



PRESENT

HANNIE RAYSON'S

EXTINCTION



Community and Education Resource

How do you know if something is worth saving?

A wild, rainy night, a twist of fate and an endangered tiger quoll bring together a passionate environmentalist and an unlikely Good Samaritan. Both are hell-bent on saving the species, but what will be compromised in the quest to save the quoll? Nothing is black and white.

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Introduction to this resource

This resource has been created to accompany the production of Hannie Rayson's *Extinction*. It is presented in two sections. In *Part One: Background to the Production* you will find a series of interviews with members of the creative team, reviews of the first season of the play, excerpts from articles that discuss the science that concerns extinct animals and climate change, links to online resources including documentaries, and further reading that you may find of interest.

Part Two: Education Resources presents a series of activities, discussion and analysis questions, and performance tasks that students and teachers can use to explore the themes, ideas, theatrical form, and stagecraft present in Extinction. The resources aim to prepare students to see the work, and then provide a platform for discussing their understanding of the play in performance, the issues it raises, and ways of responding.

The resource has been created with the idea that *Extinction* is theatre and it is contemporary Australian theatre. It is live and it is immediate. Most audience members will see the play only once, so the resource is aimed at keeping the performance alive for the purposes of discussion and debate. Hannie Rayson, the playwright says, "This is not a play that will divide you. This is a play that will fill you with hope. We hope you enjoy the performance and the ensuing discussion".

I wrote this play because I wanted to understand what it means that a species might go extinct in my lifetime. Just wink out of existence. I wanted to understand the human cost – Hannie Rayson

About the Play

The tiger quoll once ruled the dense Otway forest but is now almost extinct. A wild, rainy night, a twist of fate and an injured tiger quoll bring together a passionate environmentalist and an unlikely Good Samaritan. Both are hell-bent on saving the species, but intentions are murky. What will be compromised in the quest to save the quoll? Nothing is black and white in this intriguing story about love, sex, money and power played out under the shadow of global warming.

Extinction is a timely and intelligent new Australian play by Helpmann award winning playwright and screenwriter Hannie Rayson (*Hotel Sorrento, Life After George*), directed by acclaimed film director and producer Nadia Tass (*Malcolm, Matching Jack*). It delves deep into the heart of our own morals, choices and tightly-held convictions. **Extinction** wraps an important conservation message around a unique and personal human story. What would you choose?

Entering the world of the play

The following section offers you some insight in the issues and ideas the play explores. Consider the quotations, definitions and images below as a starting point for experiencing *Extinction*.

Few problems are less recognized, but more important than, the accelerating disappearance of the earth's biological resources. In pushing other species to extinction, humanity is busy sawing off the limb on which it is perched – Paul R Ehrlich, American Biologist Carbon dioxide is not a pollutant and, in fact, is a desired.... to date global warming alarmists have not come close to providing any valid scientific data that proves humans are the sole source of changes in so-called global average temperatures. Quite simply, correlation between the carbon dioxide levels and the global average temperatures does not prove a causal relationship - Ed Rademacher, Chemical Engineer







Snow storm in NYC 2016

In biology and ecology, extinction is the end of an organism or of a group of organisms, normally a species. The moment of extinction is generally considered to be the death of the last individual of the species, although the capacity to breed and recover may have been lost before this point.

Focus: What do these quotations, definitions and images conjure for you? What messages or arguments are they conveying? How do you imagine they relate to the production? What is your view?

Extinction charts parallel narratives of survival undertaken by four characters – a zoologist, vet, mining executive, and ecologist – all of which revolve around a plight to save the endangered tiger quoll. The quoll, native to Australia, stands in for the many mammals that have become extinct or are endangered in Australia. The manner in which the national and domestic narratives unfold between the characters echoes the rapid unravelling of the ecosystem around them. To paraphrase zoologist Piper Ross, millions of relationships hinge on the existence of the tiger quoll. It is a reminder that we humans are not exempt from the effects of a dysfunctional ecology.

- Charlotte Guest, Australian Book Review, November, 2015, No. 376

Focus: After reading this extract from a review of the play, discuss what is meant by 'millions of relationships hinge on the existence of the tiger quoll' – How? Why?

What is sustainability?

In ecology, sustainability is the capacity to endure; it is how biological systems remain diverse and productive indefinitely. Long-lived and healthy wetlands and forests are examples of sustainable biological systems. Sustainability addresses the ongoing capacity of Earth to maintain all life. Sustainable patterns of living meet the needs of the present without compromising the ability of future generations to meet their needs. Actions to improve sustainability are individual and collective endeavours shared across local and global communities. They necessitate a renewed and balanced approach to the way humans interact with each other and the environment

Source: Victorian Curriculum, 2015



Take the challenge – How many Earths?

Go to this link and enter the required details to determine your environmental footprint http://www.wwf.org.au/our work/people and the environment/human footprint/footprint calculator What did you discover? How many Earths? How might you change that? What can you do without?

Extract from the Play

Read the following extract from the play.

What perspectives are presented? What is your opinion/belief?

How can we resolve human energy needs?

HARRY: Clean coal. It's the only way forward, Andy. ANDY: What part of this do you not understand?

HARRY: It's the cheapest, most abundant fuel on the planet.

ANDY: It's the absolute dirtiest.

HARRY: And it's booming worldwide. /Sorry to have to tell you. ANDY: (Ticking off the problems) Toxic waste; acid rain; air pollution/

HARRY: /But we can change the way we use it.

ANDY: /that's even before we get to carbon dioxide and rising temperatures.

HARRY: We're investing massive amounts of money –

ANDY: In bullshit. In lies and bullshit. Source: Extinction by Hannie Rayson

Species are graded according to their numbers and capacity to sustain.

Species which have small populations or only live in a small number of places, and could become vulnerable or endangered quite quickly.

Vulnerable

Species which are likely to become endangered within the next 25 years, if nothing is done to improve their situation.

Endangered

Species which are at a high risk of becoming extinct in the near future, if nothing is done to improve their situation.

Extinct

A species is considered extinct if it has not been seen in the wild for at least fifty years.



What are the causes of extinction?

Natural causes of extinction

- Climatic heating and cooling
- Changes in sea levels or currents
- Asteroid/Cosmic radiation (thought to have wiped out dinosaur populations)
- Acid Rain (caused by chemicals in the atmosphere)
- Disease (eg the current Tasmanian Devil population is subject to a dangerous viral cancer)
- Invasive and introduced species (cane toads, star fish, cats, foxes, rats)

Other causes of extinction

- Increased human population
- Nuclear accident and testing (prevalent in the 1960s)
- Destruction/Fragmentation of creatures' habitat
- Pollution

Source: http://people.uwec.edu/jolhm/eh4/extinction/CausesLink.html

The extinction of species – human hunting



DODO BIRD

The dodo bird inhabited the island of Mauritius in the Indian Ocean, where it lived undisturbed for so long that it lost its need and ability to fly. It lived and nested on the ground and ate fruits that had fallen from trees. There were no mammals on the island and a high diversity of bird species lived in the dense forests.

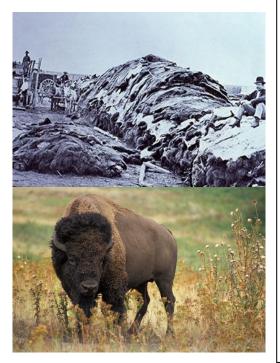
In 1505, the Portuguese became the first humans to set foot on Mauritius. The island quickly became a stopover for ships engaged in the spice trade. Weighing up to 50 pounds, the dodo bird was a welcome source of fresh meat for the sailors. Large numbers of dodo birds were killed for food.

Later, when the Dutch used the island as a penal colony, pigs and monkeys were brought to the island along with the convicts. Many of the ships that came to Mauritius also had uninvited rats aboard, some of which escaped onto the island.

Before humans and other mammals arrived the dodo bird had little to fear from predators. The rats, pigs and monkeys made short work of vulnerable dodo bird eggs in the ground nests. The combination of human exploitation and introduced species significantly reduced dodo bird populations. Within 100 years of the arrival of humans on Mauritius, the once abundant dodo bird was rare. The last dodo bird was killed in 1681.

Source: http://www.bagheera.com/inthewild/ext_dodobird.htm







AMERICAN BISON

In the 16th century, North America contained 25-30 million buffalo. Bison were hunted almost to extinction in the 19th century. Less than 100 remained in the wild by the late 1880s. They were hunted for their skins, with the rest of the animal left behind to decay on the ground. After the animals rotted, their bones were collected and shipped back east in large quantities Due to the roaming behaviour of bison, their mass destruction came with relative ease to hunters. When one bison in a herd is killed, the other bison gather around the buffalo. Due to this pattern, the ability of a hunter to kill one bison often led to the destruction of a large herd of them.

In 1889, an essay in a journal of the time observed:

Thirty years ago millions of the great unwieldy animals existed on this continent. Innumerable droves roamed, comparatively undisturbed and unmolested. Many thousands have been ruthlessly and shamefully slain every season for past twenty years or more by white hunters and tourists merely for their robes, and in sheer wanton sport, and their huge carcasses left to fester and rot, and their bleached skeletons to strew the deserts and lonely plains.

The cause of this buffalo population crash is heavily debated by academics; some contend that indigenous peoples were responsible for just as much, if not more, of the bison extermination at this time. Because native people adapted to the social changes that resulted from Euro-American arrival in the West, some native people reinvented their style of hunting and thus drove the buffalo population down. The increase in fur trade and bison hunting via horse, drove up significantly the number of bison that could be slaughtered at any one time.

Source: https://en.wikipedia.org/wiki/Bison hunting

THYLACINE: The thylacine (Greek for "dog-headed pouched one") was the largest known carnivorous marsupial of modern times. It is commonly known as the Tasmanian tiger (because of its striped lower back) or the Tasmanian wolf. Native to continental Australia, Tasmania and New Guinea, it is believed to have become extinct in the $20^{\mbox{\scriptsize th}}$ Century. It was the last extant member of its family, Thylacinidae. Specimens of other members of its family have been found in the fossil record dating back to the late Oligocene. The thylacine had become extremely rare or extinct on the Australian mainland before British settlement of the continent, but it survived on the island of Tasmania along with several other endemic species, including the Tasmanian devil. Intensive hunting encouraged by bounties is generally blamed for its extinction, but other contributing factors may have been disease, the introduction of dogs, and human encroachment into its habitat. Despite its official classification as extinct, sightings are still reported, though none has been conclusively proven.

Source: https://en.wikipedia.org/wiki/Thylacine

Read and consider

What are the common patterns that emerge in the extinction of the three species presented above? What attitudes and values may have accompanied such hunting practices? Are these practices contemporary? What has changed?

The Tiger Quoll

The Tiger Quoll is the subject of the play, Extinction. It was thought to be locally extinct in Victoria.



Securing the future of our remaining wildlife such as bandicoots and potoroos will depend, to a large degree, on the successful conservation of large native predators such as the Tiger Quoll. These carnivorous species regulate the food chain and can restore and maintain ecosystem health and resilience, leading to sustainable biodiversity conservation across the landscape. The Tiger Quoll is the largest remaining carnivorous marsupial on the Australian mainland and its populations are in free fall across its entire range. Though Tiger Quolls once ruled in the Otways they were feared extinct in this region until they were rediscovered by the Conservation Ecology Centre in 2012. Threatened by introduced foxes and feral cats, habitat fragmentation and other human impacts, the greatest risk to the survival of the Tiger Quoll and other threatened mammals is a lack of information. These critical information gaps are currently hampering conservation efforts – ecologists simply do not have the data to make informed decisions to manage habitats for the species' survival.

Source: http://www.conservationecologycentre.org/our-work/threatened-species-research/



Watch, Consider, Discuss

The following link will take you to a short film about the tiger quoll conservation program in the Otways. https://www.youtube.com/watch?v=Kfku3kzxGbk

Why do they need in order to be bred?

What is an 'apex predator'?

What type of research is being undertaken to monitor quoll populations?

Why do you think this creature was selected to be saved?

Contemporary Big Game Hunting

The following extracts are taken from public websites that advertise hunting safaris in Africa.

Company 1:

Our company] gives hunters the opportunity to hunt and harvest Monster South African Lion any date of the year. Limpopo is the premier destination for hunting trophy lion. Hunting takes place in conjunction with a 7 to 10 day safari. Hunters will learn to hunt spot and stalk tactics. Methods of hunting include rifle, blow, black power, crossbow or handgun though apparently you are most successful with a rifle at ranges of 70-80 yards.

Lion Hunt Pricing

Blonde Mane Lion - \$16,500 Record Class and Black Mane Lions - \$25,000 to \$25,000 Trophy White Lion - \$30,000 Lioness - \$9,900

Company 2:

I have been lucky to have had the opportunity to go on numerous African Hunting Safaris and to hunt turkey, white tails, brown bear, elephants, lions, tahr and everything in between in my 43 years of hunting. My goal is to enable you to enjoy a unique Africa hunting experience for big game and receive the same satisfaction that hundreds of our clients have received from their trips around the world. Explore our web site and discover the high quality Africa big game hunting packages we offer. We also do customized Africa hunts if you prefer. Our pricing is competitive with other booking agents including large firms seen in magazines or on TV.

We are a client friendly hunting business serving men, women and handicapped hunters worldwide. From the initial deposit to your return home, we try to assure you that your African safari or big game hunt will be the memory of a lifetime.



Read, Consider, Discuss

After having read these two extracts consider the content, what type of 'experience' is being advertised and to whom?

What are your thoughts about big game hunting? Do these extracts provide enough information? Consider the prices hunters pay to shoot particular types of lions. What are your thoughts on putting a price on an animal's life?

Why do you think people choose to go game hunting?

Extinction as a modern moral dilemma

The following three online links take you to sites that wrestle with the question of extinction. The first two argue that if we have the science to make it possible we have a moral obligation to bring extinct species back to life. The third link takes you to a successful story about re-invigorating a species population. What do you think? Watch all three and compile a list of arguments for and against bringing animals back from extinction.

Should we bring extinct animals back to life?

National Geographic https://www.youtube.com/watch?v=a hgCM8XZkk (2 mins)

Ted Talks

Michael Archer: How we'll resurrect the Tasmanian Tiger and the Gastric Brooding Frog https://www.ted.com/talks/michael archer how we II resurrect the gastric brooding frog the tasman ian tiger#t-75604 (17:40 minutes)

ABC Radio National

A breathtaking story that has seen the Lord Howe Stick insect re-discovered on a remote and perilous rocky outcrop in the Pacific in 2001 and since then nurtured back into existence with many hair-raising twists and turns along the way.

http://www.abc.net.au/radionational/programs/drive/fight-to-save-stick-insect-goes-global/7122322

Moral dilemma in 'Extinction'

The following extract is taken from a scene in the play, the moment when the vet, Andy, euthanizes the Tiger Quoll hit by Harry.

ANDY takes a large syringe. He draws up a substance into it.

PIPER: What are you doing?

ANDY: She can't survive these injuries. PIPER: Andy!? What are you doing? Andy?

He euthanizes the quoll. It dies. The heart beat stops. Silence.

ANDY: Do you want your towel?

HARRY stares coldly at ANDY while he wraps the animal up and puts it in a box and seals it.

PIPER: I don't believe you just did that.

HARRY: This was not somebody's mangy cat, you know.

ANDY: Really?

HARRY: You don't just pull out your needle and dispose of the problem.

PIPER: We needed to at least try. ANDY: You snapped its spinal column.

HARRY: You do what you can to keep an endangered animal alive.

ANDY: Not if it's paralysed, you don't!



Read, Consider, Discuss

Why does Andy euthanize the Quoll? What other perspectives are presented in this scene? How do you feel about this action? What does it say about the relationship between humans and animals?

EXTINCTION, the play

About the Playwright



Hannie Rayson has established a reputation for topical, complex dramas written with wit and humour. A graduate of Melbourne University and the Victorian College of the Arts, she has an Honorary Doctorate of Letters from La Trobe University and is a Fellow of the Australian Centre at the University of Melbourne. Her plays include Please Return to Sender, Mary, Leave It Till Monday, Room to Move, Hotel Sorrento, Falling From Grace, Competitive Tenderness Life After George, Inheritance and Two Brothers. She has been awarded two Australian Writers' Guild Awards, four Helpmann Awards, two NSW Premier's Literary Awards and a Victorian Premier's Literary Award as well as the Age Performing Arts Award. She also wrote Scenes from a Separation with Andrew Bovell. For television she has written Sloth (ABC, Seven Deadly Sins) and cowritten two episodes of Sea Change (ABC/Artists Services). A feature film of *Hotel Sorrento*, produced in 1995, was nominated for ten Australian Film Institute Awards. In 1999 she received the Magazine Publishers' Society of Australia's Columnist of the Year Award for her regular contributions to HQ magazine. Hannie made playwriting history when Life After George was the first play to be nominated for the Miles Franklin Award. In 2006 she was nominated for the Melbourne Prize for Literature.

FROM THE PLAYWRIGHT

Hannie Rayson, Geelong Performing Arts Centre, Season Launch December 3, 2015

It seems fitting to be launching this play this week during the Paris talks (COP 21) which as you know is a massive conference, with some 40,000 diplomats from all over the world, policy experts, journalists, activists and so on, all engaged in high-stakes negotiations about climate change.

This international climate summit goes on for about two weeks and has been budgeted at costing the French government around \$200 million dollars. But as with all big international conferences they've sought corporate sponsorship, and some of those sponsors are involved in the fossil fuel industry. The very industry the conference is aiming to dismantle.

So Big Coal is involved in keeping the lights on and the tea and coffee urns boiling while the talk in the conference rooms is about reducing man-made greenhouse gas emissions and basically phasing out the viability of some principle sponsors that have written the cheques. I am telling you this not because I want to grand-stand here, but because this is precisely the territory of this play.

Where does the money come from? And what are the implications for the conservation business when the money is coming from outfits that have a completely different agenda. Or do they? Is this merely greenwashing — as in, making themselves look good by association, or are these corporations needing to find new solutions. Should we be sceptical or open-minded? But to be open-minded is that just naive?

In *Extinction*, a man hits an animal on the Great Ocean Road at Cape Otway, in the dead of night. And it's a wild and rainy night. He recognizes the animal as a tiger quoll. He knows this country. He grew up here, on a dairy farm. When he was a boy, tiger quolls were running around, everywhere. In fact he used to shoot them with his dad when they got into the chicken runs. Now the tiger quolls are on the verge of extinction.

And as an apex predator, the largest marsupial on the Australian mainland, if this species vanishes, this affects a whole complex chain of relationships.

The man works in the mining sector. He's an executive for an outfit that mines coal and has an eye on the Otways. When he puts two million dollars on the table to kick-start a massive bio-diversity project involving a local university, like a fictitious university in Waurn Ponds for example, and you head up an Ecology department, do you take the money?

What's involved in getting into bed with Big Coal? And then the man who works for Big Coal is very attractive and single and you're single and what would happen if you got into bed... literally.

Can a mining executive be an environmentalist? Is it sensible to take the money while it's being offered? You have to consider you have a staff of twenty, all of whom are relying on you to keep the doors of the institute open. These people need their jobs. They all have families and mortgages. Maybe the writing is on the wall - spelling the end for fossil fuels?

I wrote this play because I wanted to understand what it means that a species might go extinct in my lifetime. Just wink out of existence. I wanted to understand the human cost. So this is a story that lives in the shadow of death. As we soon learn that one of the other main characters, the local vet, is looking down the barrel at his own mortality. His life is in as much danger as the species he's trying to save.

My husband's family has a house in Airey's Inlet. I used to be a Sorrento person, as you may know, which is where Hotel Sorrento comes from. But I married into this side. Which is a bit like changing footy teams. But now I feel very much attached to this country. So Extinction is the first of my surf coast plays, which is why I wanted it to open here at GPAC. (Geelong Performing Arts Centre)

When I first began to research this play down at Lizzie's Conservation Ecology Centre in Cape Otway, I was struck by the question, how do you know if something is worth saving? I wondered if the search for the tiger quoll, with their detector dog, trained to find communal latrine sites was really a lost cause.

But between then and now, there has been five pieces of evidence of tiger quolls, including photos. In fact on the day I sent my first draft to America – as this play was commissioned by the Manhattan Theatre Club - I opened The Age and there was a report that a tiger quoll had been seen and photographed in the Otways. Prior to that there hadn't been a confirmed sighting for a decade. I thought - the stars are aligning.

I want to finish by telling you about this funny little incident. One of the characters in the play loses her wedding ring after she goes swimming in Urquarts Bluff. After I'd finished the play, I was in the IGA at Anglesea and I saw a handwritten note on the community noticeboard in the supermarket. A wedding ring had been found at Urquart's Bluff. I thought, that's weird, someone has actually found my fictitious character's ring. My husband said, "Ring them up, ring them up. You've got the mobile number. I said, "And say what? I sort of know the woman who lost the wedding ring. She doesn't actually exist..." Welcome to my weird life. This is not a play that will divide you. This is a play that will fill you with hope.

Source; http://www.gpac.org.au/hannie-rayson-extinction-speech/



After reading Hannie's speech consider the following:

Is there an hypocrisy inherent in a climate summit being sponsored by mining companies? Can a mining executive be an environmentalist? What are your thoughts?

This is not a play that will divide you. This is a play that will fill you with hope. What are your thoughts?

About the Director



Nadia Tass is considered to be one of Australia's most respected and unique filmmakers with her films being responsible for twenty-three Australian Film Institute nominations, while garnering eight wins including Best Film and Best Director. She has had retrospectives of her body of work in Moscow, Capetown & Johannesburg, New Delhi and most recently at the American Cinematheque in Los Angeles in 2012 - a program which is now travelling to other US cities. In addition, Ms. Tass has sat on film festival juries for the Hawaii Film Festival, Head of Jury at St. Tropez, Asian Festival Of First Films, and most recently, the Chair of the Pune International Film Festival. Nadia's experience as a director of theatre is extensive and diverse ranging from IMPROVISED theatre, CLASSIC plays, CONTEMPORARY pieces and MUSICAL theatre. Her production of "The Lion, The Witch And The Wardrobe" in 2002/2003, adapted by David Parker from the C.S. Lewis novel garnered her a nomination for BEST DIRECTION OF A MUSICAL for the prestigious Sir ROBERT HELPMANN AWARDS. In 2012 she directed "PROMISES, PROMISES" (2012) by Neil Simon, Burt Bacharach and Hal David, for The Production Company, then directed Australia's premiere of "THE OTHER PLACE" (2013) by Sharr White (a new voice from America) for the Melbourne Theatre Company. In 2014, Nadia returned to Red Stitch Actors Theatre to direct the Pulitzer prize winner "THE FLICK" and in 2015 Tass directed OUT OF THE WATER both were a critical and box office success.

FROM THE DIRECTOR

The characters in Extinction are intelligent; the situations are complex; the Tiger Quoll is never far from anyone's consciousness. The source of funding of research is murky - a known contributor to global warming can hardly be an appropriate benefactor.

There's nothing straightforward here – the mind and the heart jockeying for first place – all in the shadow of death. Will a species survive and will dear Andy die? Obstacles arise and possible choices of solutions drive the narrative of Extinction along an unpredictable and dangerous path. This will be a night at the theatre to remember – it is not a do-gooders cry to save the planet. This is the story of four people – brought together to achieve the impossible – but it becomes far more than that – when Andy's illness is exposed and death is not restricted to a rare marsupial, a reality creeps in of mortality, futility and dichotomy. Visually, we'll portray the semi tropical forests of the Otway Ranges with light, projection and set - steamy, shafts of morning sun - an unusual and arresting image that will enhance the drama and invigorate an audience.

Source: Extinction Proposal, GPAC, 2014

What I usually do with theatre, no matter how severe and serious it is, I always look for light moments and highlight those. To me the theatre has always been a place where you go, to be inspired to think, to analyse your world, to be faced with new concepts, new questions about the place that you live in. This is a play that definitely does that. So theatregoers will be able to come and, even if they come with a closed one, hopefully they will be entertained enormously by the drama of the play but, at the same time, walk away with a lot of issues to discuss. It's not often that I get a play on my desk and I am riveted by the subject matter. It is beautifully written, the characters are so three dimensional and alive and I think the relationships that develop are so real. I feel that audiences will be riveted by this production because it is such an amazing story.

Source; https://www.youtube.com/watch?v=acacm9f38Gg



What is the role of a director? When you watch theatre can you "see" directing? Do you go to the theatre "to be inspired to think, to analyse your world, to be faced with new concepts, new questions about the place you live in" as Nadia Tass suggests?



PLAYWRIGHT - HANNIE RAYSON

She is the author of fourteen plays and has established a reputation for topical, complex dramas written with wit, insight and broad demographic appeal.

DIRECTOR - NADIA TASS

Nadia Tass began acting and later directing classical and contemporary theatre in Melbourne. She directed her first feature film, Malcolm, in 1986. Since then Tass has directed a number of Australian features including Amy which received 23 international awards.

SET DESIGN – SHAUN GURTON

As a freelance designer Shaun has designed productions for most of the major theatre and opera companies in Australia. He has also designed many international productions.

RED STITCH ACTORS THEATRE

Red Stitch Actors Theatre is an ensemble of artists who share a commitment to excellence in our craft. Inspired by great contemporary writing and driven by a need to investigate the world, performances are bold in their honesty, enhanced by the intimacy of the Red Stitch stage. Red Stitch an artist driven company who develop, curate and present work from Australia and around the world.

Characters

Dr Piper Ross (30), a conservation biologist on secondment from the San Diego Zoo **Harry Jewell (**45), CEO of Powerhouse **Professor Heather Dixon-Brown (**50), director of the CAPE Institute **Andy Dixon (**35), a vet, brother of Heather

Synopsis

Extinction is set on the windswept coast of southern Australia, where the dense temperate rainforest sweeps down to the blue wilderness of the Great Southern Ocean.

One wild winter night, Harry Jewell is driving along the Great Ocean Road, when he hits an animal. He stops and discovers that the creature is still alive. He picks it up and drives through the storm to a wildlife shelter, where an American zoologist, Dr Piper Ross, is on duty as a volunteer. Harry Jewell recognizes that the animal is a tiger quoll, once common in these parts, but now on the verge of extinction. The quoll dies, but the two of them are bonded by their attempt to save its life.

A week after the quoll incident, Harry Jewell shows up at the CAPE Institute, where he meets with the director, Heather Dixon-Brown. He slaps two million dollars on the table and says that he wants to fund a research project to save the tiger quoll. But there is a complication. Harry is the Managing Director of Powerhouse Mining. He has a license to explore the Otways for brown coal. Meanwhile Heather Dixon-Brown's brother, Andy is facing his own crisis of mortality. Getting into bed with Big Coal and letting Powerhouse mine the forest, will happen over his dead body.

This is a play about passion, ethics and what it means to live with the shadow of death (our own and other species). Does it matter if the tiger quoll's days are numbered? Perhaps extinction is just part of the cycle of life or is human intervention necessary? No one in this play is wicked. No one is entirely virtuous. What unites them all is the one urgent question, in the age of global warming, how are we to live?

Source: http://australianplays.org/script/ASC-1597

Reviews

Explore the links to some reviews of the Black Swan production of *Extinction* in 2015. Reviews are interesting, sometimes controversial. Most reviewers offer a personal opinion, some offer detailed critiques, some raise questions.

http://www.theaustralian.com.au/arts/review/hannie-raysons-extinction-raises-quoll-question-at-black-swan/news-story/3265e82dbff20eb8fbb9aeee4b6a63b8

 $\underline{http://www.australianstage.com.au/201509257465/reviews/perth/extinction-\%7C-black-swan-state-theatre-company.html}$

http://artsreview.com.au/extinction/

http://performing.artshub.com.au/news-article/reviews/performing-arts/nerida-dickinson/extinction-249396



Read, Consider, Discuss

What is the purpose of a theatre review?

What qualifies someone to be a reviewer?

How do reviews enhance or detract from an audience member's experience?

What is their impact?

How do reviews contribute to contemporary theatrical debate?

Location and setting

Hannie Rayson's play is set in contemporary times in Victoria, Australia.



Map of the Otways and Wild Dog Creek Road, Google Maps

Other locations include (quoted from the script)

- The small balcony of an apartment looking across at a sea of other apartments in the centre of the city. This is the home of PROFESSOR HEATHER DIXON-BROWN.
- An animal shelter, Otways
- Dixon-Brown's office at the CAPE Institute, Otways. Big windows look out over bushland. The Institute is attached to a small provincial university.
- Night. The Australian rainforest. A tent is illuminated a small intimate space in the vast blackness

EDUCATION RESOURCE

Extinction is a theatre production appropriate for students in Years 9 to 12. Importantly it is contemporary Australian theatre. The playwright, Hannie Rayson, wrote the play in order to explore important and challenging ideas and concepts. Extinction is a play that deals with the ethics of mining, climate change, the value of a human life versus the value of a creature's life, and what species should be saved versus what can be sacrificed. These education resources are aimed at supporting the study of the production of Extinction through the platform of discussion and analysis, as well as a series of scaffolded responses that address a range of learning areas and learning styles.

Key learning Areas

The following key learning areas can be considered with regard to the study of *Extinction*. Drama, English, Literacy, Science, Environmental Studies, Politics, Intercultural Understanding, Sustainability, Critical and Creative Thinking.

Because the production is touring to two different states and territories, the following material is suggested as belonging to the broader key learning areas listed above. Teachers are advised to adapt the activities and tasks to suit the needs of their particular learning area and the needs of their students within their learning contexts.

Pre and Post Show

Ideally students will have an opportunity to research, read about or discuss the production of *Extinction* prior to seeing a performance.

Pre-show — Within the general background Information section of this resource there are a number of focus areas that introduce the play, the broader themes, the previous production, reviews, and research material. Each of these sections offers **read-consider-discuss** options. Some of those activities may be useful before the show. By introducing students to aspects of the play, its themes and ideas, asking them to predict what may happen, and conducting additional research, may give them capacity to fully engage in the live performance. After all, most of us only see a performance once.

Post-show – After the show teachers and students can use the activities and analysis questions to explore what they saw and experienced, and from that exploration they can make their own meaning. If a more formal response is required, such as a review or analysis, then tasks can be adapted accordingly.

INTERVIEW WITH HANNIE RAYSON, PLAYWRIGHT – EXTINCTION

How do you create a character or a series of characters? Where do you conjure them from?

Well it is a kind of varied process. If there is any rule or prescriptive way of doing this, the first component of the writing process that comes to me is the theme. If you think of a play being about theme, plot, character and style. Then theme and style come first, plot and character come afterwards. Then it all it comes together. I begin by asking myself a big question. With *Extinction* it was concerned with: Who funds research? Where does the money come from? What would be the implications for an ecology outfit to accept funding from one of the biggest greenhouse gas polluters, a coal mining company? How does that impact on outcomes of research and knowledge? That was quite an academic question. That was paired with the big question of: What is worth saving? When you are thinking about the conservation dollar being quite restricted and you have to make decisions about where the money goes. How do you make that decision? Those questions were turning around in my mind. A thematic question like that would then generate the story. What happens? What characters do I need to tell this story and create the dramatic action on stage? I need the world to be populated by these types of people. Then I begin to distil these ideas down to who the vet would be, who the mining magnate is.

Characters come from all types of reading and discussion – newspapers, research, novels, non-fiction - but mostly they come from talking to people. I spend a lot of time in that space. I'm less interested in people discussing theory with me and more interested in anecdotes that give me a feel for character.

Do characters sometimes need to inhabit key ideas in order to drive some of the thematic content?

I'm wary of that. They do have to embody certain ideas, but the key thing for me is that the characters I create embody a series of contradictions. That's what I am looking for. I am less interested in creating a character who is pro uranium mining and will be determined and dogged and whose function is to be in the play to tell you that people who are against uranium mining are ridiculous, wimpy lefties and don't live in the real world. We already know who that person is or we imagine we know who that person is. What is more interesting are characters that embody paradoxes. In this way it is disturbing or unsettling for an audience because they can't have preexisting prejudices and ignorance's confirmed. Theatre is about trying to discombobulate and challenge, to show that humans are contradictory.

There is a quote from a Walt Whitman poem that I have had on my computer for a long time in a frayed sticker:

Do I contradict myself?

Very well then I contradict myself,
(I am large, I contain multitudes.)

Song of Myself (Part 51)

I keep it there to remind myself that we all contain multitudes. That is what I am trying to get at with characters. I may read something or meet someone and they have a quirkiness that I notice, a strange anxiety about peanut butter for instance. That is as interesting to me as their philosophical perspective or religion or the plot I am seeking to put them into.

A key thing about character development is that they need to be pitted against other people. Our personality traits come to the fore in different ways and in the presence of different people. It is the relationships I am creating as much as individuals. I often find when I am talking to students and to people who are studying theatre they make comments such as, "I didn't like that character!!!" I then enjoy spending time unpacking that by asking them, "Well, who did you feel empathy for? Who did you find compelling or riveting? Who did you want to know more about?" These are more important questions than whether you liked them or not.

How do you know when a script is finished? Is it ever finished?

I am always longing for it to be finished but every time I see a production of my work I think it needs some rewriting. In a way it is a shifting feast. I could say when a play is published it is finished but you can keep working on it even beyond that. A book is finished when it is published and that is a relief. But plays are ongoing and live things.

Now that you have seen a production of *Extinction* and there is a new one imminent. What would you change?

As soon as I got back from Perth I did another draft, not a full draft but a series of small changes I wanted to make after having watched the performance. Sometimes it can be slightly vexing because you don't know if it is the actors and if they were redirected would that problem be relieved? You have to make a professional judgement whether the issue is in the writing or on the stage and it can be very hard to make that type of judgement. In the Black Swan production of Extinction, the delineation was clear. I felt there were lines, dialogue exchanges or descriptions that needed more power (more grit, more anger, more sarcasm, for example) or that there was a misplaced trope that was getting in the way and that it needed perhaps a more poignant ending. It is always, for me, about the impact of the text.

You write in a range of styles. Why a theatrical form for this story?

I think stories deliver themselves to you in a particular genre. I may read something or someone may tell me a story and I think: That would make such a beautiful poem. Something else may present as a film idea. I suppose for a play it is about an idea that can be contained within a particular world, one that can be populated with fewer characters than a novel or a film. The theatre needs to have less people to be able to stand in for a whole world. That is a key consideration, an idea that I feel enables me to tell a story through theatre and tell it with these people and their interactions and relationships.

What is it like giving your script to a director? Do you generally participate in the rehearsal process or are you absent from that part?

It depends. I used to participate in the whole rehearsal process. In Extinction I was only visiting Perth, so was part of the first week of rehearsal. It is a good experience. You want to get the script out of the way and have it be rehearse able so the director and the cast have time to realise that

script for the stage. In an ideal world you would have the script completely ready and treat it as you would treat a Shakespeare or a Mamet or a Miller or a Stoppard. You wouldn't muck around with it and suggest you had a better line than them or have an actor say: "I'm sure my character wouldn't say that!" It is better that I step away from the rehearsal room, let the script stand and if there is further work to be done then do it for the next production.

Given that popular culture and particularly online spaces allow audiences to re-appropriate content, re-imagine it and mash it up, should theatre remain separate from these types of responses? Can it continue to stand on its own?

In a funny way I think I am slightly doctrinaire about not messing around with plays. A lot of new work is about mashing up styles and genres and content. I suppose my approach to not mucking around with text is more a functional one. When an actor says, "I don't feel my character can say this" often it is a question of them finding it rather than simply discarding it and saying something that comes more easily. The push to ask the actor to find it is what gives the work some power. I think this is a separate issue from adaptations of classic texts that are occurring more frequently. There have always been adaptations. I am not necessarily decrying that.

Why is theatre important when people can do things on line? I think it is for the same reason it has always been; it is compelling to watch a story in real time being told by real people. That makes it distinct from other means of storytelling.

Students studying theatre tend to have to consider theatrical styles and genres. How might you describe the style or genre of *Extinction*?

I think *Extinction* is an ideas play. Possibly contemporary Australian realism.

What for you is the urgency around the issues raised in Extinction?

The urgency pretty much is what we do about finite energy sources. How do we address complex questions about what we use to turn the lights on, not just here in Australia but in the developing world? What are our alternatives (solar, wind, nuclear, hydrothermal) and what are the pros and cons of each of those? How can we all participate in caring for the planet in the way we live each and every day?

Do you think that message conveyed through the theatre may have more impact than through another medium?

A lot of reading about environmental issues can be quite dry so what I wanted to do was make something that was a bit sexier, dramatic, funny, real, and human and full of folly. I think Extinction is quite a powerful way to be introduced to some of the issues really. Of course I would think that because I am the writer! I will wait to be instructed by students about whether it's true or not. I have had lovely responses from students at senior secondary level in Western Australia who have written some reviews and I remain very open to those responses.

The Lord Howe Island stick insect has just been brought back from extinction so it is possible but, to return to your original thematic question, who chooses what should be saved?

The other thing to note about the play is that it is based on a true story. That is what is exciting. The story is real and the Conservation Ecology Centre exists in Cape Otway. The centre has a tiger quoll program and I went to see them about this in 2011 when they were just beginning the program to save the tiger quoll. The creature had been prolific in the Otways' right up until the 1970s but then sightings became rarer and rarer. The tiger quoll became endangered, teetering on the possibility that the species was on the brink of extinction. Part of the CEC's program was training tracker dogs to detect quoll's scats (poo) and lead researchers to communal latrine sites. During the process of me writing the play and to now, the centre accrued a body of evidence including hair, quoll poo, and photographic evidence. That is a good news story. Saving creatures is not a fanciful one, nor is it a story of doom, but one of possibility, that human intervention can reverse what it caused.



Consider, discuss, analyse

Read the above interview carefully. What insights does it offer you with regard to;

Why Hannie Rayson chose to create a play rather than tell the story in another way?

The purpose of playwriting?

The dominant theatrical styles in the production?

The key themes explored in the play?

The role and purpose of theatre in contemporary times?

THEATRE VENUES: Their impact on the experience

You are a student of Drama. You are sitting in a theatre in order to see a performance of *Extinction*. What is that space? Where are you seated? Where you see the performance and where you are seated has considerable impact on your experience. Below are images from the three venues that are hosting *Extinction* in 2016, and an image of the original venue in Perth in 2015.



Playhouse, Canberra Theatre Centre



The Drama Theatre, Geelong Performing Arts Centre



Fairfax Studio, Arts Centre Melbourne



Heath Ledger Theatre, Perth (original venue)



Consider, Discuss

Proscenium arch, black box, studio – what do you understand each of these theatre spaces to be? What type of actor/audience relationship does each offer?

Consider each of the performance spaces in which *Extinction* will be performed.

Analyse how each one will shape the performance experience for the audience.

What factors will contribute to that experience?

Focused analysis of the performance – Extinction

This section of the resource explores the live performance of *Extinction* in order to discuss and analyse acting, character, style, stagecraft and themes.

The World of the Play:

- At what point do you enter the world of the characters?
- At what point to you leave their world?
- How are the various settings conveyed animal shelter, city apartment, an office, the forest?
- What theatrical or stagecraft elements came together to create the world of the play?

Theatrical form:

The performance of *Extinction* could be considered **realistic in style**. While it moves between locations – an animal shelter, an apartment, an office and a forest – how is this achieved?

- What is your understanding of 'realism'?
- What is realistic about the performance its story, characters, set, costumes, lighting, sound?
- Is the acting style realistic? Is the language/dialogue realistic?
- Did the acting and dialogue generate 'belief'?

Structure

Extinction is a scripted play written in two acts. Within each act are several scenes that occur in the locations mentioned under Setting in this resource.

- What is an 'act'? What is a 'scene'? What does each term mean in the theatre?
- Do you think there will be an interval? What is the purpose of an interval in a play?
- Do all plays have these structural tropes or mechanisms?

Stage directions are written into scripts in order to inform the direction of a play. Some playwrights such as Samuel Beckett licensed their plays so that no changes to stage directions could occur. Other playwrights don't specify. The opening stage directions to *Extinction* say:

A wildlife rescue centre tucked away in the rain forest of Cape Otway. It is a wet and windy night. Piper Ross, dressed in khakis enters and hurries to her computer. The Google homepage appears on the back wall. Piper types in the words 'tiger quoll' and presses Google search. She flicks through various sites that display pictures of the tiger quoll and searches for information. Sound of buzzer. Piper leaps up and exits then returns holding open the door to a man in a heavy rain-jacket, dripping wet. Harry Jewell enters, cradling an animal wrapped in a towel.

How do these stage directions aim to set up the central ideas in the play? How closely were they followed in the performance you saw?

Use of stagecraft/design

Generally speaking stagecraft includes: costume, make-up, set, properties, sound, lighting, multimedia. As a play, *Extinction* is realistic in style.

- In what ways did the stagecraft reflect a realistic style?
- For instance were the costumes contemporary and specific to situation and character?
- Did the set represent the different locations in a realistic manner?
- Did the actors use real properties that reflected locations, occasions and occupations?
- How was sound used to create a realistic feel? For instance was there diegetic sound?
- Did the lighting capture interior and exterior locations?

- What aspects of the stagecraft were more abstract or representative? Why do you think these choices were made?
- Evaluate the overall effectiveness of the design choices in this production.

Acting and character

Dr Piper Ross (30), a conservation biologist on secondment from the San Diego Zoo **Harry Jewell (**45), CEO of Powerhouse

Professor Heather Dixon-Brown (50), director of the CAPE Institute

Andy Dixon (35), a vet, brother of Heather

- There are four actors in this production who play the four characters listed above
- Select two characters and generate a list of characteristics you would attribute to each
- Consider use of voice, interactions with other characters, personality traits, habits
- How does the actor use their expressive skills in portraying their character eg. Voice, gesture, movement, facial expression, gait generate three moments for each character

...who did you feel empathy for? Who did you find compelling or riveting? Who did you want to know more about?" These are more important questions than whether you liked them or not – Hannie Rayson, Playwright

- Do you agree with the playwright?
- Do we need to like the characters in a play in order to enjoy the experience or engage with the material?

Playwright, Hannie Rayson says - the key thing for me is that the characters I create embody a series of contradictions — How do you respond to this? Was does it mean?

- What contradictions exist in your two chosen characters?
- Did the characters surprise you, annoy you, compel you? What other feelings did they evoke?

A key thing about character development is that they need to be pitted against other people. Our personality traits come to the fore in different ways and in the presence of different people. It is the relationships I am creating as much as individuals – Hannie Rayson, playwright

- Discuss this comment in relation to the play and the four characters within it
- How are the characters in Extinction pitted against each other?

Themes & Ideas

Who funds research? Where does the money come from? What would be the implications for an ecology outfit to accept funding from one of the biggest greenhouse gas polluters, a coal mining company? How does that impact on outcomes of research and knowledge? – Hannie Rayson, playwright.

- Did the play answer these questions?
- What other ideas or themes are contained in the play?

Piper: You have to be in the wilderness to feel reverence. You have to be someplace where life is unfolding beyond human control

From 'Extinction'



The following activities are designed for expanding students' exploration of the play and the themes and ideas present within it. They explore the learning areas of Drama, English, Literacy, Politics, Environmental Studies, Science, and the capabilities of Ethical Understanding and Personal and Social Learning.



1. DRAMA - Ensemble building

The catalyst for the play is the accidental death of a rare Australian marsupial. As the first scene unfolds we learn that, on a dark and rainy night in the Otway Ranges, Victoria, while driving to his parents' house in Western Victoria, Harry Jewell hits a tiger quoll. He explains to Piper:

I saw it run out onto the road. I just saw the spots and I thought, shit that's a tiger quoll and then I hit it. I was speaking on the phone to my daughter. She's fourteen. She rang to let me know I've destroyed her life.

You are going to create an ensemble performance that theatrically creates the accident / moments described above.

- Divide into small groups, possibly three to five
- As a group imagine how this scene could be created using the elements and conventions of drama and theatre
- What are the key actions? What is the mood? What is the climatic moment?
- Brainstorm some ideas about number of scenes, characters, objects, sounds, how the dialogue could be used
- Consider using non-naturalistic or non-realistic forms of theatre that allow you to become objects, change character, develop sound scape, represent or symbolize
- Rehearse, edit and build your piece
- Create a mini class drama festival of performances by performing each ensemble work
- How has the scene been 'interpreted'? What choices did people make? How effective were they in conveying the ideas and action?
- Reflect on how different interpretations are possible.



2. DRAMA - What happens next?

At the end of the play, Piper's phone flashes. The technology has picked up images of a tiger quoll. Imagine it is five years later. What has happened?

- In the same ensemble groups, create a *short scene* that explores what you think may have happened
- Use the events and ideas in the play to guide your thinking eg mining versus the environment, the choice of what to save, the relationships between and contradictions within the characters. What might be realistic? What might be possible?
- As you plan your scene consider the 'given circumstances' of drama and theatre who, what, where, when and why. These will help you structure the scene; who the characters are, what will happen, where it will happen, when and why.
- Create your scenes by brainstorming, rehearsing, editing and making final choices.
- Present your scenes to the class
- Reflect on the ideas that were explored and reflect on the drama elements that were used to explore these ideas
- Which scenes offered hope, humour, threat, danger, or progress? What other adjectives would you use?



3. DRAMA - Monologue

The characters in the play

Dr Piper Ross (30), a conservation biologist on secondment from the San Diego Zoo Harry Jewell (45), CEO of Powerhouse

Professor Heather Dixon-Brown (50), director of the CAPE Institute

Andy Dixon (35), a vet, brother of Heather

If you have completed a detailed character study of at least two of these characters you will have a good understanding of them as people. What are their qualities? What are their relationships? What are their contradictions?

- Select one of the characters
- Write a short monologue (100 words) that captures their thoughts and believes about climate change
- Starters "When I hit the tiger quoll I realized...", "It is impossible to balance mining with environmental needs. You know it is", "Why do we only save some and not all of them? Because we can't..."



4. DRAMA AND ENGLISH – Writing a theatre review

This activity asks you to write a review of the performance you saw of Extinction. On page 15 of this resource are links to a range of reviews of the first production. Also consider the following:

- http://www.theguardian.com/stage/theatreblog/2012/oct/04/theatre-criticism-cat-hottin-roof
- http://www.bbc.co.uk/education/guides/zxs9xnb/revision
- Using the resources and examples provided write a review of *Extinction*.
- Remember that you can have a strong opinion about the play just be prepared to draw on examples from the performance to assist.
- In pairs or small groups, share your reviews, comparing different views and opinions of the production. Do you share the same views?
- What do you think qualifies someone to write reviews professionally? Why might their opinion be more 'worthy' or 'valued'?



Haiku

A haiku in English is a very short poem in the English language, following to a greater or lesser extent the form and style of the Japanese haiku. A typical haiku is a three-line observation about a fleeting moment involving nature.

Select an idea from the production and create a haiku that captures your thoughts.

Here are some examples.

Quoll eyes glow brightly Alert to danger and threat Flash, it vanishes

A large gaping hole Machines gouge the land, and it Spews forth its metal

How many creatures Have left the earth, disappeared Why do we not learn?

Take a while to see
The land upon which we stand
Timeless and endless



The juluie su

Dear mortals;

I know you are busy with your colourful lives; I have no wish to waste the little time that remains

On arguments and heated debates; But before I can appear Please, close your eyes, sit still

And listen carefully

To what I am about to say;
I haven't happened yet, but I will.

I can't pretend it's going to be

Business as usual.

Things are going to change.

I'm going to be unrecognisable.

Please, don't open your eyes, not yet.

I'm not trying to frighten you.

All I ask is that you think of me

Not as a wish or a nightmare, but as a story

You have to tell yourselves -

Not with an ending

In which everyone lives happily ever after,

Or a B-movie apocalypse,

But maybe starting with the line

'To be continued...'

And see what happens next. Remember this; I am not

Written in stone

But in time -

So please don't shrug and say

What can we do?

It's too late, etc, etc, etc.

Dear mortals,

You are such strange creatures

With your greed and your kindness,

And your hearts like broken toys;

You carry fear with you everywhere

Like a tiny god

In its box of shadows.

You love festivals and music

And good food.

You lie to yourselves

Because you're afraid of the dark.

But the truth is: you are in my hands

And I am in yours.

We are in this together,

Face to face and eye to eye;

We're made for each other.

Now those of you who are still here;

Open your eyes and tell me what you see."

- Nick Drake

Read the poem The Future Says by Nick Drake

- What are the key ideas being presented in this poem?
- What is your favourite line and why eg. Or a B-movie apocalypse

- What is the over-riding metaphor of the poem?
- Who are 'strange creatures'?
- Discuss the final line of the poem and what it means
- How does this poem about the environment differ from the play in terms of language and in terms of potential impact?
- Which do you prefer as a form of writing?

Responding through Drama

- Work in groups of three
- Present the following section of the poem using drama, movement and sound.

We are in this together,

Face to face and eye to eye;

We're made for each other.

Now those of you who are still here;

Open your eyes and tell me what you see.

E.

6. SCIENCE / SUSTAINABILITY - What is scientific evidence?

This section asks you to explore the arguments and issues around climate change and what constitutes scientific evidence.

Science provides an empirical way of answering interesting and important questions about the biological, physical and technological world. The knowledge it produces has proved to be a reliable basis for action in our personal, social and economic lives. Science is a dynamic, collaborative and creative human endeavour arising from our desire to make sense of our world through exploring the unknown, investigating universal mysteries, making predictions and solving problems. Science aims to understand a large number of observations in terms of a much smaller number of broad principles. Science knowledge is contestable and is revised, refined and extended as new evidence arises – Australian Curriculum,

http://www.australiancurriculum.edu.au/science/rationale

We're in a giant car heading towards a brick wall and everyone's arguing over where they're going to sit – David Suzuki, Environmental Scientist

Creating an ideology pegged to carbon dioxide is a dangerous nonsense...The present alarm on climate change is an instrument of social control, a pretext for major businesses and political battle. It became an ideology, which is concerning — Delgado Domingos, Environmental Scientist

RESEARCH LINKS:

David Suzuki: http://www.davidsuzuki.org/blogs/science-matters/

Jane Goodall: http://www.janegoodall.org/

Teachers TV, climate change; the causes: https://www.youtube.com/watch?v=RHrFBOUI6-8

Climate change skeptics: http://www.friendsofscience.org/index.php?id=3

Gore V Durkin: https://www.youtube.com/watch?v=N2B34sO7HPM&index=4&list=PL82yk73N8eoX-

Xobr_TfHsWPfAlyI7VAP

WA's vast mineral, gas and petroleum resources, and globally important biodiversity mean that we must work harder than ever before to balance competing interests as pressure on the environment mounts. Key to this is building a deeper understanding of cumulative impacts and risks to our environment and sharing that knowledge and understanding so that development can be sustainably managed into the future and continue to contribute to increasing prosperity and well-being in Western Australia.

Source: http://www.abc.net.au/news/2013-11-18/vogel-mining-conservation-balance/5099404

DIXON-BROWN: Well the situation hasn't changed. No point squandering your money on a creature that has passed the point of no-return. I'm an ecologist. Not an environmentalist. Use my head, not my heart.

HARRY: Sounds good to me.

DIXON-BROWN: We have to be careful not to dramatize ourselves as saviours; snatching a poor little animal from the jaws of extinction. It makes us feel good. But we rarely succeed.

HARRY: But *sometimes* we do.

DIXON-BROWN: As I say, rarely. Species are like commodities, Mr Jewell. You should only invest in those that are going to give you a good return. In any case, I just don't approve of this 'charismatic fauna' push – making celebrities out of pandas and polar bears.

From the play, Extinction by Hannie Rayson

ACTIVITY – Drawing on **some or a**ll of the above material and reading more broadly if you wish, construct an argument that either supports or denies climate change.

- What scientific evidence can you draw on?
- What science is important?
- Which scientists might be seen as more important or valued?
- Why is research important?
- How is science presented in *Extinction*?



7. INTERCULTURAL UNDERSTANDING/CRITICAL THINKING

What does land mean to Aboriginal people? Watch the following two video clips

THE LAND OWNS US - GLOBALONESS PROJECT

Bob Randall, a Yankunytjatjara elder and traditional owner of Uluru (Ayer's Rock), explains how the connectedness of every living thing to every other living thing is not just an idea but a way of living. This way includes all beings as part of a vast family and calls us to be responsible for this family and care for the land with unconditional love and responsibility.

https://www.youtube.com/watch?v=w0sWIVR1hXw

INDIGENOUS AUSTRALIAN LAND RIGHTS - BEHIND THE NEWS

Mabo Day is the anniversary of a court decision that recognised for the first time that Aboriginal and Torres Strait Islander people have a special connection to the land of their ancestors. So we asked special guest reporter Dwayne Coulthard to give us his insight into what that connection is all about.

https://www.youtube.com/watch?v=OiQ8YHDfySA

- How do these clips provide insight into the role and significance of land for Aboriginal Australians?
- What did you learn that you didn't know before?
- How might Aboriginal people's way of considering land, land ownership and caring for land be useful for business, policy and environmental science

NORTHERN LAND COUNCIL:

More than 80 percent of the value of minerals extracted in the Northern Territory comes from mining on Aboriginal-owned land, amounting to more than \$1 billion a year. Approximately 30 percent of Aboriginal land is under exploration or currently under negotiation for exploration. Different processes apply for those wishing to mine and explore on land covered by the Land Rights Act (Aboriginal-owned land) and on land covered by the Native Title Act (land where Aboriginal people have native title interests). In all instances, where enterprises have entered into good faith negotiations and respected Aboriginal rights, agreements are being reached with benefit to all parties.

Read more here: http://www.nlc.org.au/articles/info/the-mining-industry-and-the-nlc/

DISCUSS AND CONSIDER

- Why might Aboriginal people want to develop their land?
- Discuss how development and traditional ownership can work together.



8. POLITICS/ETHICS/CRITICAL THINKING

At the recent launch of the National Innovation and Science Agenda, the following speeches were delivered.

MALCOLM TURNBULL, Prime Minister

Good afternoon. I'm here with my good friend and colleague, the Minister for Industry, Innovation and Science, Christopher Pyne, to usher in the ideas boom. The mining boom, the mining construction boom has been great for Australia. It has driven growth in incomes, but, as we have seen, the mining boom inevitably has receded. What is going to drive Australian prosperity in the years ahead? How does our economy transition? Our innovation agenda is going to help create the modern, dynamic, 21st-century economy Australia needs.

Our fundamentals are strong, we are in our 25th year of consecutive economic growth, but, we need new sources of growth if we are to maintain our high standard of living, high wages and generous social welfare safety net. Although there are challenges, there has never been a better

time to start and grow a business from Australia, which can now compete for customers located anywhere in the world.

CHRISTOPHER PYNE, Minister for Industry, Innovation and Science

But overall they are designed to bring together all those in Australia who recognise that the future for our economy is in high-tech advanced manufacturing, the way we use data and we cover every aspect of that in this particular agenda that's been announced today. We are particularly focussing on start-ups, on small and medium enterprises, on regional Australia, whether it's in agriculture or tourism or mining.

We are using all the different parts of our economy to drive jobs and to drive growth because that's what the Australian public are looking for. We will always deal with the other issues governments have to deal with but this is an agenda that is about jobs, it's about growth, it's about the future of the Australian economy.

Source: http://www.malcolmturnbull.com.au/media/launch-of-the-national-innovation-and-science-agenda1

DISCUSS AND CONSIDER:

- What are the dominant concerns for the government as indicated in these speeches?
- Considering the concerns of Extinction, what is missing from these speeches?

THREE WORD SLOGANS

Ex PM, Tony Abbott, became famous or infamous for his three word slogans: *Jobs, Jobs, Stop the boats; End carbon tax; Prudent, frugal, responsible.*

- Discuss what the thinking is behind three word slogans. Why might they be effective or even ineffective?
- Discuss and comment on the choice of these slogans by the ex PM. Do you remember any of them?
- Why might these have been chosen?
- Brainstorm a list of key words that link to environmental concerns and protecting endangered animals
- Play around with creating a series of three word slogans that could be used politically at a rally, a party meeting or for the media.
- Be creative here but remember you need to make a powerful point
- Select one and design it into a poster or even a MEME.
- Collect all the classes slogans/memes into a slideshow
- Discuss the effectiveness, favourites, funniest of the slogans/memes
- Consider -Is this the kind of political strategy that might assist the environmental movement?

Discipline	Organising Strands	Sub-strands / descriptors
English	Language: knowing about the	Language variation and change
	English language	Language for interaction
		Expressing and developing ideas
		Literature and context
		Responding to literature
	Literature: understanding,	Examining literature
	appreciating, responding to,	Creating literature
	analysing and creating literature	Interacting with others
	Literacy: expanding the	Interpreting, analysing and evaluating
	repertoire of English usage.	Creating Texts
The Arts:	Making	Improvising, devising, playing, acting,
Drama		directing, refining, interpreting,
		rehearsing, presenting, performing
	Responding	Being an audience, listening to, enjoying,
		reflecting, analysing, appreciating and
		evaluating own and others' drama work
Science	Science understanding,	Science understanding is evident when a
		person selects and integrates
	Science as a human endeavour	appropriate science knowledge to
		explain and predict phenomena, and
	Science inquiry skills.	applies that knowledge to new
		situations. Science knowledge refers to
		facts, concepts, principles, laws, theories
		and models that have been established
		by scientists over time.
		As human endeavour, this sub-strand
		develops an appreciation of the unique
		nature of science and scientific
		knowledge, including how current
		knowledge has developed over time
		through the actions of many people.

General Capability	Organising Elements
Intercultural Understanding	Recognising culture and developing respect
	Interacting and empathizing with others
	Reflecting on intercultural experiences and taking
	responsibility
Ethical Understanding	Understanding ethical concepts and issues
	Reasoning in decision making and actions
	Exploring values, rights and responsibilities
Critical and Creating	Inquiring – identifying, exploring and organising
Thinking	information and ideas

Generating ideas, possibilities and actions
Reflecting on thinking and processes
Analysing, synthesizing and evaluating reasoning and
procedures

Cross Curriculum Priorities	Key Concepts
Aboriginal and Torres Strait	Connection to Country/Place
Islander histories and cultures	Celebration of unique believe systems that connect people physically and spiritually to Country/Place
	Diversity of culture through language, ways of life, and
	experiences as expressed through historical, social and
	political lenses
	Kinship structures and significant contributions of ATSI
	people at local, national and global level.
Sustainability	Interdependent and dynamic nature of systems that
	support life on Earth
	Promotion of patterns for living for our collective wellbeing and survival
	Allowing for diversity of world views, ecosystems, values
	and social justice to be discussed and linked to individual
	and community action for sustainability
	Building capacities for thinking and acting in ways that are
	necessary to create a sustainable future.

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