plates often move at a very _____ rate.
8. Why are big earthquakes not as likely to occur in Australia?
9. What do people in Nepal need help with?
10. How did this story make you feel? Visit BtN's [Upsetting News Page](#)

ACTIVITY

Negotiate with students how many activities they complete from each section.

REMEMBER / UNDERSTAND

Before watching the BtN *Nepal Earthquake* story hold a class discussion to find out what students know about earthquakes.

Throughout this activity students will keep a journal entering what they know, what they have learnt and what they would like to learn. Students may want to organise their diary in the form of a KWHL chart (see below).

What do you know?	What do you want to find out?	How will you find out?	What did you learn?

KEY LEARNING

Students will develop a deeper understanding of why earthquakes occur and how they impact on people and places.

AC AUSTRALIAN CURRICULUM

Science – Year 6

Sudden geological changes or extreme weather conditions can affect Earth's surface ([ACSSU096](#))

Scientific understandings, discoveries and inventions are used to solve problems that directly affect peoples' lives ([ACSHE100](#))

Important contributions to the advancement of science have been made by people from a range of cultures ([ACSHE099](#))

Science – Year 9

The theory of plate tectonics explains global patterns of geological activity and continental movement ([ACSSU180](#))

Geography – Year 6

Significant events that connect people and places throughout the world ([ACHGK034](#))

Students may want to watch the story again or download a copy of the *Nepal Earthquake* transcript to assist them with this activity.

As a class brainstorm a list of words that are associated with earthquakes and record student's responses on the class whiteboard. Using the internet students will find meanings or explanations for each of these words and then create their own class glossary. Here are some words taken from the BtN *Nepal Earthquake* transcript to get you started.

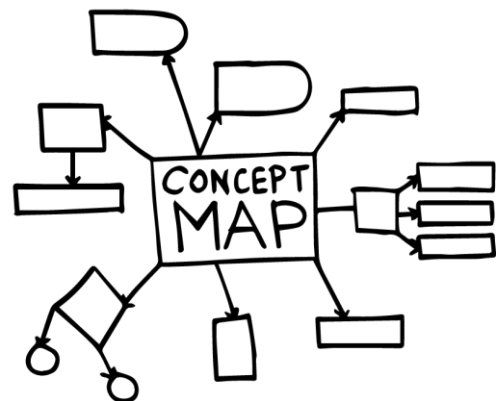
- magnitude
- avalanche
- crust
- tectonic plates
- natural disaster

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

Discuss with students the affect that significant events like earthquakes have on people and places. Examine its local, regional and global effects on people and places. Record student's responses on a concept map and discuss the different categories for their responses (physical and emotional).

Ask students to finish one or more of the following incomplete sentences:

- This story made me feel...
- The earthquake in Nepal has destroyed...
- The earthquake in Nepal has impacted on...
- The people in Nepal at the moment...
- An earthquake is...



APPLY / ANALYSE

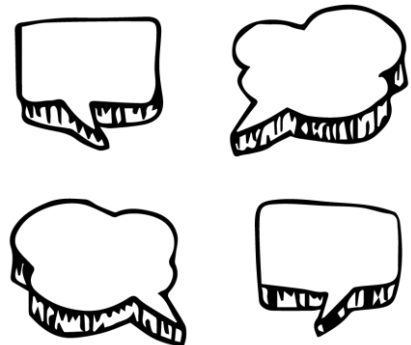
- Make a list of questions you have about earthquakes that you would like to ask a seismologist or geologist. Use the internet to find answers to your questions. Visit the following websites and see which questions are answered.

ABC Science – Ask an Expert!

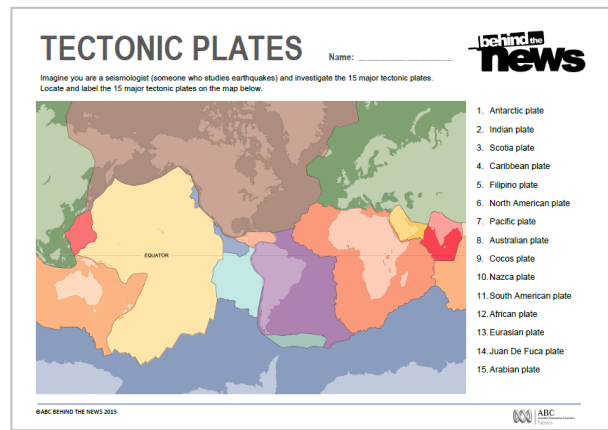
<http://www.abc.net.au/science/expert/realexpert/earthquakes/>

Geoscience Australia – Earthquake Basics

<http://www.ga.gov.au/scientific-topics/hazards/earthquake/basics>

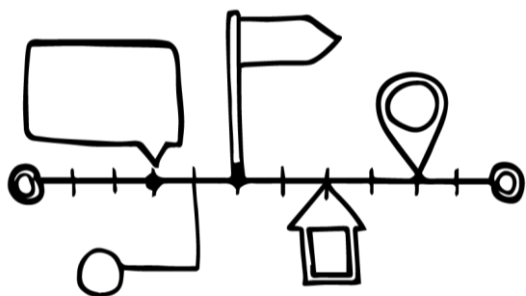


- Research and write 10 true or false statements about earthquakes. For example: The edges of tectonic plates are called plate boundaries (true).
- Research how earthquakes connect people and places throughout the world. Some possible questions to investigate include:
 - What do you think are the most effective ways of helping people who have been affected by an earthquake?
 - How do international aid organisations help people after an earthquake? Choose an organisation to investigate. How has aid been distributed in Nepal since the earthquake?
- What are tectonic plates and how do they work? Using this map of tectonic plates template locate and label the 15 major tectonic plates.
 1. Eurasian plate
 2. Australian plate
 3. Filipino plate
 4. North American plate
 5. Juan De Fuca plate
 6. Pacific plate
 7. Cocos plate
 8. Nazca plate
 9. Caribbean plate
 10. South American plate
 11. Scotia plate
 12. African plate
 13. Arabian plate
 14. Indian plate
 15. Antarctic plate



Map: http://en.wikipedia.org/wiki/List_of_tectonic_plates#/media/File:Plates_tect2_en.svg

EVALUATE / CREATE

- Using the internet find out about ten or more significant earthquakes that have occurred over the past century. Plot your findings on a timeline and include three important points of information about each earthquake. Use a world map to plot each earthquake's location. Make comparisons (similarities and differences) between the earthquakes you have researched, including location, magnitude and impact on people and places.
- 
- Using an enlarged version of this [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.
 - Investigate 10 major earthquakes and plot them on your map. Compare where the earthquakes occur and how close they are to where the tectonic plates meet. Discuss your findings.
- Examine the impact that the Nepal earthquake had on people and places using these before and after photographs. Create a caption for each image <http://www.abc.net.au/news/2015-04-27/nepal-earthquake-before-after-photos/6424570>

Learn more about Nepal

Watch this [Behind the News Sherpas](#) story to learn more about Nepal and Sherpas. Sherpas are the guides that help climbers scale and descend Mt Everest.

Teachers, use [BtN's Sherpas Teacher Resource](#) for a range of activities linked to the Australian Curriculum.



Upsetting News

It's easy to feel sad and upset about some of the things you see on the news. Because it's real it can be really hard to take in. But it's on there for a reason. It's important and it shows us things that could change the world as we know it.

Teachers, visit BtN's [Upsetting News support page](#) for a range of helpful resources.



Behind the News – Upsetting News

<http://www.abc.net.au/btn/topic/upsettingnews.htm>

Behind the News – NZ Earthquake

<http://www.abc.net.au/btn/story/s3148193.htm>

Behind the News – Ring of Fire

<http://www.abc.net.au/btn/story/s2709798.htm>

Behind the News – Earthquakes

<http://www.abc.net.au/btn/story/s2835225.htm>

Behind the News – Sherpas (Teacher Resource)

<http://www.abc.net.au/btn/resources/teacher/episode/20140506-sherpas.pdf>

ABC Splash – Earthquakes

<http://splash.abc.net.au/digibook/-/c/617025/earthquakes-when-the-earth-shakes>

BBC – How Earthquakes happen (animation)

http://news.bbc.co.uk/2/hi/in_depth/4126809.stm

USGS – The Science of Earthquakes

<http://earthquake.usgs.gov/learn/kids/eqscience.php>

CBBC – Eight million affected by Nepal earthquake

<http://www.bbc.co.uk/newsround/32492843>

CBBC – Why do earthquakes happen?

<http://www.bbc.co.uk/newsround/14649714>



Subscribe to our weekly newsletter for an update on upcoming BtN stories and other useful and relevant teacher information. Visit the BtN website and go to the Teachers page to join up.

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



Teacher Resource

Minecraft

? FOCUS QUESTIONS

1. What was the main point of the BtN story?
2. Some kids in South Australia are using Minecraft to design...
3. Who is running the competition?
4. What features are they including in their design?
5. How does Minecraft help them design their park?
6. What are some of the challenges designing a national park?
7. How are games like Minecraft similar to the programs that landscape architects use?
8. What skills are the kids learning using Minecraft?
9. Why do the kids like being involved in the project?
10. What features would you include if you were designing a national park?

ACTIVITY

Facilitate a class discussion about national parks using the following questions.

- What is a national park?
- What do you do in national parks?
- What do you like about national parks?
What would encourage you to spend more time in national parks?
- Why are national parks important?

Ask students to imagine their perfect national park and to think of a range of features they would like to see in the park. Record student's responses on the class whiteboard. Below are some examples.

- trails for bushwalking, mountain biking or horse riding
- barbecue and picnic areas
- public toilets
- wheelchair accessible areas
- camp sites
- scenic lookouts
- adventure playgrounds



KEY LEARNING

Students will investigate and discuss why national parks are important. Students will generate, develop, communicate and document design ideas for their perfect national park.

AC AUSTRALIAN CURRICULUM

Design and Technologies – Years 5 & 6

Critique needs or opportunities for designing, and investigate materials, components, tools, equipment and processes to achieve intended designed solutions (ACTDEP024)

Generate, develop, communicate and document design ideas and processes for audiences using appropriate technical terms and graphical representation techniques (ACTDEP025)

Negotiate criteria for success that include consideration of sustainability to evaluate design ideas, processes and solutions (ACTDEP027)

Geography – Year 3

The similarities and differences in individuals' and groups' feelings and perceptions about places, and how they influence views about the protection of these places (ACHGK018)

Geography – Year 7

The influence of accessibility to services and facilities on the liveability of places (ACHGK044)

The strategies used to enhance the liveability of places, especially for young people, including examples from Australia and Europe (ACHGK047)

- natural play spaces
- places for rock climbing and abseiling
- geocaches
- interpretive trails
- orienteering
- places to launch canoes and kayaks
- or something completely different that no-one has ever thought of before!

ACTIVITY

Activity overview

Explain to students that they will be using Minecraft to design their perfect national park. Before beginning this group based activity, explain to students they will need to consider the following when designing their national parks.

- Does your design complement the natural environment, including plants and animals?
- Is your design practical, sustainable, creative and usable?
- Can your national park be created in the real world?

Students will work together in groups of 2 or 3, either basing their design on a real park, or making one from scratch. Whatever they create in Minecraft needs to be able to be translated into the real world. Alternatively, students can use [SketchUp](#) or simply use paper and pencil to design their national parks.

Design process

Investigate

- Using the internet visit a range of national park websites to get some inspiration for your national park. Collect your ideas (photos and drawings) to draw on for when you are designing your own national park. If it is practical consider visiting a national park close to your school.
- Consider surveying a cross section of people (friends and family) about national parks. Find out what would encourage them to spend more time in national parks.
- Brainstorm and list a range of features that you will include in your perfect national park.
- Sketch some of your ideas on paper.
- Practise using Minecraft. Complete some of the Minecraft tutorials to familiarise yourself with the program.

Design

- Design your national park using graph paper and pencil. You will need to consider the following:
 - Does your design complement the natural environment, including plants and animals?
 - Is your design practical, sustainable, creative and usable?
 - Can your national park be created in the real world?
- Use Minecraft to design your national park.

Presentation

- Present your design to the class. Explain why your group included certain elements in the design. Present your information in an interesting way.

Reflection

- Reflect on your design and the design process by responding to the following questions.
 - What worked well?
 - What would you do differently next time?
 - What parts of the activity did you enjoy, find challenging or find interesting?

RESEARCH

Architecture and Design – Children invited to design South Australian national parks in Minecraft
<http://www.architectureanddesign.com.au/news/children-invited-to-help-design-south-australian-n>

BBC News – Children to design new national park in Minecraft
<http://www.bbc.com/news/technology-32433127>

Minecraft edu – Minecraft in the Classroom
<https://minecrafteu.com/>

Edutopia – Using Minecraft in the classroom
<http://www.edutopia.org/blog/minecraft-in-classroom-andrew-miller>



Subscribe to our weekly newsletter for an update on upcoming BtN stories and other useful and relevant teacher information. Visit the BtN website and go to the Teachers page to join up.

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



BtN: Episode 11 Transcript 5/05/15

Coming up:

- Happy birthday Hubble! We celebrate 25 years of pics from this telescope in the sky.
- Find out how Minecraft could help you design something in real life.
- And meet the kid creating amazing dance tracks at just 11 years old.

Hi I'm Nathan. Thanks for joining me for Behind the News. All that will be up later.

Nepal Earthquake

Reporter: Matthew Holbrook

INTRO: But first today, we're heading to Nepal where a massive earthquake killed thousands of people and caused a huge amount of damage recently. Aid groups are working hard over there right now trying to help all of the people left without anywhere to live. Here's Matt with a look at what's going on and how it all happened.

In a matter of seconds, homes, buildings, and roads were turned to rubble. The 7.9 magnitude quake hit these cities in Nepal and caused serious avalanches on the world's highest mountain, Mt Everest.

CLIMBER: We had quite a big few, big avalanches coming down over those faces. Quite a bit of rock fall, most of our team is OK.

Thousands of people have died, and many have been left homeless. It's the worst earthquake Nepal's experienced in a long time, but it's definitely not the first. Earthquakes are an unfortunate part of life here.

To understand why, we need to know a little bit more about the earth. For starters, it's not just one giant, solid rock. It's made up of different layers. If you go down far enough below the earth's surface, you'll eventually reach red hot, molten rock.

The layer we live on floats on top. It's called the crust. The crust is made up of huge blocks of earth called tectonic plates. And this is where earthquakes happen.

MATT HOLBROOK, REPORTER: These pieces roughly represent the tectonic plates that make up the world. It might look a bit like a neat jigsaw puzzle, but in real life, the pieces don't really fit. They're always changing, moving around, and running into each other. When that happens, it can create an earthquake.

Tectonic plates move at a very slow rate often just a few centimetres every year. Yep, that's even slower than this snail. But because we're talking such huge blocks of earth with a heap of pressure behind them, those collisions can cause a lot of damage. Luckily, big earthquakes don't happen very often, but there are millions of tiny ones every year, most so small we never even notice them.

MATT HOLBROOK, REPORTER: The majority happen along the edges of where the tectonic plates meet, like the one Nepal experienced right here. That's why the same places seem to be hit by major earthquakes again and again.

Luckily, as you can see, Australia is in the middle of a plate, so we probably don't have to worry about them too much. For now, the focus in Nepal is on helping those people who desperately need food, shelter, water and medical treatments. And there's still a lot cleaning up to do. It's going to take some time, but many countries are doing what they can to help Nepal get back on its feet.

The Wire

Last week, two Australian men, Andrew Chan and Myuran Sukamaran, were executed for smuggling drugs out of Indonesia. But the punishment raised a lot of controversy back here in Australia. Political leaders said the two men had worked hard to turn their lives around while they were in jail and the punishment was cruel and unnecessary.

But others said it's Indonesia's right to choose how they punish criminals. The government has responded by taking Australia's ambassador out of Indonesia for the time being.

There's been lots of fighting going on between police and protestors in the US city of Baltimore. Protestors are angry about the death of a young black man while he was in police custody. The riots got so bad, a curfew was put in place and people in Baltimore weren't allowed out after 10pm.

A new program has been launched to help kids to prepare for some of the challenges they'll face at high school. It's called Mind Matters and it targets things like depression and

anxiety, which can sometimes be a problem for school kids. *Research shows that about 75 per cent of all mental health problems start when people are between 12 and 25 years old.* There'll also be training for teachers so they know how to support kids who need help.

And in England, Prince William and Princess Kate have welcomed a baby girl into their royal family.

"We welcome with humble duty, the second born of the royal highnesses."

Just a few hours old, she had no idea of the crowds who were awaiting her arrival. The princess, who hasn't been named yet is the fourth in line to the throne of England, behind her big brother George.

Presenter: Now, we've had some pretty heavy stories so far in today's show, so I just want to remind you about our upsetting news page. If anything so far has you concerned please check it out on our website.

Hubble Birthday

Reporter: Eloise Fuss

INTRO: Now, there aren't too many telescopes that have a huge following but Hubble isn't your usual telescope. Over the 25 years it's been operating up in space, Hubble has sent back millions of spectacular pictures that not only look great but have taught us a lot too. Here's Eloise to wish Hubble a very happy birthday.

Images like this have inspired generations and taught us more about our place in the universe. And they all come from one telescope sitting way above the earth. It's called Hubble, and has the ability to see things humans hadn't been able to see before.

But how can it peer so deep into the atmosphere? Well that's something the kids at this school can tell me all about.

KID: "Here at our school we have a couple of telescopes which we use to observe objects in space."

But they don't always work perfectly.

KID: "The problem with telescopes on the ground is that when light comes through the atmosphere, the atmosphere changes the path of the light slightly, which is why when you look at the night sky, the stars twinkle."

That's why Hubble Space Telescope is so important. It's a telescope that lives up in space, which gives it some huge benefits over all the telescopes here on earth.

KID: “Up in space there's a lot less of what astronomers call light pollution. Light pollution is stuff like street lamps and light that doesn't come from the object you're trying to observe, that makes it a lot harder to view something that's very far away.”

The Hubble Space telescope was launched on the 24th of April 1990. It was the world's most powerful telescope and huge too - about the size of a bus. Scientists hoped Hubble would give them a clearer view of what existed beyond our planet.

Here's how it works. Light travels in this end and hits the primary mirror. It then bounces off onto a secondary mirror, and onto some special instruments in the back, that record the image and transmit it back to earth.

And the results were mind blowing, for the first time scientists could see the expanse of the universe.

KID: So through the Hubble telescope you can see a lot of very cool things, for example something that has been named the Hubble ultra deep field. NASA who controlled the Hubble, pointed the Hubble at a small area of sky that seemed to have no stars in it. They kept pointing the Hubble at this patch of sky for about a week, and the picture they came out with is so incredibly famous, certain scientists have identified over 10,000 galaxies in that photo.

But after 25 years in space, Hubble is starting to get pretty old, so it'll soon be replaced.

KID: In 2018 a new telescope is going to be launched called the James Webb telescope, and that will allow us to discover many new things and possibly solve some of the great mysteries in astronomy and science in general, such as the mysteries of dark energy and dark matter

But the Hubble will always be the first telescope to give all of us, our first amazing glimpse at the universe we live in.

Quiz 1

Now as you heard there, Hubble will soon be replaced by the James Webb Telescope. But who was that?

It's quiz time.

Was James Webb:

An astronaut

A rocket scientist

Or the head of NASA

Answer: The head of NASA

Minecraft Park

Reporter: Carl Smith

INTRO: Pretty much every kid watching this would know what Minecraft is. For the teachers and parents who don't it's an incredibly popular game that allows players to create pretty much any world they want. But now fans are being given the opportunity to use the game to create a park in real life. Carl found out more.

CARL SMITH: Designing something like a new park is pretty hard.

STUDENT: "A few benches over here."

You have to imagine how things could look and how they might fit together.

STUDENT: "Maybe the toads and frogs should be near a duck pond so do you think there should be a duck pond?"

Or at least that's how it used to be.

These days, computer games like Minecraft let kids design spaces in virtual reality instead. But what if your virtual creations could become a reality? These kids are taking part in a competition where the aim is to design a real national park using Minecraft.

STUDENT: "Right now we're seeing the carpark, which you've got to be at least 5 metres up, and as you can see this is a waterfall. Well we've been adding trees and we've been adding like bushes and trees that go behind the water."

STUDENT: "I first started building a bridge and I thought it was pretty good, so I started creating more."

The competition run by the South Australian Government is calling on classes to band together to figure out what the state's national parks should look like. And the winning design ideas could be built in real life.

But designing something as huge as a national park is a real challenge. You've got to work around existing trees and rivers and make sure everything is easily accessible.

Ah how do I get out of this island!?

So this class has split up into groups to tackle the problem, first on paper then in their virtual world.

STUDENT: “This is the entertainment area, and in it we have like a water fountain and we have stepping stones so that's more to entertain children, we also put in a BBQ so that we can have picnics there.”

STUDENT: “It's really fun cos you've got to like make sure that it's exact so the water doesn't go everywhere, try and make it straight and all of that so it doesn't go everywhere and ruin your whole world.”

It's lots of fun but they're picking up some valuable skills too. In fact games like Minecraft are even pretty similar to the programs that real landscape architects like Sean use.

SEAN: “You get to take your ideas and actually see them in the real world. You get to put them out there and share them with people and get feedback. It's all the stuff we go through as a profession it's super important.”

Whether it's a sophisticated computer program or a game like Minecraft these tools are really important for young designers.

SEAN: “When you actually see it in real life, like a real thing, suddenly people can kind of understand the space and they get how everything works.”

But for these kids having fun along the way is also pretty important. And just imagine if your design ideas end up being built!

STUDENT: “It's like we designed this! We can say to our friends we designed that! And you can be proud of yourselves.”

So what better way to turn your wildest ideas into reality.

Presenter: And if you'd like to get involved in that Minecraft comp the links are on our website. Okay next up we're taking a look at dinosaurs. But first a quiz about them.

Quiz 2

What does the word dinosaur mean?

Big Lizard

Terrible Lizard

Or Scaly Lizard

The Answer: Terrible lizard

Dinosaur Show

Reporter: Carl Smith

INTRO: Okay, in that quiz you saw some pictures of dinosaurs. But how do we know what they looked like if we've never seen them in real life? It's a tricky question that we put to the experts behind a dinosaur show currently touring Australia. Here's Carl with their answer.

CARL SMITH, REPORTING: Just imagine walking outside and being chased by these things.

Thankfully dinosaurs went extinct millions of years ago. But these giant puppets are giving thousands of kids a good idea of what they might have been like.

PALEO ACTOR: "There are 21 dinosaurs in this show, there are 10 different species that are represented. Right through from very small Herbivores, the Plateosaurus, babies that break out of the eggs, right through to the very end of the period of dinosaurs, 170 millions years to the massive Tyrannosaurus Rex and the 25 metre tall Brachiosaurus."

This international show is bringing dinosaurs back to life, sort of.

PALEO ACTOR: "This is the lion of the Jurassic at over three tonnes, a massive predator!"

A lot of work's gone into making them look as real as possible.

The show's palaeontologists have studied dinosaur remains like bones and teeth, and they've looked at things called trace fossils, they're all the other things left behind by these giant creatures like footprints and burrows.

PALEO ACTOR: "Trace fossils can tell us about the stride of a beast, how fast they may have moved and also whether or not they're a predator which is a three pronged foot, a bit like this Utahraptor behind me, or a four pronged foot which is a herbivore."

All of this evidence has helped researchers figure out a lot about these creatures like how they moved, how they looked, what colour they were and even how they might've acted, all without ever having to see them in the flesh.

Having all that detailed information is one thing but bringing them to life is another. So how do they do it? Well these are mega puppets, and each one needs specially trained people to make them move.

PUPPETEER: "Well my name's Ed, I'm a voodoo puppeteer. And they call me a voodoo puppeteer because I perform what's called a voodoo rig. We call this a voodoo rig because if you look at it, it looks like a small model of a dinosaur."

Each puppet can weigh as much as a car and they need as many as three people to make them work!

PUPPETEER: "So if I move the neck on the voodoo rig like this, the neck on the dinosaur will move. This is the head, I can twist the head around, have a little toggle switch here, move the head left and right, up and down."

We also have a voodoo auxiliary who performs all the sounds live during the show just like that. And we also have a joystick that moves the mouth open and closed and makes the eyes blink up and down and the eyes move side to side.

So even though humans and dinosaurs have never walked alongside one another this comes pretty close to experiencing what they would have been like up close.

Online Poll

Okay. Now that story got us thinking, if humankind ever has the chance to, should we bring dinosaurs back to life? That is our question for this week's poll.

QUESTION: Should people bring dinosaurs back to life?

Head to our website to place your vote.

The Score

Okay, missed something this week in the world of sport? We've got you covered.

Heavy rain postponed the Anzac rugby league test a few days but for kiwi fans, it was worth the wait, with New Zealand taking the win 26-12. The results mean they've beaten the top ranked Australian Kangaroos three times in a row!

And that has some people wondering if the roos will be able to hold their number 1 ranking or if the All Blacks might move to the top for the first time ever!

In soccer, Chelsea have been crowned the English premier league champions. They're now in an unbeatable position, after a narrow, 1 nil victory over Crystal Palace. But it came from a penalty that has everyone talking.

Eden Hazard's shot was pretty average but goal-keeper Julian Speroni's save was even worse.

And these girls are making Aussie Rules history. They're the first all-girl team to umpire a T-A-C Cup game in Victoria. It's a big deal because there weren't enough female umps to do it in the past, especially at this level of competition.

"It's a special moment for AFL Victoria to be at this point, to have the depth and talent in the female umpiring ranks to be able to field a full team."

"Every year there seems to be more and more girls getting into it. I guess it's good for fitness as well as being part of the game."

DJ Kid

INTRO: Finally today, Triple J Unearthed is an ABC radio station that plays music from amateur artists. So they're used to getting sent tracks from all sorts of different people. But what they're not used to getting is amazing dance music produced by an 11 year old kid. He goes by the name of Black Summer. Here's his story.

RHYS: "Hello, my name is Black Summer, I'm a producer from Canberra and I am 11 years old and I have been making music for five or six years now."

RHYS: "Man, I love this bit. I just love that effect so much I use it in so many songs."

RICK AND NICOLA, PARENTS: "He's always had an interest in music from a very young age. You'd just hear Metallica blaring out of his room. He'd be singing along to Pink Floyd."

RHYS: "Then I have the drop because I've heard in a lot of songs they have a build up then everything stops and they just have this boom."

PARENTS: "Oh yeah, we've had comments, 11 year old producer making sample packs, and mum and dad are helping. We don't have a clue how to operate what he uses."

RHYS: "Some people say 'Oh this person is better, the beats don't sound good enough.' Just remember I'm 11 years old."

MUM: "He's sitting there every morning before school and he's got 5-10 kids around him listening to music."

KID: "I really like Dubstep sounds but a lot of people don't like Dubstep."

KID: "Mr Dean he's not a big fan of it but he appreciates what I do and gives me a lot of support. He got one of my songs and he got it played at the school graduation disco."

RHYS: They put me up onstage to talk about my song and this girl screamed out 'I love you Rhys' and it was just so funny, I thought I've got my first groupie!"

He started jumping up and down and yelling that's my song, that's my song.

RHYS: "I just remember what about the teachers they're dancing, oh this is so awesome. I got the word black from up there and the word summer from there and I call myself black summer."

"Flume's songs I really like him - a remix he did. I wonder whether you'd be interested in watching this?"

VIDEO: "Hey Rhys, Flume here just wanted to say keep at it, you're good at the music."

RHYS: "Really? Wow, that's awesome. Holy Moley."

GIRL: "That's really cool even considering I don't know who Flume is."

Triple J Unearthed: "Have a listen to this - an amazing upload on triple j unearthed, Black Summer: dark times bright lights."

I'm doing my happy dance.

I'm so happy I made a profile on unearthed, got my song played on there.

PARENTS: "When he figures out all the nooks and crannies of what he can do, look out."

Carl Promo

Now before we go today, I just want to quickly let you know about a story coming up next week. Right now, our very dedicated reporter Carl is living below the line which is a campaign that challenges people to live on 2 dollars worth of food a day for the whole week.

If you want to follow his progress, go to our website and follow the links to his profile page where he'll be posting videos about his progress.

So please jump on and check out Carl's videos and give him some encouragement! Tune in next week as well to find out how it all went and why he's doing it.

Closer

Okay that's it's from us today!

See you next time!