

### Cyber Attacks

1. Briefly summarise the BTN *Cyber Attacks* story.
2. How much money does cybercrime cost our economy each year?
3. Give an example of a cybercrime.
4. Why do people carry out cyber crimes? Give one reason.
5. Why do some cybercriminals try to collect information?
6. What country has recently been accused of using cybercrime to try to interfere with US politics?
7. Recently Australia's Parliament and several political parties were hacked. True or false?
8. What can we do to protect ourselves from cybercriminals?
9. How do you stay safe online?
10. What did you learn watching the BTN story?

### Sports Pay Gap

1. Before watching the BTN story, make a list of elite female sportspeople.
2. In pairs, discuss the *Sports Pay Gap* story and record the main points of the discussion.
3. What professional sport does Erin Phillips play?
4. What sport does Nicole Seekamp play?
5. How are low wages affecting elite sportswomen?
6. Who is coming up with a plan to close the pay gap between men and women in elite sport?
7. In what sport do men and women receive the same prize money at all major tournaments?
8. What sport pays both men and women the same hourly base rate?
9. What was surprising about this story?
10. How do you feel about men being paid more than women in professional sport? Discuss in pairs.

### History of the Oscars

1. Name some of the categories awarded at the Oscars.
2. What is the name of the production company that Louis B. Mayer co-founded?
3. What year was the first Academy Awards held?
4. Why is the gold award called an 'Oscar'?
5. In what year were the Academy Awards first televised?
6. Give an example of when things have gone wrong at the Academy Awards.
7. In what year was an African American man first named best actor?
8. Who is the only woman to have won best director?
9. What is your favourite film from 2018? Why?
10. What did you learn watching the BTN story?

Check out the [History of the Oscars resource](#) on the Teachers page.

### Space Junk Clean-up

1. Retell the BTN *Space Junk Clean-up* story using your own words.
2. What is the name of the first satellite launched into space?
3. What year was the first satellite launched in Earth's orbit?
4. What type of space junk can be found orbiting Earth?
5. How many pieces of space junk the size of a marble or bigger is orbiting Earth?

6. How might a disaster involving space junk affect humans on Earth?
7. What does the RemoveDEBRIS junk collector look like? Describe.
8. How does the RemoveDEBRIS junk collector collect and remove space junk?
9. What will happen to the RemoveDEBRIS junk collector once it has completed its mission?
10. Illustrate an aspect of the *Space Junk Clean-up* story.

Check out the [Space Junk Clean-up resource](#) on the Teachers page. Get your class involved in BTN's [Ask A Reporter!](#) This week's topic is Space Junk Clean-up.



## Circus Abyssinia

1. Before watching the BTN, story think of 5 words you would use to describe circuses.
2. Where is Ethiopia? Find using Google Maps.
3. Who started the circus group featured in the BTN story?
4. Circuses aren't very popular in Ethiopia. True or false?
5. What story does the show tell? Give a summary.
6. Why did Fikir, the youngest performer, want to join the group?
7. What does Fikir perform in the show?
8. Where around the world has Circus Abyssinia performed?
9. Why is performing and touring around the world important to Fikir?
10. What questions would you like to ask Fikir?

## Teacher Resource

# History of the Oscars

## Focus Questions

1. Name some of the categories awarded at the Oscars.
2. What is the name of the production company that Louis B. Mayer co-founded?
3. What year was the first Academy Awards held?
4. Why is the gold award called an 'Oscar'?
5. In what year were the Academy Awards first televised?
6. Give an example of when things have gone wrong at the Academy Awards.
7. In what year was an African American man first named best actor?
8. Who is the only woman to have won best director?
9. What is your favourite film from 2018? Why?
10. What did you learn watching the BTN story?

## Activity

### Class discussion

Discuss the BTN *History of the Oscars* story as a class. Students will respond to the following:

- What did you learn from the BTN story?
- List some of the categories awarded at the Oscars.
- Who is involved in the filmmaking process? List as many roles as you can think of.

### Further investigation

As a class, watch the closing credits of a film to see who is involved in the film making process. Students will choose one role to research in detail.

## Activity

### Glossary

Students will develop a glossary of words and terms that relate to film making. Below are some words to get them started. Add words and meanings to your glossary as you come across unfamiliar words throughout your research. Consider using pictures and diagrams to illustrate meanings.

|        |              |                |            |
|--------|--------------|----------------|------------|
| score  | animation    | director       | storyboard |
| action | green screen | genre          | dialogue   |
| plot   | documentary  | motion picture | production |

## Key Learning

Students will explore the roles involved in the film making process. Students will plan, produce and present media artworks

## Curriculum

### Media Arts – Years 5 & 6

Develop skills with media technologies to shape space, time, movement and lighting within images, sounds and text.

Plan, produce and present media artworks for specific audiences and purposes using responsible media practice.

### Media Arts – Years 7 & 8

Develop and refine media production skills to shape the technical and symbolic elements of images, sounds and text for a specific purpose and meaning.

Plan, structure and design media artworks that engage audiences.

## Activity

### Film Review

Students will choose a film they have watched this year and write their own film review.

- What are the themes in the film?
- What did you like or dislike about the film? Why?
- Would you recommend the film to other kids your age? Why or why not?
- Include an illustration with your review. It could be a poster for the film or a sketch of one of the characters from the film.
- Give a star rating out of 5
- Tip: Think about the audience you are trying to reach. Use effective vocabulary and accurate and persuasive language.
- Class activity. Hold your own class film club. Everyone will watch the same film, either individually or as a class and then discuss the film (genres, characters, plot).



## Activity

### Produce your own documentary

Students will produce a short documentary about someone who's doing something great, doing something interesting or helping others in their community. It could be a friend, family member, school teacher, or themselves. Alternatively, you could encourage students to research an issue that affects their local community.

1. Choose someone in your community that you want to feature in your documentary. Watch some of BTN's [Rookie Reports](#) for inspiration.
2. Write your documentary – find out what makes a good feature story [here](#). Celebrate the persons' strengths in your writing. Share your story with the class.
3. Plan your documentary – Story board your documentary on paper.
4. Make your documentary – check out these [interviewing tips](#) to help with interviewing your subject. Encourage students to film and edit their own short documentary and send it in to BTN. Visit BTN's [Rookie Reporter webpage](#) for some training videos.

## Activity

### Stop motion animation

Students will create their own short 3D clay animation film using the stop motion animation technique. Students will follow these simple steps to animate a plasticine ball using iPads, iPods, Smartphones or tablets.

#### 9 Steps to animating a ball of plasticine – Courtesy of GooRoo Animation

1

#### Download a Stop Motion App

Some of the best apps are Stop Motion Studio, Lego Movie Maker, and Smovie.



2

### Create a small workspace

A large sheet of paper taped up against a table and a wall provides a nice simple backdrop.



3

### Position and secure the camera

Place your device so that the camera is facing your workspace. Blu-tack and masking tape work well, or for extra stability use a device holder.



4

### Prepare the shot

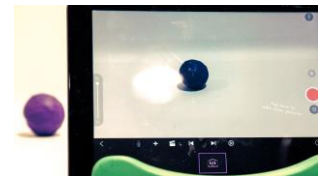
Place a ball of plasticine in front of the camera so that you can see it on the screen.



5

### Start taking pictures

You can now start by taking your first photo, which is usually the large red button on most apps.



6

### Move the ball

Move the ball slightly to the right about half a centimetre.



7

### Take another photo

Once you've moved your hand out of the way, take another photo.



8

### Move the ball again, then take another photo

Now move the ball half a centimetre in the same direction, then take another photo. Repeat the process of moving the ball and taking photos.



9

### Play the animation

Once you have a sequence of photos you can play the video to see how it looks.

When you've mastered rolling a ball around, maybe you can move on to something a little trickier. Try morphing the ball into another shape or create a character out of plasticine and bring them to life with animation.



 [View Animation.mp4](#)

## Activity

Students will create a quiz about the history of the Oscars using [Kahoot!](#). Quizzes can be created to recap learning or test personal knowledge. Include a variety of question types in your quiz, including multiple choice, true or false or fill in the blanks. Ask your classmates to complete your quiz and then give them their scores.

There is also the option to connect with classrooms around the world and play kahoot in real time.



## Useful Websites

BTN – Movie Sounds

<http://www.abc.net.au/btn/classroom/movie-sounds/10533052>

CBBC Newsround – Oscars: 7 things you didn't know about the statues

<https://www.bbc.co.uk/newsround/42787189>

CBBC Newsround – Oscars 2019: Five times the Oscars have hit the headlines

<https://www.bbc.co.uk/newsround/47141169>



# Teacher Resource

## Space Junk

### Focus Questions

1. Retell the BTN *Space Junk Clean-up* story using your own words.
2. What is the name of the first satellite launched into space?
3. What year was the first satellite launched in Earth's orbit?
4. What type of space junk can be found orbiting Earth?
5. How many pieces of space junk the size of a marble or bigger is orbiting Earth?
6. How might a disaster involving space junk affect humans on Earth?
7. What does the RemoveDEBRIS junk collector look like? Describe.
8. How does the RemoveDEBRIS junk collector collect and remove space junk?
9. What will happen to the RemoveDEBRIS junk collector once it has completed its mission?
10. Illustrate an aspect of the *Space Junk Clean-up* story.

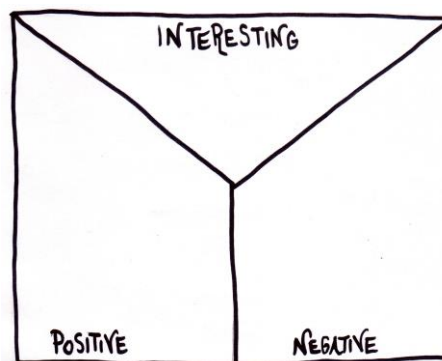
### Activity

#### Note Taking

Students take notes while watching the BTN story. After watching the story, students reflect on and organise the information into three categories. What information about space junk was...?

- Positive
- Negative or
- Interesting

What is space junk? Come up with a class definition.



#### Glossary

Students will develop a glossary of terms that relate to space junk. Below are some key terms and concepts to get you started:

|           |           |            |
|-----------|-----------|------------|
| debris    | orbit     | atmosphere |
| satellite | collision | space junk |

### Key Learning

Students will investigate the problem of space junk and design an object to clean up space debris.

### Curriculum

#### Science - Year 5

The Earth is part of a system of planets orbiting around a star (the sun).

Scientific knowledge is used to solve problems and inform personal and community decisions.

#### Science – Years 5 & 6

With guidance, pose clarifying questions and make predictions about scientific investigations.

#### Science – Year 7

Scientific knowledge has changed peoples' understanding of the world and is refined as new evidence becomes available.

## Activity

### Space junk research

**Define:** What do I want to know?

#### Key questions to research

Students can choose one or more of the following questions or come up with their own:

- How much junk is in space?
- What causes space junk?
- How long does space junk stay in orbit?
- What danger does space junk pose?
- Why is space junk a threat to humans on Earth?
- Why is it difficult to clean up space junk?
- What are some solutions to the space junk problem?
- Who is responsible for cleaning up space junk?

#### Locate: Where do I find the information?

What resources will help answer my questions? (Internet, people, resource centre, organisations, print). Discuss with students what a reliable source is.

#### Select: What information is important for the investigation?

Students may need support to sort through and select relevant information.

#### Organise: How do I make sense of the information?

Students can organise their research by creating main headings from their questions. Write each heading on a separate piece of paper. Record the information found for each question.

#### Present: How do we let others know about this information?

Each group needs to discuss then decide on the best way to present the information. Possibilities could include:

- A 'Did You Know' Facts sheet
- Infographic
- Oral presentation
- [Prezi](#) presentation
- Create an infographic using [Canva](#)

#### Evaluate: What have we learnt?

Each group reflects on what they have learnt about space junk during their investigation. Students will reflect on their learning and respond to the following.

- What I learned...
- What I found surprising...
- What I would do differently next time...

## Activity

### Solving the problem of space junk

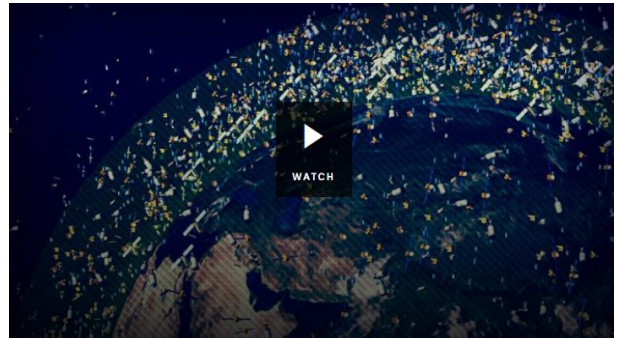
In this activity students will design an object that can clean up space junk from the Earth's orbit. The BTN *Space Clean-up* story explained how a spacecraft successfully fired a harpoon into space junk that was



orbiting Earth. Students can watch the videos below to get more ideas about ways to solve the problem of space junk. Ask students to create a labelled diagram of their design and an explanation of how the object cleans up space junk.



[How to solve the problem of space junk](#)



[BTN Space Junk](#)

## Activity

### Protecting the ISS from space junk

Begin with a class discussion to find out what students know about the International Space Station. Students watch the video [How NASA protects the ISS from space junk](#) then answer the following questions:

- What is the ISS?
- What risks does space junk pose to the ISS?
- The Space Debris Sensor measures pieces smaller than a \_\_\_\_\_.
- What does the sensor measure?
- What did you learn watching the video?



## Activity

### Space Junk Quiz

1. When was the first satellite launched
  - a. 1945
  - b. 1957
  - c. 1967

Answer - 1957

2. What was the first satellite called?
  - a. Sputnik 1
  - b. Satellite 1
  - c. Spacejunk 1

Answer - Sputnik 1

3. How many objects larger than a marble are orbiting earth?
  - a. 100,000
  - b. 300,000
  - c. 500,000

Answer – 500,000

4. Space junk orbits at speeds of up to...
- 18,000 km per hour
  - 28,000 km per hour
  - 38,000 km per hour

Answer – 28,000 km per hour

5. Space junk is also called space debris.
- True
  - False

Answer - True

### Create a Kahoot Quiz

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



### Useful Websites

BTN – Space Junk

<http://www.abc.net.au/btn/classroom/space-junk/10531450>

ABC News – Harpoon successfully spears space junk in experiment to clean up tonnes of debris orbiting the Earth

<https://www.abc.net.au/news/2019-02-17/space-harpoon-fires-target-cleaning-space-junk/10819842>

NASA – Space Debris and Human Spacecraft

[https://www.nasa.gov/mission\\_pages/station/news/orbital\\_debris.html](https://www.nasa.gov/mission_pages/station/news/orbital_debris.html)

CleanSpace One – A Swiss satellite to tackle space junk

<https://www.youtube.com/watch?v=qTAv7TsnjzA>

NASA – Waste in Space Infographics

<https://www.jpl.nasa.gov/infographics/infographic.view.php?id=10929>

CBBC Newsround - What is space junk?

<https://www.bbc.co.uk/newsround/33795896>

CBBC Newsround - Everything you want to know about space junk

<https://www.bbc.co.uk/newsround/45571384>

CBBC Newsround - How to solve the problem of space junk

<https://www.bbc.co.uk/newsround/42173535>

NASA - Space junk in action

<https://youtu.be/IOwv1j-fUbo>



# BTN Transcript: Episode 3 – 26/2/19

Hi everyone. Amelia Moseley here. Welcome to another episode of BTN. Check out what we've got for you today. Jack's getting glammed up to give you a brief history of the Oscars. Martin's hanging out with some sports stars to find out about a new plan for more equal pay. And I'm going to tell you about a satellite that's helping to clean up outer space.

## Cyber Attacks

Reporter: Amelia Moseley

*INTRO: But before we get to all of that, let's talk about cyber security. That was a topic that was really big in the news last week after hackers broke into the networks of Australia's Parliament and some political parties. Let's find out more.*

Do you ever wonder if what you're doing online isn't as private as you'd like to think?

CYBERCRIMINAL 1: Online shopping, are you? Nice dress.

AMELIA, REPORTER: Umm thanks. Wait who are you?

CYBERCRIMINAL 1: I'm just gonna grab your credit card details.

AMELIA, REPORTER: Ah, um, ok.

The reality is, the digital world provides a lot of opportunities for crafty criminals. Stats show cybercrime costs our economy up to 1 billion dollars a year and experts say the problems getting worse.

MAJ. GEN. MARCUS THOMPSON, ADF INFORMATION WARFARE: What I'm seeing is a significant uptick in the threats as Australians as a society become more and more dependent on information and on our electronic devices for our everyday day-to-day lives.

Cybercrime can be carried out in many different ways and for many different reasons. Often, it's about making money. That can be done by sneakily installing software that gives someone access to your device or tricking you into giving out your personal information.

CYBERCRIMINAL 1: Oh. Was that a capital T in your password?

AMELIA, REPORTER: Umm, no it was a small t.

CYBERCRIMINAL 1: Right. Thanks.

AMELIA, REPORTER: No worries.

Sometimes, criminals are out to cause chaos and shut down websites, spread nasty content or viruses. That might be to prove a point or just for lols.

AMELIA, REPORTER: Why is this website not working.

CYBERCRIMINAL 2: That was me. I did that. I crashed it. That was me.

AMELIA, REPORTER: Great.

CYBERCRIMINAL 2: That was me.

But sometimes cybercriminals are actual spies, or people employed by governments or organisations. They could be trying to collect information, cause problems for rivals, or even influence elections.

CYBERCRIMINAL 3: So. Who you gonna vote for?

AMELIA, REPORTER: What? Who are you?

CYBERCRIMINAL 3: I'll tell you, but then I'd have to kill you.

You've probably heard that Russia has been accused of using cybercrime to try to interfere with US politics. But it's not the only government suspected of hacking other country's networks. Recently, Australia's Parliament and several political parties were hacked, and experts say it was probably a foreign government trying to steal information.

FERGUS HANSON, INTERNATIONAL CYBER POLICY CENTRE: This is really the treasure trove of juicy details. You've got all the insider political gossip, you've got which MPs are in favour of which policies and which ones are descenting and you've also got also quite a lot of personal information about voters.

Australia's government already has teams of experts working on keeping our networks secure and they say that job will only be more important in the future.

CYBERCRIMINAL 1: On Instagram, again are we?

CYBERCRIMINAL 2: She's been on there for hours.

While those experts work on protecting the country, there are some things you and I can do to protect ourselves from cybercriminals, like having hard-to-guess passwords and keeping them to ourselves, ignoring any dodgy looking emails or texts and thinking twice about what we download and share online.

AMELIA, REPORTER: And password changed. Done. Back to Instagram.

## Quiz

What's the name of a hacker that breaks into networks with their owner's permission to test their security?

Is it

A white pant hacker

A white hat hacker or

A white glove hacker

It's a white hat hacker. They're kind-of like the good guys of the hacking world. Hackers that use their powers for crime are known as black hat hackers.

AMELIA, REPORTER: Aww thanks guys. And hey, if you want to get your school on the show you can send us a shout out like the one you just saw. Head to our website for more details.

## Sports Pay Gap

Reporter: Martin Dougan

*INTRO: Now to a good news story about sport. Last week a whole heap of Aussie sports execs got together and released a plan to try close the pay gap between men and women in some sports. Here's Martin with more.*

MARTIN, REPORTER: Yep, I think Australia should be mighty proud of itself when it comes to producing top female athletes and it seems like you guys agree.

KID 1: I like Sam Kerr because she's extremely skilful.

KID 2: I like Sally Pearson because she's just like a really good athlete.

KID 3: I really like Erin Phillips because she's an amazing athlete and I personally find her a huge inspiration for girls and women who wanna start playing sport.

Some new research has shown the popularity of top level women's sports is on the rise and more than half of Australians follow women's sports. That's great news for people like Nicole who's spent her life getting to the top of her game.

NICOLE SEEKAMP, PROFESSIONAL BASKETBALLER: Yeah, I mean I love it. It's so much fun. It's so fun to play in front of a lot of people but like just, obviously having a love for the game and playing it at that kind of level its' competitive and challenging but it's fun

Nicole Seekamp has just played in a WNBL grand final. She also represents her country and has even won a gold medal at the Commonwealth Games. She also helps to train up and coming stars like Emmy who has big ambitions of her own.

EMMY: Yeah. I'd like to hopefully probably do what Nicky has done, play WNBL, hopefully maybe represent Australia one day.

But while becoming an elite athlete is an awesome achievement it doesn't always come with a big pay packet, especially for women. In many sports there are big gaps in the amount that men and women get paid, for example, in the W League, the minimum salary a player can earn this season is \$12,200. In the A League for men over 20 it's over \$64,000. AFL players earn around \$370,000 on average. While average AFLW players earns just \$9,700. As for basketball, Nicole says there have been steps to make pay fairer, but women still get less.

NICOLE: Thankfully now for our younger players if you've signed a contract you get a minimum wage. So that's a big step for us. But, still it's not enough to live off so a lot of people do have to get jobs.

Some say low wages are stopping many sportswomen from reaching their potential. That's why recently the heads of 17 Aussie sporting organisations got together to come up with a plan to close the pay gap between men and women. The plans says there's no good reason why, in the future, women shouldn't be paid the same as men, but it'll take effort from lots of areas of sport. For example, making sure girls have the same opportunities as boys to play and train and building the profile of women's sports and women's sports stars in the media so that they attract valuable sponsorship and broadcast deals.

The plan pointed out a few examples of sports that have already managed to lower the pay gap like tennis where men and women receive the same prize money at all major tournaments and cricket Australia which pays both men and women the same hourly base rate. For many it's a positive step.

NICOLE: It probably won't be enough. You know I think it's a good start, but you know there's always going to be something that comes up that needs to get better.

MARTIN, REPORTER: So, it would be good to find out what some young sporting starts have to say. Did you get that? Come on ref that was a foul.

KID: There all doing the same thing, you've just got a different gender, what's the difference?

KID: I would think it's really disturbing to see that people actually think that women should get paid less than men in sports.

KID: I don't think it's enough, I think they definitely should be getting paid the same and it needs to change.

## This Week in News

The leaders of North Korea and the USA are getting together in Vietnam. It's the second time Kim Jong Un and Donald Trump have met and it's a pretty big deal because the two countries have been enemies for a long time.

Last time they met they said they'd work towards a better relationship and maybe ending North Korea's nuclear weapons program.

A group of scientists and insect enthusiasts have made an un-bee-leviable discovery on a remote Indonesian island. Yep, this is a bee, the world's biggest bee to BEE precise. And until now, it was thought to be extinct.

Its name is Megachile Pluto or Wallace's Giant Bee and this is the first time it's been spotted since 1989. It's got a wingspan of 6cm, giant pincers on its head and it doesn't die after it stings something. Hmm creepy.

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And Hollywood got all dressed up for this year's Academy Awards. The ceremony was a little bit different this year. For the first time in 30 years there was no host. Instead 70s rock group Queen opened the show with some of their classics.

It was a big night for superheroes. Spiderman into the Spiderverse won best animated film and Black Panther picked up three awards for its costumes, its production design and its musical score. Meanwhile best picture went to Green Book and Rami Malek and Olivia Coleman were named best actor and actress.

## History of the Oscars

Reporter: Jack Evans

*INTRO: Of course, the Oscars are always big news, but do you know much about the history of the Academy Awards? Well we thought it would be a good time to find out how Hollywood's big night began and how it's changed over the years. So, we put our most dramatic reporter on the case. Here's Jack.*

They're the five words any aspiring actor, film-maker, cinematographer, costume designer, animator, director, writer, production designer, sound mixer, dreams of hearing.

REPORTER, JACK: Thank you, thank you. Oh wow, look at all the people. There's Meryl, hi Meryl. And there's Leo, how ya' doin' Leo? I'm not even prepared for this. Right, I'd like to thank the Academy, wait what is the Academy?

The Academy came about because of this guy, Louis B. Mayer. AKA the co-founder of this production company. In 1927 he decided to set up a group for people who worked in the film industry, who would work together to improve the quality of these newfangled motion pictures and give awards to the year's best movies and movie makers.

On the 16th of May 1929; 270 actors, directors, technicians, writers, producers and, well, all the other film people, got tizzied up for The 1<sup>st</sup> Academy Awards. Back then tickets only cost \$5 and the ceremony went for just 15 minutes. So, I guess acceptance speeches were a lot shorter. Oh, and how could I forget the most important little gold man of the evening. Believe it or not, no one actually knows how Oscar got his name. One theory is that the Academy's Executive Secretary, Margaret Herrick, thought the statue resembled her uncle Oscar. Although I doubt her uncle was 34cm tall, gold and held a sword at all times. But, then again, I never met the guy.

Over the years the awards grew until thousands of people were attending. In 1953 the ceremony was televised and beamed out to audiences for the first time. Today it's one of the biggest Award Ceremonies in the world, with around 50 million people tuning in to watch. Although things don't always go as planned. There have also been quite a few controversies. It wasn't until 1963 that an African American man was named best actor. And it wasn't until 40 years later that the first African American woman won best actress.

HALLE BERRY: This moment is so much bigger than me.

Only one woman has ever won best director.

KATHRYN BIGELOW: There's no other way to describe it, it's the moment of a life time.

This year lots of people complained when the Academy announced that some awards would be played during commercial breaks. Including cinematography and editing, you know the people who actually make the movies. In the end they changed their mind. And despite the controversies, and the arguments about who should and shouldn't have won, the Academy Awards are just as glamorous and just as sought after as ever.



JACK: I could wear this jacket and of course, I would like to thank this award for not being too heavy.

AMELIA: Jack, what are you doing?

JACK: Oh, um nothing.

AMELIA: Oh, thank you. I can't believe it.

## Did You Know?

Did you know Walt Disney won more Oscars than anyone else ever has? He was nominated for 64 awards and won 26. Composer John Williams is the second most nominated person, with 47 Academy Award nominations.

## Space Junk Clean-up

Reporter: Amelia Moseley

*INTRO: Hmm, oh sorry. Right, our next story is not quite as glamorous, but it is really interesting. It's about a little robot that's been sent into space to collect rubbish. You see, Earth isn't the only place where humans have been littering. Check it out.*

1950s SCI-FI MOVIE NARRATOR: It's endangering our citizens, attacking our technology and surrounding our planet. It's space junk.

OK, that's a little dramatic. But space junk really is a thing and it really is a problem. It all started when the first satellite, Sputnik 1, was launched into Earth's Orbit in 1957. Ever since then, people have had a grand old-time shooting stuff into space to learn more about our universe, or to help us communicate and navigate back on Earth. But, as a result, there's a lot of man-made stuff orbiting the Earth including old, broken satellites and bits of rockets and spacecraft, and while some of it falls back to Earth and burns up in the atmosphere; some of it doesn't and that, my friends, is space junk.

There are around 20,000 pieces of debris larger than a tennis ball whizzing around Earth right now and 500,000 pieces of space junk the size of a marble or bigger. But even something tiny is a big problem up here, because it's orbiting at speeds of up to 28,000 kays an hour. Just look at these tests on spacecrafts and this is an actual window on the International Space Station. Yikes.

ALASTAIR WAYMAN, ADVANCED PROJECT ENGINEER, AIRBUS: We're launching more and more spacecraft every day, and we're using space more and more in our everyday lives. And with that comes the risk of spacecraft colliding with each other and then that leading to us never being able to use the space environment again.

And what does that mean for earth-bound beings?

SIMON FELLOWES, PROGRAM MANAGER FOR THE RemoveDEBRIS PROJECT, SURREY SPACE CENTRE: There's a disaster scenario where one object could strike another and could cause a cascade effect that could actually destroy all of the things that we use daily and take for granted, like GPS, satellite navigation, telephones, the internet, and all those things that we all know and love.

Noooooo. Not my beloved cat videos. Something clearly has to be done about this. Luckily, scientists around the world agree. They've been working for years to try to find the best way to get rid of space junk and recently a project called RemoveDEBRIS sent this little junk collector up to the ISS. It tracked down some space junk, then it did what can only be described as extraterrestrial rubbish fishing. Yes, I made that up.

It tried chucking a special net at some space junk. Success. And then it managed to throw a harpoon at it. Whoa let's watch that again. Then the rubbish was dragged out of orbit and into the atmosphere to burn up. And soon, the spacecraft itself will face the same fate to avoid creating more junk. But it's not the last rubbish removing robot we'll see up here. RemoveDEBRIS' creators are planning to perfect their spacecraft and there are plenty of other scientists around the world working on ways to keep us all safe from the menace of space junk.

## Ask a Reporter

If you want to know more about space junk you can ask me live this Friday on Ask A Reporter. Check out the website for more info.

## Sport

A spectacular finish by Pat Cummins has given Australia the lead in the T-20 series with India. He hit the winning runs with the match's final ball giving the Aussies the 127 runs they needed to win.

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Meanwhile the Australian Women's cricket team has retained the Rose Bowl over after winning by 95 runs against New Zealand.

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Manchester City have taken the English League Cup after a dramatic penalty shootout win over Chelsea. But the moment that's got everyone talking is this. Chelsea Goalkeeper, Kepa, threw this tantrum when his coach tried to sub him off and he refused to leave the field. A few minutes later the game went to penalties and, well, Kepa was more zero than hero.

## BTN Newsbreak Promo

Hey guys, it's Ruby here. If a week is just too long to wait for your next dose of BTN – good news. We're actually on YouTube every weekday with a special new show. We cover the big, fun, and amazing stories of the day. So, make sure you subscribe and hit the bell, so you get those notifications every time a new video drops. If you're not on YouTube, don't stress. You can still catch it on our website or on the ABC Me app.

## Circus Abyssinia

Reporter: Jack Evans

*INTRO: Now, how would you like to travel the world as part of a circus troupe? Pretty awesome right? Well you're about to meet some teenagers who do just that. They're part of Circus Abyssinia the very first circus from Ethiopia. Take a look.*

These guys are heading into school. But it's not your average school there's a twist it's circus school, which explains the acrobatics, some very impressive hula hopping and well this. Yeah don't try that at home. The school is in Ethiopia, which is a country in Africa. It was started by two brothers, Bibi and Bichu. As kids they dreamed of running away to join the circus. But in Ethiopia, circuses aren't really a thing. So eventually they started their own company, Circus Abyssinia.

BICHU: The show is based on our true-life story, two kids from Ethiopia from the middle of nowhere a place called Jimma dreaming about joining a circus. We saw on TV and we dreamed about it. And now we're here and created our own circus.

Bibi and Bichu wanted to make a uniquely Ethiopian circus with traditional music, dance and performance. Fikir is one of the newest and youngest members of the circus.

FIKIR: I wanted to join the group because I saw on tv lots of stuff about Circus Abyssinia touring around the world. And last year one of the members came back to Ethiopia and talked to us about the circus and how the tour works. And then that was my dream to join the circus and tour around.

As you can see she's pretty skilled when it comes to hula hooping. In fact, she can hula up to 20 hoops, that's 19 more than me. But when she's on stage she says she's as cool as a cucumber.

FIKIR: When presenting myself to the audience, as much as the audience is enjoying it I'm enjoying it myself. I love performing, so that's why you see me relaxed and enjoying myself.

That comes in handy when you're performing in front of crowds right around the world. Circus Abyssinia has performed to audiences throughout Asia, Europe and America. And of course, now they're in Australia

showing locals what they can do.

FIKIR: Touring around the world means a lot to me because I get to see a lot of people. One of the main things is representing my country and showing my culture and what Ethiopia has to offer to the world.

## Closer

Oh man, I wish I could do that. How amazing are they? Well, that's all we have for you this week but, don't worry, we'll be back with more stories, more fascinating facts and probably more costumes next week. Until then, you can keep up to date with the latest news on our website, YouTube and on Newsbreak every weeknight on ABC Me. See you next week.