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A **STUDY GUIDE** BY CHERYL JAKAB AND 360 DEGREE FILMS

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"The Tasmanian Devil is a loveable marsupial ... with serious attitude. A devastating disease threatens their species. Hope rests on a few devils born in captivity. Their mission: leave their safe surroundings, train for an elite squad, head for an isolated island, and life in the wild."

SARAH PECK, PHIL WISE & LORRAINE DEWEYS © ANDREW SULLY

ARMIN LEAVING HIS TRAP © SAVE THE TASMANIAN DEVIL TEAM

FORESTERS KANGAROOS © DAVID PARER

FERAL CAT IN CAGE

Introduction

From the safety of captivity to the remote Tasmanian wilderness, 15 Tasmanian devils set off on an extraordinary adventure to save their species from extinction and change the course of Australian wildlife history.

A loveable marsupial with serious attitude, the Tasmanian devil is fighting for its survival. A devastating cancer epidemic threatens to wipe out the species with 80 per cent of the wild population killed by a highly contagious facial cancer, which first appeared in 1996.

The very real prospect of losing the species to Devil Facial Tumour Disease has mobilised the world's scientific community.

At the Save The Tasmanian Devil Program headquarters in Hobart, wildlife vet Sarah Peck, biologist Phil Wise and their team have hatched an audacious plan to create an 'insurance' population of disease-free Tasmanian devils.

Elsewhere, a crack team of scientists and zoologists are testing Tasmanian devils to see which ones have what it takes to survive in the wild.

Hope rests on a handful of disease-free devils raised in captivity. Their mission: leave their safe surroundings to train in an elite squad before moving to an isolated island off the coast of Tasmania and a new life in the wild.

Filmed by renowned wildlife cinematographer David Parer, directed by Andrew Sully, and produced by Sally Ingleton, the 6-part documentary series *Devil Island* follows 15 Tasmanian devils as they are selected from Australian wildlife sanctuaries and then transported and released on remote Maria Island off the coast of Tasmania. Will they rediscover their instincts to hunt, mate and – hopefully – raise their own young?

It's a risky experiment. The devils are captive and hand-reared and were born and raised in captivity. They've never hunted, found shelter or fought off another predator. If they can fend for themselves, they might save their species.

But how will the island's native wildlife cope with their feisty 'new neighbours from hell'? The populations of Flinders Island wombats, Little Penguins, Forester kangaroos and Cape Barren geese must adapt to these new predators or their future, too, will be at risk.

The series covers the devils' first nine months on the island, and it's soon revealed that the devils have a secret mission. Without predators, the numbers of feral cats and Brushtail possums have increased and they are devouring the small mammals and birdlife. When the devils arrive, there's a new cop in town!

It's a make-or-break year for fifteen little devils as they fight for their survival and the survival of their species on *Devil Island*.

Written for Years 5-10. **Series Suitability:** Recommended for Years 5-12. **Written by** Cheryl Jakab, M.Sc, B.Ed, PhD, in conjunction with 360 Degree Films.

The program at a glance

BRIEF SYNOPSIS

A group of Tasmanian Devils are hauled from the safety of captivity and released into the wilds of a remote island. If they can fend for themselves they might just save their entire species from extinction. But how will the island's teeming wildlife cope with the arrival of their new neighbours?

SYNOPSES OF EPISODES 1–6

Episode 1: Mission Maria Island

Three Tasmanian devil joeys, Reba, Remmy and Ruben, prepare to leave life in captivity for an adventure into the wild that may hold the key to the survival of their species.

Episode 2: Devil 'D' Day

Tasmanian devils Reba, Remmy and Ruben must undergo personality tests and boot camp; the final squad is chosen and then released – on remote Maria Island.

Episode 3: Meet The Neighbours

As the newly released Tasmanian devils explore their new home on Maria Island, the hand-reared predators find the going tough and must dig deep to find the wild animal within.

Episode 4: Summer On Devil Island

Three months after the release, the Tasmanian devils face the challenge of their lives with an influx of tourists and a record-breaking heat wave that could spell the end for these tough little predators.

Episode 5: Manny Goes Missing

It's the breeding season but four months after releasing fifteen Tasmanian devils on remote Maria Island, the scientists are worried. Manny the male who loves exploring is missing.

Episode 6: Devil Dynasty

It's been five months since their release and the future looks bright for the fourteen surviving disease-free Tasmanian devils on Maria Island, as all eight females prepare to have joeys.

Average episode running time: 26 minutes

CREDITS:

- **JASON DONOVAN** – Narrator
- **SALLY INGLETON** – Series Producer
- **ANDREW SULLY** – Series Director
- **DAVID PARER ACS** –Natural history cinematographer
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SERIES PRODUCER SALLY INGLETON


360 DEGREE FILMS CREW © SALLY INGLETON


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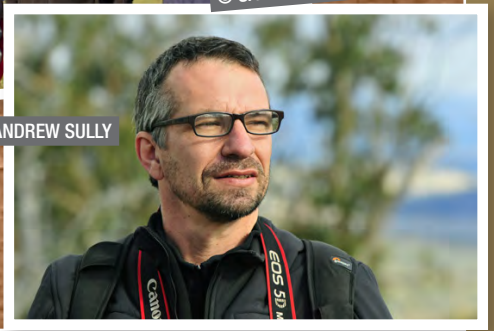
DIRECTOR OF PHOTOGRAPHY DAVID PARER


DAVID PARER, ANDREW SULLY & TARQUIN NETHERWAY ON MARIA ISLAND © SALLY INGLETON


DIRECTOR ANDREW SULLY

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DEVIL IN A SACK © SAVE THE TASMANIAN DEVIL TEAM

FLINDERS ISLAND WOMBAT © DAVID PARER

CAPE BARREN GOOSE NESTING © DAVID PARER

Background information

THE TASMANIAN DEVIL

The largest living marsupial carnivore, the Tasmanian devil is the size of a small, stoutly built dog. Their common name derives from the ferocious growls and cries that terrified early European settlers at night. Their massive heads and powerful jaws make it ideal for their role as Australia's only specialized mammalian scavenger. Tasmanian devils eat any meat that is available. This includes insects, birds and even beached fish. But their favourites are small mammals, such as possums, wallabies and wombats.

While they can hunt small prey (they pounce and bite at the head or chest) they are also efficient, opportunistic and solitary scavengers that rapidly locate dead animals in the bush. Their massive jaw muscles and strong teeth allow them to eat almost every part of the carcass, including the hide and the skull. In short, they are an efficient killing machine and play a vital role in cleaning up the remains of dead animals in the wild.

Like all marsupials, the Tasmanian devil has a softer side. They carry their young in a pouch through infancy. Up to four 'joeys' can stay in the backward-opening pouch for five months before emerging fully furred into their grass-lined den. A month later they will explore outside their den and by ten months they are fully weaned and independent. Although they once roamed across the Australian mainland, the devil now only lives in Tasmania. Following the extinction of the Tasmanian tiger, in 1936, the very real prospect of losing the Tasmanian devil has mobilised the world's scientific community. Geneticists in the USA, UK and Australia are working overtime to unlock the secrets of the devil disease and the devil genome in the hope that this will help save the species.

WEDGE-TAILED EAGLE © DAVID PARER

THE DEVIL DISEASE

Devil Facial Tumour Disease (DFTD) is extremely unusual as it is only one of three recorded cancers that is contagious. The disease is passed from devil to devil via biting and has spread across the state from East to West at a rate of 6km per year. Since the cancer was first discovered in the 1996, the population of Tasmanian devils has plummeted by 80 per cent. If the current rate of contagion continues, the species may be extinct in the wild within ten years.

SPECIES ON MARIA ISLAND

- **CAPE BARREN GOOSE** (Various, Ep 5 11:50:12 –12:30:20)
- **FLINDERS ISLAND WOMBAT** (Various)
- **LITTLE PENGUIN** (Ep 4 10:26:06 – 11:45:12 Ep 5 09:09:07–10:10:05)
- **FORESTER KANGAROOS** (Ep 5 Breeding 04:57:16 – 05:52:18; 12:34:09 – 13:41:00)
- **ECHIDNA** (Ep 4 14:41:18 – 15:05:01)
- **PADEMELONS** (Ep 4 21:52:06 – 24:15:05)
- **ELEPHANT SEAL** (Ep 5 10:17:08)
- **BRUSHTAIL POSSUMS** (Ep 6)
- **WEDGE-TAILED EAGLE** (Ep 3)

TWO YOUNG MALES FIGHTING © DAVID PARER

Curriculum and education suitability

Levels: This guide is written for senior primary to middle secondary (Years 5–10). The material in *Devil Island* series is also suitable for use in Year 11 Biology.

Learning areas and strands:
Science, Geography, English/Media

Major Learning area focus:
Science: Understandings: Biological sciences, Science inquiry skills, Science as a human endeavour

Cross curriculum links:
Sustainability

General capabilities: Literacy, ICT

Additional Learning areas
Geography: Environment
English: Literacy

Reference: ACARA <http://www.australiancurriculum.edu.au/Curriculum/F-10>

* Summary Learning area: Science

Year 5

Science Understanding
Biological sciences: Living things have structural features and adaptations that help them to survive in their environment (ACSSU043)

Science as a Human Endeavour
Use and influence of science: Scientific understandings, discoveries and inventions are used to solve problems that directly affect people's lives (ACSHE083)

Year 6

Science Understanding
Biological sciences: The growth and survival of living things are affected by the physical conditions of their environment (ACSSU094)

Science as a Human Endeavour
Nature and development of science: Science involves testing predictions by gathering data and using evidence to develop explanations of events and phenomena (ACSHE098)

Years 7 and 8

Science understanding
- **Biological sciences** (see p. 8 for specific achievement standards by year levels)

Science inquiry skills
- identify questions and predictions for testing
- analyse data, describe and explain relationships
- discuss and compare results with predictions
- draw conclusions and communicate ideas and understandings.

Science as a human endeavour
- consider how science is used in work and leisure

Years 9 and 10

* Summary Learning area: Geography

Environment: exploring ethical questions and the practical applications of the geographical knowledge, developing students' understanding of active citizenship

» Year 7: People (resource management)
» Year 8: Biotic life (links with Year 8 science)
» Year 9: Landscapes and resources (combined with a study of the human use)
» Year 10: Environmental sustainability

Reference: ACARA <http://www.aus-traliancurriculum.edu.au/Geography>

* Learning area: English

Literacy

» Year 7: Analyse and explain the ways text structures and language features shape meaning and vary according to audience and purpose (ACELY1721)
» Year 8: Analyse and evaluate the ways that text structures and language features vary according to the purpose of the text and the ways that referenced sources add authority to a text (ACELY1732)
» Year 9: Interpret, analyse and evaluate how different perspectives of issue, event, situation, individuals or groups are constructed to serve specific purposes in texts (ACELY1742)
» Year 10: Identify and analyse implicit or explicit values, beliefs and assumptions in texts and how these are influenced by purposes and likely audiences (ACELY1752)

General capabilities

The seven named general capabilities of the National Curriculum (Literacy, Numeracy, ICT Capability, Critical and Creative Thinking, Personal and Social Capability, Ethical Understanding, Intecultural Understanding) can be well supported with working with *Devil Island* as stimulus materials.

Specific capabilities well covered in the activities outlined in this teacher guide include Investigating with ICT and Literacy.

Personal and social capability

Self awareness: Recognising emotions
» demonstrate deepening understandings of their emotional responses in a range of learning and social situations (for example identifying and articulating their challenges and strengths in individual and collaborative learning situations)

Self management: Working independently and showing initiative
» are accountable for their own learning, working independently, and setting and monitoring personal goals

Social awareness: Understanding relationships
» explain how relationships differ

SUSTAINABILITY – ORGANISING IDEAS	
Systems	
OI.1	The biosphere is a dynamic system providing conditions that sustain life on Earth.
OI.2	All life forms, including human life, are connected through ecosystems on which they depend for their wellbeing and survival.
OI.3	Sustainable patterns of living rely on the interdependence of healthy social, economic and ecological systems.
World Views	
OI.4	World views that recognise the dependence of living things on healthy ecosystems, and value diversity and social justice are essential for achieving sustainability.
OI.5	World views are formed by experiences at personal, local, national and global levels, and are linked to individual and community actions for sustainability.
Futures	
OI.6	The sustainability of ecological, social and economic systems is achieved through informed individual and community action that values local and global equity and fairness across generations into the future.
OI.7	Actions for a more sustainable future reflect values of care, respect and responsibility, and require us to explore and understand environments.
OI.8	Designing action for sustainability requires an evaluation of past practices, the assessment of scientific and technological developments, and balanced judgments based on projected future economic, social and environmental impacts.
OI.9	Sustainable futures result from actions designed to preserve and/or restore the quality and uniqueness of environments.

between peers, parents, teachers and other adults, and identify the skills needed to manage different types of relationships (for example identifying the various communities to which they belong and how language reinforces membership of these communities)

Social management: Working collaboratively

» develop strategies for working in diverse teams, drawing on the skills and contribution of team members to complete complex tasks (for example developing a plan for achieving group goals and criteria for evaluating success, considering the ideas of others in reaching an independent or shared decision)

Investigating with ICT

Defining and planning information searches

» select and use appropriate ICT independently and collaboratively, analyse information to frame questions and plan search strategies (for example using wikis, searching databases)

Locating and accessing data and information

» use advanced search tools and techniques to locate precise data and information that supports the development of new understandings (for example using logical statements such as true/false; searching within fields or for data type; using datalogger equipment, digital microscope)

Selecting and evaluating data and information

» develop and use criteria systematically to evaluate the quality, suitability and credibility of located information and sources (for example comparing objective data from multiple digital sources to evaluate the likely credibility of the information provided)

Literacy

Years 7 and 8

» apply their emerging understandings of what makes a text valuable and appropriate when creating texts of sociocultural and personal importance.
» engage with a variety of genres and modes.
» display their understanding of narrative, theme, purpose, context and argument
» defend their ideas in written and oral modes.

Years 9 and 10

» integrate strategies and topic and textual knowledge to select, navigate, read and view complex learning area texts
» analyse and evaluate information sources.

See <http://www.australiancurriculum.edu.au/GeneralCapabilities/Overview/General-capabilities-in-the-Australian-Curriculum>

Cross curriculum priority: Sustainability

See <http://www.australiancurriculum.edu.au/CrossCurriculumPriorities/Sustainability>

Science: Detailed achievement standards

Year 5

Science Understanding

Biological sciences: Living things have structural features and adaptations that help them to survive in their environment (ACSSU043)

Science as a Human Endeavour

Use and influence of science: Scientific understandings, discoveries and inventions are used to solve problems that directly affect peoples' lives (ACSHE083)

Year 6

Science Understanding

Biological sciences: The growth and survival of living things are affected by the physical conditions of their environment (ACSSU094)

Science as a Human Endeavour

Nature and development of science: Science involves testing predictions by gathering data and using evidence to develop explanations of events and phenomena (ACSHE098)

Year 7

Science Understanding

Biological sciences

1. There are differences within and between groups of organisms; classification helps organise this diversity (ACSSU111)
2. Interactions between organisms can be described in terms of food chains and food webs; human activity can affect these interactions (ACSSU112)

Science as a Human Endeavour

Nature and development of science

1. Scientific knowledge changes as new evidence becomes available, and some scientific discoveries have significantly changed people's understanding of the world (ACSHE119)

Science Inquiry Skills

Questioning and predicting

1. Identify questions and problems that can be investigated scientifically and make predictions based on scientific knowledge (ACSIS124)

Year 8

Science Understanding

Biological sciences

Multi-cellular organisms contain systems of organs that carry out specialised functions that enable them to survive and reproduce (ACSSU150)

Science as a Human Endeavour

Science Inquiry Skills: Science knowledge can develop through collaboration and connecting ideas across the disciplines of science (ACSHE226)

Identify questions and problems that can be investigated scientifically and make predictions based on scientific knowledge (ACSIS139)

Evaluating

1. Reflect on the method used to investigate a question or solve a problem, including evaluating the quality of the data collected, and identify improvements to the method (ACSIS146)
2. Use scientific knowledge and findings from investigations to evaluate claims (ACSIS234)

Year 9

Science Understanding

Biological sciences

1. Multi-cellular organisms rely on coordinated and interdependent internal systems to respond to changes to their environment (ACSSU175)
2. Ecosystems consist of communities of interdependent organisms and abiotic components of the environment; matter and energy flow through these systems (ACSSU176)

Science Inquiry Skills

Processing and analysing data and information

Analyse patterns and trends in data, including describing relationships between variables and identifying inconsistencies (ACSIS169)

Use knowledge of scientific concepts to draw conclusions that are consistent with evidence (ACSIS170)

Year 10

Science Understanding

Biological sciences

The theory of evolution by natural selection explains the diversity of living things and is supported by a range of scientific evidence (ACSSU185)

Science Inquiry skills

Select and use appropriate equipment, including digital technologies, to systematically and accurately collect and record data

Years 9 and 10

Science as a Human Endeavour

Nature and development of science

1. Scientific understanding, including models and theories, are contestable and are refined over time through a process of review by the scientific community (ACSHE191)

ANDREW SULLY & PETE HARMSEN FILMING INTERVIEW WITH JUDY CLARKE © SALLY INGLETON

PHIL WISE AND SARAH PECK EXAMINING JIMMY © SAVE THE TASMANIAN DEVIL TEAM

DIRECTOR ANDREW SULLY & CAMERAMAN PETE HARMSEN © DAVID PARER

JUDY CLARKE FILMING TEST © SALLY INGLETON

Exploring the series discussion topics

The following list of ideas for classroom discussion can be supported by any or all episodes of *Devil Island.*

SCIENCE

1. Terminology

» Create a class list of science concept terms: for example, provide opportunity for students to record science concept terms that are used in the series. This could be a physical classroom display or on social media.

JUDY CLARKE AND KAREN MACNAB WEIGHING A DEVIL © SALLY INGLETON

» Use this list to explore student prior understandings, look up definitions and/or create a glossary of terms from *Devil Island* related to the animals, habitats, diseases and treatments. conservation status and efforts.

2. Investigation processes

» Identify, record and discuss instances of scientific research processes described in *Devil Island* episodes

» Explore the changing nature of scientific understandings and applications further by investigating the history of the developments.

MEDIA & LITERACY

Students should be encouraged to examine the texts and techniques used to create desired effects in scenes of *Devil Island*. This can be achieved using strategies such as those in the table:

1. Double entry journals

This strategy models a bookkeeping approach by recording

a. the evidence from the series in one column
b. The response in a second column.

2. Literal/Inferential/Evaluative

A three step process in which students record:

a. The What -Literally what happens in a shot, scene or event

b. The Why - Infer why the shot, scene or event was composed or presented that way

c. The How - Evaluate how effective the scene would be/was in triggering a desired response in the audience.

PHOTOS ABOVE © DAVID PARER

Before, during and after viewing discussion starters

The following is a list of possible discussion starters that teachers can consider using depending on their study focus in using the program. These starters encourage exploration of the learning opportunities available in the program. Some link directly to the classroom activities and worksheets that follow in this study guide. A **Think–Pair–Share** strategy would be useful to employ when reviewing student responses to these questions.

* Review and select

Teachers should review the questions and modify or adapt to their needs while previewing the programs. When working with middle secondary students in Years 9–10, selected questions could be given as a handout with spaces for students to record responses during viewing of the program. For students in Years 7–8 the teacher could choose sections of program to view and ask the questions of their whole class or in groups after they view selected segments of the program.

* Before/During/After

For ease of use, the questions listed below are divided into Before, During and After viewing for each of the six episodes of the *Devil Island* series:

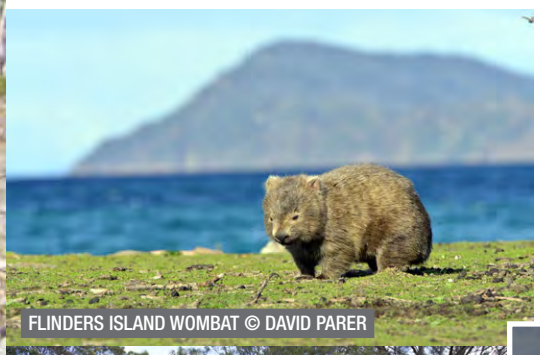
» Episode 1 Mission Maria Island
» Episode 2 Devil 'D' Day
» Episode 3 Meet the Neighbours from Hell
» Episode 4 Summer on Devil Island
» Episode 5 Manny Goes Missing
» Episode 6 Devil Dynasty

Before viewing questions and discussion starters: To be considered or discussed with students their prior knowledge of and attitudes prior to watching.

During viewing: Focus attention on the topics of interest to study in the episode by giving these to students before watching. Ask students to note any information that is they find disturbing/new/interesting about Tasmanian devils, tumour disease or conservation efforts, environmental issues and sustainability or filming while they are viewing the film. The during viewing questions are time-stamped for ease of reference, and allowing review of pertinent sections.

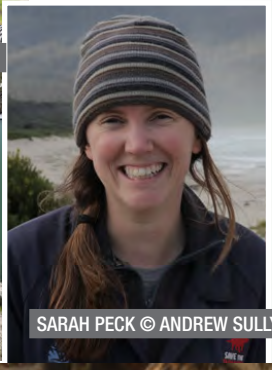
After viewing: Use questions to help stimulate discussion of student response to the main focus of the episode and any questions the issue may have raised for them.

DEVIL FACIAL TUMOUR DISEASE
© SAVE THE TASMANIAN DEVIL PROGRAM



FLINDERS ISLAND WOMBAT © DAVID PARER

JUDY CLARKE PREPARING BEHAVOURIAL TESTS © SALLY INGLETON



SARAH PECK © ANDREW SULLY

DEVIL ON A ROCK © DAVID PARER

LORRAINE DEWEYS AND BABY DEVILS © ANDREW SULLY

Episode 1: MISSION MARIA ISLAND

Study Guide Focus: This episode could be used to introduce students to scientific and environmental research on:

- Tasmanian devil biology and ecology, to discuss efforts at conservation of the world's largest marsupial carnivore (see Activity 1 and 2)
- Devil Facial Tumour Disease spread and link to endangerment of extinction of the species (see Activity 1 and 2)
- scientific approach to captive breeding programmes and the scientific behavioural testing of the Tasmanian devils for their suitability in the release program (Activity 3)
- the people involved in the conservation efforts (Activity 5).

* Detailed synopsis

Three Tasmanian devil joeys, Reba, Remmy and Ruben, prepare to leave life in captivity for an adventure into the wild that may hold the key to the survival of their species.

Orphaned when their mother died of Devil Facial Tumour Disease, a devastating cancer epidemic that is sweeping Tasmania, Reba, Remmy and Ruben have never lived in the wild. Raised by wildlife carer Lorraine Deweys, their home is a breadbox, lunch comes in a bottle and they seek their comfort from a large stuffed toy.

But while they are small and fluffy now, scientists hope the trio and many others like them will grow to become the predators they were born to be. In an ambitious plan to save the species, a rescue squad of scientists plans to take fifteen healthy devils to the protected habitat of Maria Island, off the east coast of Tasmania, to start a new, disease-free dynasty. At 20 kilometres long and 13 kilometres wide, the island's Jurassic landscape of rugged mountains, lush bush and open plains are the perfect habitat for a new devil colony. It was once a penal colony but is now a National Park and Noah's Ark for iconic Australian animals such as the Forester kangaroo, Little Penguins, wedge-tailed eagles and the Flinders Island wombat.

How will they cope when the world's largest marsupial carnivore arrives?

First the team must select the most suitable devils for the program. They visit zoos and sanctuaries and run a formidable series of behaviour tests to ensure the chosen devils have the right personality profile to survive life in the wild.

Will Reba, Remmy and Ruben make the final fifteen on the squad?

* Viewer questions

Prior to viewing

1 What do you know about Tasmanian devils? (See Activity 3)

2 What are the main factors leading to species becoming endangered? In what way is the Tasmanian devil decline different? (Refer to Background Information sheet and Worksheet 1)
3 Do you think it is important to save endangered species?

While viewing the program

4 What is so different about Tasmanian environment? (3:01–3:30)
5 What role do Tasmanian devils play in the ecology? (03:30–4:40)
6 What is causing the decline of the Tasmanian devil? (04:40–06:15)
7 How suitable do you think Maria Island is as a conservation reserve for Tasmanian wildlife ? (06:15–10:00)
8 What is the main purpose in selecting the devils before release and how are the devils selected for transport to Maria Island (11.30–25.30)?

After viewing

9 What is so different about the ecology that is being developed at Maria Island ? (see Worksheet 1 and information sheet)
10 How effective do you think the images are in the telling of this story?

Episode 2
DEVIL 'D' DAY

Study Guide Focus: Could be used as a stimulus to discussion of science of human impacts on habitats, extinctions, endangerment and conservation efforts. Themes explored include:

» importance of people in relation to individual species loss (Activity 2, 3, 4)

DEVIL REACTING TO MIRROR TEST © SALLY INGLETON

DAVID SCHAAP LOADING DEVIL ONTO FERRY
© SAVE THE TASMANIAN DEVIL TEAM

COLETTE HARMSEN TESTING CHINA GIRL © SALLY INGLETON

JUDY CLARKE RELEASING JIMMY © SAVE THE TASMANIAN DEVIL TEAM

RELEASE OF REBA © SALLY INGLETON

» problems of conserving systems as well as species for balance in ecosystems (Activity 2, 3, 6).

* Detailed synopsis

Tasmanian devils Reba, Remmy and Ruben must undergo personality tests and boot camp; the final squad is chosen and then released – on remote Maria Island.

The second episode of *Devil Island* follows the devils to an isolation centre in Hobart where scientists from the Save the Tasmanian Devil team select the final fifteen and prepare to release them into the wild for the first time on Maria Island.

Scientists put Tasmanian devils Reba, Remmy and Ruben through personality tests to make sure they can cope with the adventure that awaits them – and freedom for the first time – on remote Maria Island.

To survive in the wild, the devils must shy away from human contact but remain curious about their surrounds.

First up is Reba. To earn her spot in the Maria Island squad she must avoid the food hidden under a beach ball, a test designed to determine whether she'll avoid human temptations on the island. A mirror tests her aggression and finally a piece of tasty meat on a barbeque fork reveals whether or not she will steer clear of tourists. Reba passes the test but, to prevent inbreeding, brother Ruben misses out. The devils are then sent off to 'boot camp' where they are taught learn how to scavenge and interact with other devils with minimal human contact. Soon a hierarchy emerges as 'big Jimmy' hogs the food and hapless Manny goes without.

Once training is complete, the scientists put the devils through final health

SAVE THE TASMANIAN DEVIL TEAM
© SAVE THE TASMANIAN DEVIL TEAM

checks and fit five lucky recipients with GPS collars so they can track their every move. Then comes the moment they have waited for – the culmination of three years of planning and hard work – as the scientists load the boat and set off for Maria Island to release the devils into the wild.

Reba spent most of her young life snoozing in a laundry basket. For her and many others like her, life will never be the same.

* Viewer questions

Prior to viewing

1 How important is getting to know the young devils individually to the viewer relating to the story being told? (See Worksheet 1 and Activity 3)
2 What difficulties are faced in trying to re-introduce a predator into an ecosystem?
3 Do you think all this effort in this program to save the devils (and other species) is worth it?

While viewing the program

4 What is the purpose of the exercises in the 'boot camp'? (05:30:24–07:24:12)
5 What are problems associated with introducing the devils to Maria island reserve? (07:27:17–12:09:01)

SCIENTISTS JUDY CLARKE & KAREN MACNAB WEIGHING DEVIL © SALLY INGLETON

6 What other species live on Maria Island and how will they need to adapt when the devils arrive?
7 What role did the thylacine play in the ecology before its extinction? What caused its extinction? (14:00:21–14:53:04)
8 How did you feel about the release of the fifteen devils onto the island reserve? (14:57:12–24:28:10)
9 Why do they fit some of the devils with radio tracking collars?

After viewing

10 What difficulties are there in trying to communicate the issues involved in saving the devil from extinction?
11 What do you think it would be like to work on a project such as the one on Maria Island?
12 What do you think will happen to the captive animals in the wild and how do you think the episode attempts to influence how you feel? (see Worksheet 2)

Episode 3
MEET THE NEIGHBOURS FROM HELL

Study Guide Focus: In this episode the early stages of the re-introduction demonstrate what the problems might be for the survival of the devils. The episode could be used as background to exploring current methods of conservation of endangered species (Activity 2, 3, 4, 6).

* Detailed synopsis

As the newly released Tasmanian devils explore their new home on Maria Island, the hand-reared predators find the going tough and must dig deep to find the wild animal within.

The third episode of *Devil Island* follows 15 captive reared Tasmanian devils on their first night of freedom on Maria Island off the coast of Tasmania. Once a penal colony for convicts from Britain, Maria Island is now a national park and tourists flock from around the world to enjoy the abundant populations of native geese, kangaroos and wombats. But

TASMANIAN DEVIL MEETS KANGAROO © DAVID PARER

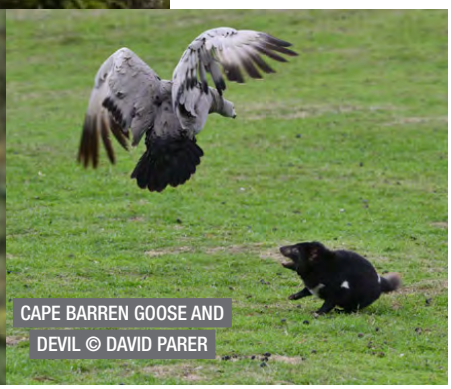
PHIL WISE AND JUDY CLARKE TRACKING DEVILS AFTER THE RELEASE © SALLY INGLETON

BENNETT'S WALLABY © DAVID PARER

MANNY SUNBAKING WITH TOURISTS © ELVIN LEA

DEVIL SCREAM © DAVID PARER

WEDGE-TAILED EAGLE © DAVID PARER



CAPE BARREN GOOSE AND DEVIL © DAVID PARER

how will the committed herbivores cope with fifteen hungry, carnivorous hunters?

Hidden cameras and radio tracking collars reveal the secret world of encounters with other island wildlife and attempts to find food.

The devils are curious, cautious and hungry. While one lands a free meal under the nest of a wedge-tailed eagle, others live up to their scavenging reputations by tucking into long dead wildlife.

Little Reba was hand reared in a laundry basket yet seems to have a nose for food. She scavenges for grubs and finds a colony of wombats. But not all the devils are behaving as they should. Adventurous Manny ventures down a wombat burrow and evicts the owner. He's then spotted by tourists behaving more like a Labrador than a devil, posing for photos and sunbaking too close to a campsite. When he crashes a tourist barbecue, it nearly costs his place in the colony.

* Viewer questions

Prior to viewing

1 How significant do you think places like Maria Island are as conservation zones?
2 What role do the different species on Maria play in the ecology?
3 How does tagging and tracking animal programmes work to assist in research and conservation?

While viewing the program

4 What happens in the first night in the wild? (03:16:00–11:41:04)
5 How can introducing devils help the island's new ecology? (03:16:00–20.50)
6 What is the purpose of the radio collars and re-capturing devils and how do these help the research? When the scientists monitor the devils what signs do they check? (11:51:04–13:01:11; 19:18:11–24:26:04)
7 What is the problem with Manny's behaviour for the 'experiment'? Why is Manny's behaviour potentially a problem for the scientists? (15:42:23–17:15:22; 19:18:11–24:26:04)

After viewing

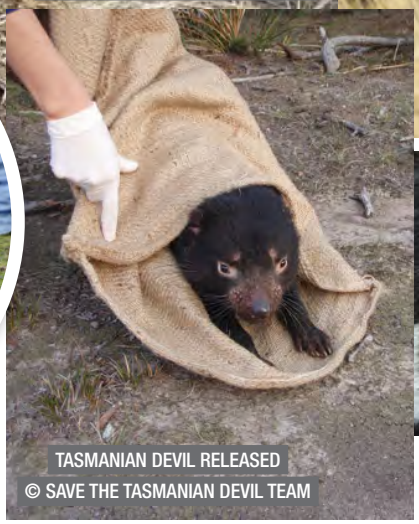
8 What is natural behaviour for a Tasmanian devil?
9 How can the scientists increase the chances of the re-introduction to the wild being successful? (See Worksheets 3, 4)
10 What role do carnivores play in ecological systems and how do you feel about them?

PHIL WISE © SALLY INGLETON

TASMANIAN DEVIL © DAVID PARER

TASMANIAN DEVIL IN DEN ENTRANCE © DAVID PARER

CAPE BARREN GEESE
© DAVID PARER



TASMANIAN DEVIL RELEASED
© SAVE THE TASMANIAN DEVIL TEAM

TASMANIAN DEVIL
© DAVID PARER

Episode 4
SUMMER ON DEVIL ISLAND

Study Guide Focus: The episode provides context for understanding of influences of physical and biological factors on ecology.

This episode could be used to explore:

- animal physical and behavioural adaptation to physical factors of the environment (see Activity 3)
- the effects that feral species have on the balance of an ecosystem (see Activity 3, 5).

* Detailed synopsis

The fourth episode of *Devil Island* follows the devils through a scorching summer and some of the hottest days on record. They have been scavenging but now must learn to hunt as the scientists reduce the supplementary food drops.

While Tasmania experiences bushfires, the devils must adjust to their new environment. Wild devils are nocturnal but this hand-reared squad has grown up in captivity, and so follow human hours. Instead of cooling in a burrow den, the devils are lying around in the hot sun.

The only animals coping with the heat are the island's Little Penguins that feed out at sea. The scientists fear the devils might feast on these tiny creatures and so monitor the devils movements with radio collars and remote cameras to make sure they stay clear of the penguin colony.

As the hunt for food continues, Reba, who's never killed anything in her life, is losing weight. She's not the only one. Maria Island's grazing wildlife, the Forester kangaroos and the Cape Barren geese, are struggling to find food and the geese return to the mainland in search of greener pastures.

The tourists arrive in boatloads and the scientists anxiously monitor the devils to make sure they don't get too close to the campers.

But as streams dry up, the Tasmanian devils must roam further in search of fresh water. Other animals on the island are suffering and the forest is littered with dead. This gives the devils a chance to scavenge, and as they munch through carcasses the blood-curdling screams of their fighting fills the night air.

Soon it's revealed the devils have a secret mission on the island. Can they eradicate the growing population of feral cats that are devouring native birds and mammals?

* Viewer questions

Prior to viewing

1 What are some animal adaptations to living in a hot climate?
2 What impacts do feral animals

SARAH PECK
© SAVE THE TASMANIAN DEVIL TEAM


TASMANIAN DEVIL
© DAVID PARER


DOMINANT MALE KANGAROO
© DAVID PARER


SCIENTIST PHIL WISE
© ANDREW SULLY


WOMBAT ASLEEP
© DAVID PARER

have on ecological systems around Australia?

3 Would you like to work in such an isolated and remote place?

While viewing the program

4 Would you like to visit Maria Island as a tourist? (04:42:09–06:12:06)

5 What problems does the heat cause for the animals? What behaviours can help animals to adapt to the heat? How can the devils help the system? (06:15:18–11:45:12; 12:26:04)

6 How does following Reba's journey help us relate to the story? (12:26:04–14:37:02)

7 What will the Island's feral species do to the native wildlife? (15:09:03–17:00:00; 18:22:13–20:45:14)

After viewing

8 How are modern technology and methods of analysis being used to increase scientific understanding of ecosystems? (11:49:11–17:00:00; 17:15:15–18:19:15)

9 How does the behaviour of Tasmanian devils help spread the facial tumour disease? (12:26:04–14:37:02)

10 Do you think that the feral cats should be left to roam Maria Island in order to conduct a scientific study? (18:22:13–20:45:14)

Episode 5
MANNY GOES MISSING

Study Guide Focus: This episode could be used to explore the ICT cross-curriculum priority through a focus on high-tech devices including commonly available ICT today:

- reproduction patterns of marsupials (see Activity 1, 3, 4)
- reproduction rates need to outstrip deaths for a viable colony to establish (see Activity 3, 4, 5)
- How technologies are changing how research can be conducted (see Activity 5, 6).

* Detailed synopsis

It's the breeding season but four months after releasing fifteen Tasmanian devils on remote Maria Island, the scientists are worried. Male devil Manny, who loves exploring, is missing.


MANNY AT THE PENITENTIARY © ELVIN LEA

In the fifth episode of *Devil Island*, Reba, one of the eight female devils, has finally got the hang of finding food. Now she must find a mate to breed a new generation of disease-free devils.

As breeding season draws near, the scientists set traps around the island to capture and examine each of the devils to ensure they are healthy and ready to mate.

Red oil in their pouches indicates they are fertile and the devils commence their brutal courtship. Male devils fight tooth and nail for their chosen female, often both biting her and trying to carry her back to their den. Once the male has succeeded he will hold the female hostage for days preventing any other male from coming near her.


SCIENTISTS TRAPPING DEVIL © ANDREW SULLY


TASMANIAN DEVIL © DAVID PARER

TASMANIAN DEVIL INSIDE DEN © DAVID PARER

TASMANIAN DEVIL SCIENTISTS WITH LORRAINE DEWEYS © ANDREW SULLY

YOUNG TASMANIAN DEVIL IN THE WILD © DAVID PARER

But it's not just the devils that are getting ready to breed as the male wombats and Forester kangaroos put on displays of masculine aggression to conquer their competitors and court their mates.

Even during mating season, the devils must eat and one is drawn by the smell of an elephant seal carcass rotting on the beach. At least this devil is displaying natural behaviour – unlike Manny.

Inquisitive, confident and bit of a showoff, Manny is a favourite with the scientific team but has always had a nose for trouble. He hasn't been seen for a few days. Using the tracking device on his collar, the team sets out to solve the mystery, with heartbreaking results.

* Viewer questions

Prior to viewing

1 What do you know about the life cycle of marsupials?
2 What do you think the chances are that the devils will set up a sustainable colony?
3 What is needed for the long term survival of the colony?

While viewing the program

4 What do the scientists do to find out about devil reproduction? (02:23:09–04:57:16; 05:52:18–19:54:18)
5 How are Tasmanian devil survival skills described in this episode through the story of the loss of Manny? (14:06:21–19:54:18)
6 What do we learn about behaviour of other animals on the island in this episode? (Flinders Island wombats, Cape Barren geese, Forester kangaroos 03:51:10–05:52:18; Little Penguins 09:02:14–10:10:05)
7 What do we know about what is involved in the mating ritual of Tasmanian devils? (20:00:21–23:26:18)
8 How have the details of devil mating been documented? (23:29:24–23:49:23)

After viewing

9 What is the importance of mating rituals to successful mating?
10 What risks are there in solitary animals like devils coming together to feed and mate?
11 What regulations are there on removing living things form the wild?

Episode 6
DEVIL DYNASTY

Study Guide Focus: This episode could be used to explore:

- efforts to ensure survival of endangered species (see Activity 4, 5, 6)
- risks that species are facing today (see Activity 1, 2, 3, 4, 5, 6).

* Detailed synopsis

It's been five months since their release and the future looks bright for the fifteen surviving disease-free Tasmanian devils on Maria Island, as all eight females prepare to have joeys.

In a resounding success for this groundbreaking scientific project, the final episode of *Devil Island* follows the devils and the birth of their young.

By mid autumn on Maria Island, many of the kangaroos have already given birth when the scientists return to check on the devils.

They discover that big Jimmy's been a busy lad – so busy that he's forgotten to eat and has lost almost a third of his weight. Next up is Reba and its good news, she has two tiny babies in her pouch.

It's a milestone moment. Reba's offspring will be the first of a new dynasty of Tasmanian devils born in the wild off mainland Tasmania.

PHIL WISE & LORRAINE DEWEYS © ANDREW SULLY

YOUNG TASMANIAN DEVILS & MUM IN DEN © DAVID PARER

TASMANIAN DEVIL POUCH YOUNG © ANDREW SULLY

SARAH PECK, PHIL WISE & LORRAINE DEWEYS © ANDREW SULLY

After finding Reba's den, the scientists set up a camera to study her maternal behaviour and are surprised to find she has received not one, but two male callers. Male Tasmanian devils don't usually mix with females carrying young and the film offers a unique insight into how captive devils released in the wild may create new behaviours.

As the team continues to check each devil they are delighted to discover that all eight females are carrying babies meaning the devils have more than doubled their numbers in a relatively short space of time.

Meanwhile rare hidden camera footage reveals that the island's Brushtail possums have turned into killers and have been decimating the local bird population. Analysis of devil scats reveal they are eating possums and thus protecting the island's seabirds. There is a new cop on the island!

Eight months after the release the scientists visit once more to check on the wellbeing of the devil mums.

This time they bring a special visitor – Lorraine Deweys, the wildlife carer who raised Reba and Remmy as babies. It's an emotional end to the six-part series when Lorraine finds Reba with two tiny joeys in her pouch.

While a few miles away on mainland Tasmania, Devil Facial Tumour Disease continues to ravage the populations. Reba, Remmy and this pioneering squad give new hope that the species can be saved.

* Viewer questions

Prior to viewing

1 What do you expect this episode will be about given the title 'Devil Dynasty'?
2 What do you now know about devil behaviour that you did not know before?
3 How important is the scientific study of this scheme?

While viewing the program

4 Why would male devils lose weight in the breeding season? (02:35:14–03:30:02)
5 Why do you think the scientists were so excited when Reba was pregnant? (03:49:21–07:11:04)
6 What was unusual about Reba's behaviour during her pregnancy? How did the scientists discover this? (07:11:04-09:23:22)
7 What do we know about the facial tumour disease? (10:06:23–11:20:21)
8 What surprising implications for island life are described? (13:36:24– 16:48:20)
9 How do you think the people involved felt when they found the devils were breeding? (16:56:12–23:12:15)

After viewing

10 What is the significance of politicians being convinced on the importance of the program?
11 In what ways does the island sanctuary benefit from having the Tasmanian devil, and in what ways does the devil benefit from having a colony on Maria?

Activities

* 1. What I know about Tasmanian devils: Multiple choice quiz (Worksheet 1)

This quiz sheet is ideal for use as an opener to discussion of Tasmanian devils and their treatment by people in the past. The questions introduce topics for discussion about basic knowledge of 'endangerment' and conservation efforts within the context of saving Tasmanian devils.

Suitable for use prior to or after watching first episode(s) of *Devil Island* depending on age and knowledge level: Suggested for:

- Years 5 and 6 as a whole-class activity after watching Episode 1 of *Devil Island*
- Years 7 and 8 as a small-group activity as a stimulus to discussion of prior knowledge before watching Episode 1
- Years 9 and 10 as individual activity and stimulate questions for further research for supporting reasons/evidence for their quiz answers)

- **Curriculum focus:** Science, Geography, Sustainability
- **Time:** One class session

THE TASK

1. As a class or in groups, pairs or individually, ask students to fill out their answers. Discuss supportive evidence for answers and questions raised based on what they know from prior knowledge or viewing the first episode of *Devil Island*. Encourage students to record their own raised questions or wonderings about the subject matter or develop a class list of wonderings to discuss for future exploration.
2. Using the quiz as a starting point, set students research tasks to find other facts about devils (or other endangered species), diseases and feral pests. Ask students to record further questions that come to mind while viewing each episode.

Extension activity: Have students create their own true/false quiz or create a class 'Endangered quiz game' using the prepared questions.


TASMANIAN DEVIL © DAVID PARER

Using websites listed in this study guide showing species at risk across Australia, ask students to create their own quiz for others in the class to complete. See e.g. Australian Endangered Animals website <http://www.kidcyber.com.au/topics/austendangered.htm>

Ensure students have an answer sheet prepared and know the reasoning behind the correct answers to their constructed quiz prior to sharing with others.

When all have completed the task have students share their quizzes with others.

Nb. Devils feed their young on milk, which means they are mammals. Marsupials are one order of mammal. The term marsupial refers to mammals that suckle young in a pouch not just that they feed their young on milk. Cows, elephants, pigs and so on are not marsupials. Marsupials are a mammalian order whose members are born incompletely developed and are typically carried and suckled in a pouch on the mother's belly. Marsupials are found chiefly in Australia and New Guinea, and also in America.

Teacher note: An information sheet available at <http://www.tassiedevil.com.au/tasdevil.nsf/About-Tasmanian-devils/611F4851DA7D24A6CA2578E1002032AF> could be handed out to support students in completing quiz. Teachers should decide when/if to hand out this information, depending on student background and needs, and the focus of the classroom activity for their particular setting.

Below is a key to correct answers in Worksheet 1:

1	b.	5	c.	9	c.
2	d.	6	b.	10	a
3	d.	7	c.		
4	b.	8	d.		

* 2. What is meant by … ? (Worksheet 2)

- **Most suitable** for Years 5–7 as presented; could be modified for more senior level students to include more detailed requirements of the information to be included in their research report.
- **Time:** One class session
- Nb. teachers could choose to work through steps 1–3 below as a class depending on the age group of the class. Dictionaries or online references are required for students to complete question 2.
- **Curriculum focus:** Science, Sustainability, Literacy, Ethics, Geography

THE TASK

This worksheet provides opportunity for students to explore definitions of terms used in *Devil Island*:

- examine terms used to describe species, their decline and loss
- examine the range of attitudes towards what influences species loss
- consider the relationship between scientific evidence and their own feelings about conservation.

What to do:

1. As a class discuss student's ideas about the concepts of biodiversity, species, species loss, endangerment and human impacts on ecology.
2. Hand out worksheet and ensure students understand the task.
3. When complete, check through responses and revise terms used

Question 1:

- *Extinct*: no living examples of a species existing; none have been found for over fifty years.
- *Critically Endangered*: species with

extremely high risk of being extinct very soon.
» *Endangered*: species in danger of becoming extinct.
» *Vulnerable*: species not yet classified as endangered, but numbers dropping or could easily become threatened.
» *Rare*: species that are uncommon, found in small number or within a small area

Question 2:
» *species*, noun, singular and plural, pronounced spe - cies. from the Latin *specere*, meaning to look or appearance,
» A group of individuals having common characteristics; a distinct sort or kind.
» In biology a species is the major subdivision of a genus or subgenus. Species is the basic category of biological classification. The scientific name given to each type of living thing is made up of genus and species. Species are composed of related individuals that resemble one another, are able to breed amongst themselves, but are not able to breed with members of another species to produce viable young.

Question 3:
» A habitat is the place or environment where a plant or animal naturally or normally lives and grows. Understanding animals' basic survival needs helps you understand the characteristics of their habitats.

Question 4:
» The class could be divided into six groups, with each group exploring one of the factors listed: Land clearing, Disease, Competition, Pollution, Legal or Illegal killing (hunting and fishing), Introduced species.

Follow-up: The rate of extinction today could be compared with that of past extinction events, such as that 65 million years ago that killed off the dinosaurs.

4 Share students' own expressed ideas about endangered creatures and conservation (Q. 5) and how watching excerpts of *Devil Island* may have influenced their knowledge and feelings about the topic.


PHIL WISE
© JESSICA COOK

Extension Activity:

5 Create a research project or report on endangerment and loss biodiversity:
How concerned are you about loss of biodiversity and specific groups of living things? Negotiate with students the exact nature of their research project report to be conducted which could involve, for example:
- individual or group reports
- developing a list of local rare, threatened, extinct or endangered species.
- Creating an information poster about a local rare, endangered, threatened or extinct creature
- Negotiate the requirements of the task with students and related assessment criteria.

* 3. A devil at home (There is no worksheet for this activity)

» **All levels:** Think–Pair–Share activity
This task provides an opportunity for students to explore details of current conservation efforts in Tasmania where the devil is indigenous and/or throughout other areas of Australia
» **Time allocation:** approximately 2–3 hours
» **Curriculum focus:** English, Science, Geography; General Capability: Investigating with ICT. *Devil Island* shows many well known and less well known living creatures from Australia. Students may believe we have information on all living creatures, including in Tasmanian terrestrial and marine habitats.
» **Aim:** To provide opportunity for students to explore current knowledge of diversity of life in Tasmanian habitats and their conservation status
» **Scenario:** You are newspaper reporter writing a story on current research into a particular Australian habitat or biome

THE TASK

» Write a report about life as a Tasmanian devil (or another species on Maria Island), in an agreed format.

What to do:

1 Review the introductory section of *Devil Island*.
2 Ask students individually to list the details of the habitats of Maria Island that the Tasmanian devils were introduced to in *Devil Island* and how the species shown gain their basic living requirements. List the different biomes of Tasmania based on their prior knowledge.
3 In pairs review ideas of habitat and lifestyle of a species on Maria island: devil, kangaroo, wombat, goose or penguin.
4 Working in groups of four, research scientific classification of biomes and details of the island of Tasmania. How long has it been separate from the Australian mainland? What effects has this had on the life there? Use web resources listed in this guide as starting points.
5 As a class: Discuss possible formats for a research report on life as a Tasmanian devil or other species (for example, photo-story, PowerPoint, newspaper article, blog). Group discussion should be used as the basis of creating an outline of the task and a quality rubric of the task assessment criteria.
6 Working individually or in groups of up to four: complete and present prepared projects for peer evaluation using set criteria.

* 4. My devilish story (Worksheet 3)

» **Time allocation:** approximately 2–3 hours
» **Curriculum focus:** English, Science; General Capability: Literacy

THE TASK

Write a short 1–2 page day in the life biography experience from the point of view of one of the devils (or another animal on Maria island), based loosely on what was seen in *Devil Island*.

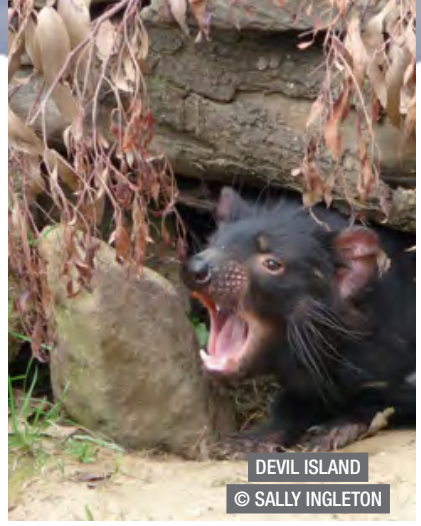
What to do:

Working as a class

1. Hand out worksheet and review task steps after viewing Episode 1.
2. Ask students to record memorable moments of devil activity that highlight a devil's personality or a person's response to devil activity while watching Episodes 2–5.
3. After viewing two or more episodes discuss: what are some interesting behaviours of devils that the programs have shown? Create a class list of interesting segments and review sections of series that show the individuality of devils. Nb. The six episodes could be reviewed by different groups of students and observations recorded and shared with the class.
4. Discuss: What makes a story interesting to the reader? What can you do to make a biographical account of individual devils a gripping story?

Working in pairs

5. Choose one specific devil featured in the series (or other animal if you choose) that you felt strongly about while watching.
6. Re-watch segments of the episodes to make a list of terms (adjectives and verbs) that describe the animals and events on Maria Island. What facts will be included?
7. Explore student ideas of what will create interest in the story telling. Discuss aspects of the sections of film that might add to interest including the science, the scenery, the filming, the interactions, the importance to the story.
8. Direct students to make a decision about the audience for their story before planning the account.


DEVIL ISLAND
© SALLY INGLETON

Extension: The biographies could be put together as a class play consisting of a series of monologues by each 'devil' character.

* 5. Scientists at work: Stereotypes, myths and reality (Worksheet 4)

» **Curriculum focus:** English; Media Arts; Science
» **Suggested time allowance:** 120 minutes class time
» **Most suitable** Years 7–8:
» **Groups:** Individually, in pairs or in small groups
» **Purpose:** To explore 'Being a scientist', as presented in *Devil Island*
» **Focus question:** What does conducting research as a scientist involve?

THE TASK

Write and perform a drama or role play to illustrate 'being a scientist' that says something about a stereotypical viewpoint and actual scientists.

1. Ask students to draw a scientist. Compare their drawings with stereotypical images of scientists and those seen in *Devil Island* series. Use the Modified Rating Rubric Draw-a-Scientist Test at <http://www.ecu.edu/ncspacegrant/docs/RESTEPdocs/DASTRatingRubric.pdf> to quantify the nature of the class drawings of scientists. Discuss different areas of science and why we have stereotypical images of scientists and other groups.
2. Review sections of *Devil Island* showing different scientists going about their work, including wildlife vet Sarah Peck, biologist Phil Wise, wildlife vet Judy Clarke, researcher Dr Rodrigo Hamede.
3. Most people think of veterinarians as working with cats, dogs and other domestic pets. What other animal care jobs can vets undertake?
4. The report: Students are asked to decide on their own mode of presentation of 'Scientist at work'. For ideas on how to write the article, see <http://www.mediacollege.com/journalism/news/write-stories.html>.

* 6. A.B.C. to getting involved in conservation action (Activity sheet 5)

» **Most suitable** Years 9–10: paired or group activity
» **Time allocation:** To be negotiated
» **Curriculum focus:** Science; General capability: Personal and social

THE TASK

Explore possibilities and make choices to take part in conservation action.

Focus question: What could we do to get involved?

What to do:

1. Hand out Information sheet to be used to organise/record this activity that lists three possible directions for action the class might take:
   1.specifically relating to Tasmanian devil conservation,
   2. Local action, and
   3. National action.

   Have the groups explore suggestions for each direction listed in A and then add at B their own ideas for action.
   Decide as a class which of these actions you want or would choose to participate in.

Resources

ONLINE RESOURCES FOR STUDENTS AND TEACHERS

* *Devil Island*

360 Degree Films
<http://360degreefilms.com.au/productions/devilisland/>
Save the Tasmanian Devil Program
<http://www.tassiedevil.com.au/tasdevil.nsf>
Maria Island
<http://www.parks.tas.gov.au/?base=3495>
Tourism Tasmania
<http://www.discovertasmania.com.au>
Tasmanian Devil Facts for Kids
<http://www.dpiw.tas.gov.au/inter/nsf/webpages/ekoe-6fa6qb?open>
Wildlife Information Services
<http://www.wildlifetasmania.com/images/newsletter04_revised%20edition_.pdf>
Devil Facial Tumour Disease
<http://www.dpiw.tas.gov.au/inter.nsf/webpages/lbun-5qf86g>
Tasmanian Devil Photos and Information
Basic information by National Geographic. Suitable for all years.
<http://animals.nationalgeographic.com/animals/mammals/tasmanian-devil/>

* General

Australian Endangered Animals
Includes an easy to read outline of classification of risk levels. Suitable for Years 5 and up.
<http://www.kidcyber.com.au/topics/austendangered.htm>
Feral Animals in Australia
<http://www.environment.gov.au/topics/biodiversity/invasive-species/feral-animals-australia>
<http://www.kidcyber.com.au/topics/ferals.htm>
Endangered and threatened Australian wildlife – About threatened species
Downloadable PDF. Suitable as an information sheet for Years 7 and up.
<http://www.australianwildlife.net.au/pdf/school/Endangered_Species.pdf>

Endangered Mammals of Australia
Lists of Earth's Endangered Species by Continent
<http://www.earthsendangered.com/continent.asp?ID=4>

21,000 Species at Risk of Extinction
The Australian newspaper article, 2 July 2013. Suitable for Years 7 and up.
<http://www.theaustralian.com.au/higher-education/species-at-risk-of-extinction/story-e6frgcjx-1226673024255>

Poorly Known Species at Most Risk from Extinction
Cool Green Science: The Science blog of the Nature Conservancy, 14 August 2013.
'A major obstacle for conservation is our incomplete knowledge of the biological world. Less than 10% of the world's putative species have been described, and conservation knowledge is heavily biased towards terrestrial vertebrates and plants, and temperate rather than tropical regions.' <http://blog.nature.org/science/2013/08/14/poorly-known-species-at-most-risk-from-extinction/>

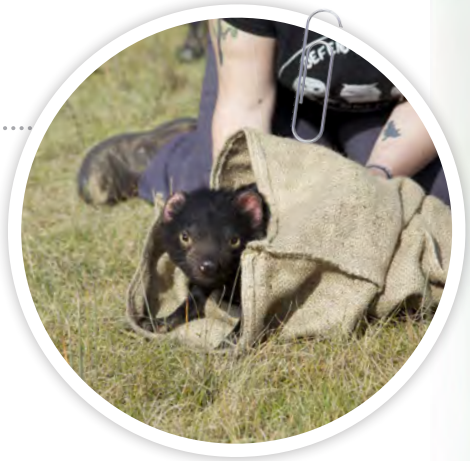
Australia's Critically Endangered Animal Species
List of Australia's ninety-six critically endangered animal species, as listed by the IUCN. *The Conversation*, 6 December 2012. Suitable for Years 9 and up and for teacher reference.
<https://theconversation.com/australias-critically-endangered-animal-species-11169>
Backyard Wildlife
<http://www.logan.qld.gov.au/environment-water-and-waste/wildlife/wildlife-friendly-backyards>
<http://www.nestingboxes.com.au>
<http://www.weekendnotes.com/urban-wildlife-watching/>
<http://www.environment.gov.au/node/14287#how>

* Draw-a-Scientist Test

Chambers, D.W. (1983). 'Stereotypic images of the scientist: The Draw-A-Scientist Test.' *Science Education*, 67(2), 255-265.
Mason, C.L., Kahle, J.B., & Gardner, A.L. (1991). 'Draw-A-Scientist Test: Future Implications.' *School Science and Mathematics,* 91(5), 193-198.
Finson, K. D. (2002). 'Drawing a Scientist: What We Do and Do Not Know After Fifty Years of Drawings.' *School Science and Mathematics*, 102(7): 335–345.
Finson, K. D. (2003). 'Applicability of the DAST-C to the images of scientists drawn by students of different racial groups.' *Journal of Elementary Science Education*. 15(1), 15-26
Medina-Jerez, W., Middleton, L., & Orihuela-Rabaza, W., (2010). 'Using the DAST-C to Explore Colombian and Bolivian Students' Images of Scientists.' *International Journal of Science and Mathematics Education,* 9(3), 657-690.
Farland-Smith, D. (2012), 'Development and Field Test of the Modified Draw-a-Scientist Test and the Draw-a-Scientist Rubric.' *School Science and Mathematics*, 112(2). 109–116

WHAT I KNOW ABOUT TASMANIAN DEVILS
MULTIPLE CHOICE QUIZ

Name(s) .....



Circle the correct answer in the multiple choice quiz below. After each question, record a question or wondering of your own related to the question that came to mind while thinking about your answer.

1 Tasmanian devils were hunted as pests until protected by law in

a. 1930
b. 1941
c. 1952
d. 1963

I wonder

2 Domestic cats are one of the feral carnivorous species causing havoc to native wildlife in Australia, including Tasmanian devils. Currently there are approximately how many feral cats across the whole of Australia

a. 1 million
b. 2 million
c. 8 million
d. 18 million

I wonder

3 Tasmanian devils

a. evolved on Tasmania after it split off from Australia
b. have long been extinct on the Australian mainland
c. were made extinct by the arrival of European people in Australia
d. became extinct on the mainland in the 1600s before Europeans arrived

I wonder

4. Wild Tasmanian devils are hunters and scavengers that are active

a. only at night
b. mainly at night
c. only in the day
d. mainly in the day

I wonder

5. Tasmanian devils are marsupials. This means they

a. are not mammals
b. lay eggs
c. feed their young on milk
d. give live birth to well developed young

I wonder

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6. On average Tasmanian devils live for about

a. four years
b. eight years
c. twelve years
d. sixteen years

I wonder

7. Devil Facial Tumour Disease is a fatal condition in Tasmanian devils, in which cancers develop around the mouth and head spread by

a. mosquito bites
b. contact with humans
c. biting behaviour
d. sharing food

I wonder

8. The Tasmanian devil

a. feeds only on scavenged meat
b. only eats what it kills for itself
c. eats only fresh meat
d. is a scavenging carnivore

I wonder

9. The Tasmanian devil makes

a. no noises
b. singing sounds when it hunts
c. a variety of fierce noises
d. very small cough and sneeze sounds

I wonder

10. The Save the Tasmanian Devil Program began to establish an Insurance Population of Tasmanian devils in 2005 in which

a. around 500 breeding devils will be kept over a period of 50 years
b. all devils found with facial tumour disease will be killed
c. no devils in captivity do not have facial tumour disease
d. no zoos will be allowed to breed devils

I wonder


© SAVE THE TASMANIAN DEVIL TEAM

WHAT IS MEANT BY … ?

Name(s) .....

Critically Endangered	species that are uncommon, found in small number or within a small area
Rare	species in danger of becoming extinct
Vulnerable	species not yet classified as endangered, but numbers dropping or could easily become threatened
Endangered	species with extremely high risk of being extinct very soon
Extinct	no living examples of a species exist; none have been found for over fifty years

1. What is endangerment? In the scrambled table above, match the definitions to the correct terms.

2. What is a species? Write your own definition for 'species' and then compare with a dictionary definition.

3. What is needed for a species to survive?
   Use the information below to make a list of basic survival requirements of Tasmanian devils.

"A **HABITAT** is the place or environment where a plant or animal naturally or normally lives and grows. Understanding animals' basic survival needs helps you understand the characteristics of their habitats."

4. What are some reasons that so many species are becoming endangered today? Give an example of how each of the reasons for endangerment could influence numbers of a species and impact on their survival rates.

Land clearing

Disease

Competition

Pollution

Illegal killing (hunting and fishing)

Introduced species

5. What do you think and feel about loss of species and biodiversity today?
   Rank of the scale below from 1–10 as an issue of importance to yourself

1 2 3 4 5 6 7 8 9 10

Most Important **Least Important**

Record your own thoughts, ideas, beliefs and attitudes below to share with the class.

MY DEVILISH STORY

Name(s)

The *Devil Island* documentary series tracks the release into the wild of fifteen devils transported from captivity to Maria Island. The viewer shares in the processes involved in developing a wild colony that is safe from a facial tumour disease, which is devastating devil populations across Tasmania.

"*Devil Island* is about highlighting just how important Tasmanian devils are to everyone and how crucial it is that we value and preserve them as a species."
– Andrew Sully, Director

The series offers the viewer an opportunity to get to know these animals as individuals and see that the devils have personalities, which helps us relate to them and their lifestyle:

"I'd spoken with lots of people who had worked closely with them, and they all said the same thing: they can be aggressive, caring, violent, inquisitive, lazy, smart. Over time, I found myself getting caught up in their lives and by the end of the year, I felt a great attachment to them."
– Sally Ingleton, Producer

Your task: Write a short 1–2 page day-in-the-life biography experience from the point of view of one of the devils, based (loosely) on what was seen in the action in the *Devil Island* series.

FOCUS QUESTION

How do Tasmanian devils display personality?

WHAT TO DO:

Working as a class

1. List memorable moments in the episodes that featured a devil's personality or a person's response to devil activity. How did *Devil Island* create interest for the viewer?

2. Discuss: What are some interesting behaviours of devils that the programs showed?

3. Review parts of the series that describe individual devils.

4. Discuss: What makes a story interesting to the reader? What can you do to make a biographical account of an individual devil into a gripping story?

Working in pairs

5. Choose one specific devil featured in the series (or other animal if you choose) that you felt strongly about while watching.

6. Re-watch segments of the episodes if necessary to make a list of terms (adjectives and verbs) that describe the animals and events on Maria Island. What facts will be included?

7. How will you create interest in the story telling?

Decide who the audience is for your story e.g. school newspaper, Save the Tasmanian Devil Program, local paper, younger students. Create a plan for your biographical account. Discuss with a partner what approach you think you will take before writing.

8. On completion, organise to share your writing with the chosen audience.

SCIENTISTS AT WORK: STEREOTYPES, MYTHS AND REALITY

Name(s)

THE SCENARIO

Imagine you are a reporter writing an article about the science and scientists behind the effort to save the Tasmanian devil portrayed in *Devil Island.*

YOUR TASK

Choose segments from *Devil Island* that show the work of the scientists involved in researching Tasmanian devils and their conservation to write a report about the work of one of the scientists involved in Tasmanian devil conservation. The report must illustrate the real work of 'being a scientist' that says something about differences between stereotypical viewpoint and what actual scientists do.

FOCUS QUESTIONS

How do the scientists shown in *Devil Island* fit with your idea of a scientist? What does conducting research as a Tassie devil conservation scientist involve?

JUDY CLARKE, WILDLIFE VET

WHAT TO DO

Working as a class:

1. Draw a scientist: What do scientists usually look like in television and film? Draw a stereotypical scientist. Compare your drawings to describe what the usual scientist stereotype is.

2. Make a list of most interesting sections of scientists and scientific work shown in the *Devil Island* series. Refer to segments of the episodes in viewer questions that you might be interested in commenting on and why you found these interesting, for example

It was a … very momentous occasion, and … personally it's the biggest thing I've ever been involved in, so to see them wandering off into the scrub … that's a highlight of my life I think, and something I'll remember for a very long time.
– Phil Wise in Episode 2 (23:24:02–23:33:10)

http://www.metromagazine.com.au – ISBN 978-1-74295-159-1

3. Describe the technology and how this is shown being used by the scientists to help in their research and understand animal behaviour (e.g. analysing scats, radio collar tracking, night vision cameras). Can you think of some technical devices perhaps not yet in use or invented that would help scientists to monitor and understand animal behaviour?

Working individually or in pairs:

4. Review sections of episodes showing the scientist you choose to feature in your report.

5. Prepare a plan and create your report (making sure individual responsibilities are clear if working in pairs).

6. Practice presenting the report using screen grabs from the series as visuals.

6. Organise a time and place to present your report and present when complete.

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PHIL WISE © SALLY INGLETON

Report form possibilities

A film review discussion about how the scientists are portrayed. Two presenters talking about the section of episode(s) as they are played

A TV news report item

A PowerPoint display with recorded voiceover and screen grabs from the film

A written newspaper item with stills from the film for illustration

RODRIGO HAMEDE © SALLY INGLETON

THE SAVE THE TASMANIAN DEVIL TEAM
© SALLY INGLETON

A.B.C. TO GETTING INVOLVED IN CONSERVATION ACTION

Name(s) .....

Ultimately everyone working on *Devil Island*, from the wildlife carers, the scientists, conservationists, veterinarians, and all the crew share the same aim: to be able to contribute to the survival of a species. Each contributed in their own way to the conservation effort.

What can each of us do to be involved in such efforts?

THE TASK

Explore possibilities and make choices to take part in conservation action.

FOCUS QUESTION

What could we do to get involved?

WHAT TO DO

Below are listed three possible directions for action the class might take:

1 *Specifically relating to Tasmanian devil conservation,*
2 *Local action, and*
3 *National action.*

In section A, explore and consider what is involved in the suggestions listed for each of these three directions and then add your own ideas in section B.

A:

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B:

After considering possibilites, decide as a class which of these actions you want to participate in.

1. TASSIE DEVIL CONSERVATION RELATED ACTIVITIES

A. Design a Postcard for Tasmanian Devil Appeal

Draw a picture of a Tassie devil made into a postcard by The Save the Tasmanian Devil Appeal see <http://www.tassiedevil.com.au/tasdevil.nsf/Kids-Club/56483CEF874FB3AECA2577F400005511>

Subscribe to Save the Tasmanian Devil Program newsletter: Newsletters produced by the Save the Tasmanian Devil Program provide information about the progress being made in response to the disease: <http://www.tassiedevil.com.au/tasdevil.nsf/folder/_newsletters>

B. Our Tassie devil action plan: We could get involved by

2. LOCAL ACTION POSSIBILITIES

A. Look for and join a local conservation group.

Write to local newspaper about local conservation issues identified by local groups. Can you find a local species that needs protecting (for example a frog or small mammal)?

Organise a day or night walk where your class or school can view the native wildlife in your area. Make a list of all the species found.

Each student can survey of all the wildlife living in their backyard or local neighbourhood. Compare results. How can you make your home more friendly for wildlife?

<http://www.logan.qld.gov.au/environment-water-and-waste/wildlife/wildlife-friendly-backyards>

<http://www.nestingboxes.com.au>

Improve or provide habitat for local species e.g. plant indigenous species in school grounds. See how you can help biodiversity at <http://www.environment.gov.au/node/14287#how>

Design a website or Facebook page for your school so that students can post photos and stories about their interactions with wildlife <http://www.weekendnotes.com/urban-wildlife-watching/>.

B. Our Local conservation action plan: We could get involved by

3. NATIONAL ACTION POSSIBILITIES

A. National Threatened Species Day is held each year on 7 September

<http://www.wwf.org.au/news_resources/archives/threatened_species_network/national_threatened_species_day/>

<http://www.environment.nsw.gov.au/threatenedspecies/ThreatenedSpeciesDay.htm>

September is Biodiversity Month <http://www.environment.gov.au/node/14287>

Explore lists of Australian threatened and endangered species and action being taken. See for example <http://www.earthsendangered.com/continent.asp?ID=4>

B. Our National conservation action plan: We could get involved by

MARIA ISLAND ROCKPOOLS © ANDREW SULLY

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