

HOW A NATIONAL NUISANCE HELPED SHAPE AUSTRALIA AND ITS PEOPLE

THE GREAT AUSTRALIAN FLY



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A **STUDY GUIDE** BY CHERYL JAKAB

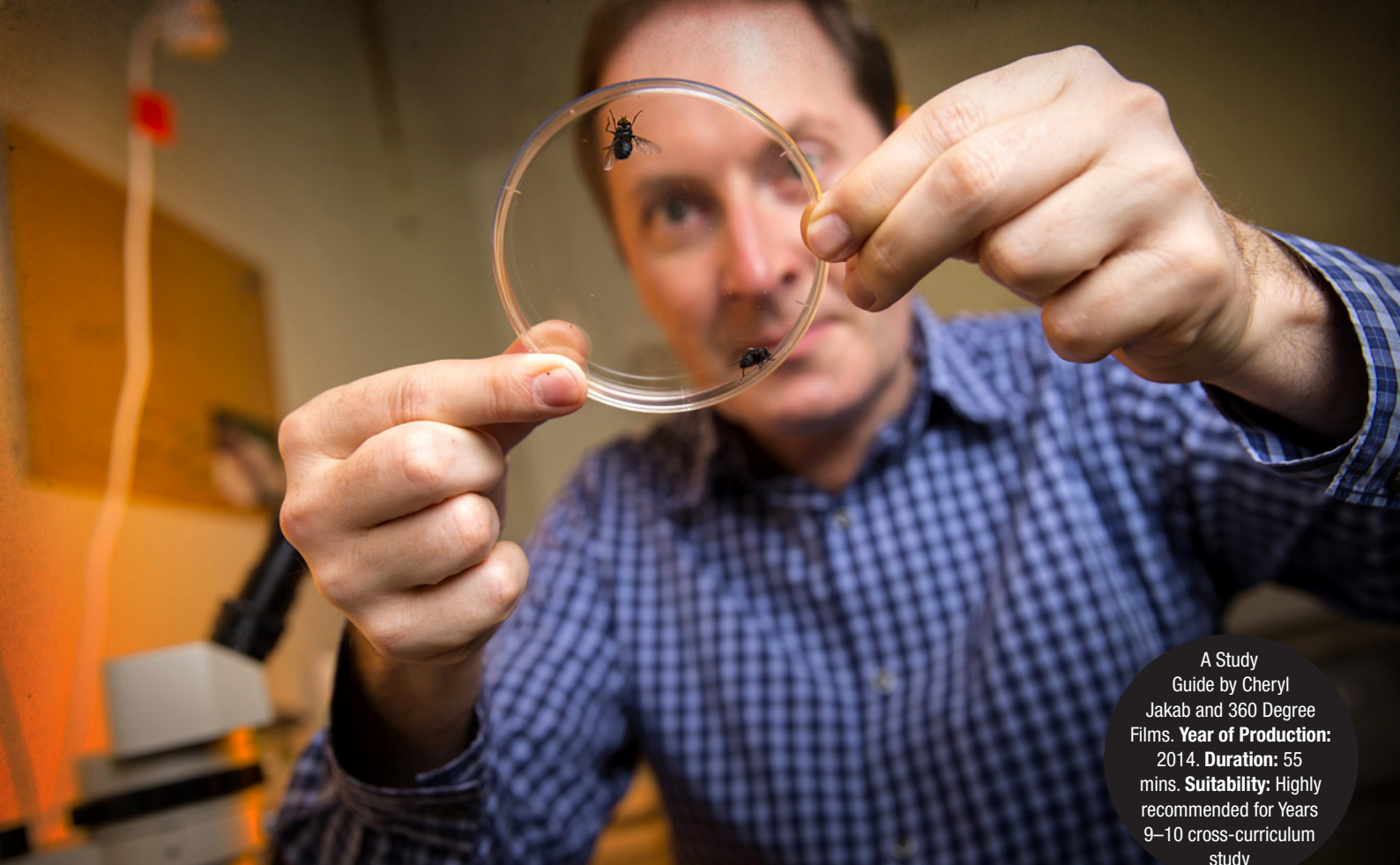


AUSTRALIAN TEACHERS OF MEDIA

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A Study
Guide by Cheryl
Jakab and 360 Degree
Films. **Year of Production:**
2014. **Duration:** 55
mins. **Suitability:** Highly
recommended for Years
9–10 cross-curriculum
study

The Great Australian Fly looks at how a national nuisance might in fact be a much-maligned national hero.

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Introduction

The Great Australian Fly is an amusing and quirky documentary, on which to base an interdisciplinary study across English, Media Arts, Science, Social science and Sustainability. *The Great Australian Fly* presents the attitudes, science, history and cultural development of ideas about flies in Australia, using a range of novel methods to communicate information and opinions as well as present up-to-date scientific studies about the fly. The film shows how the fly has shaped Australian life and reveals many of their astounding abilities. *The Great Australian Fly* presents the perspectives of: a comedian, an historian, advertising creatives, scientific experts, a fly phobic, a maggot farmer and lay fly enthusiasts to tell the complex story of Australia's relationship with flies.

This guide explores how this film may be used as the subject of a cross disciplinary study for middle secondary school.



SALLY INGLETON
© 360 DEGREE FILMS

Detailed Synopsis

The one-hour documentary *The Great Australian Fly* explores how the fly, widely held to be the spoiler of the Australian summer, is also a crime solver, healer, pollinator and street sweeper. The film examines Australia's obsession with wiping out flies and, our fascination with protecting ourselves from their perceived harm. It then reveals why flies are critical to our world and the problems we would encounter if we did successfully destroy this vast and varied population of insects. *The Great Australian Fly* provides a range of alternative perspectives on the fly, its impact on our culture and our ecology and the benefits of the fly that generally go ignored. It introduces some fascinating people who devote their lives to learning about and working with flies through science, criminology, and medicine. Part social history, part scientific study *The Great Australian Fly* is a humorous and entertaining documentary.

Subjects include Australia's only professional maggot farmer, Dave Sheldon, who has turned waste into a viable business, providing a reliable supply of maggots for use in fisheries and even crop pollination; there is Queensland Museum's curator of entomology and avid bug catcher Dr Christine Lambkin, who is leading a charge to identify and name some of the thousands of endemic fly species yet to be classified, and University of Wollongong's Assoc. Professor James Wallman who is, among other things, studying the sex life of flies.

This film alerts the viewer to common misunderstandings regarding the fly, both in the past and persisting today. The film acknowledges that most Australians consider the fly a national nuisance, then presents the case for the fly, strongly suggesting that there is much more to this little buzzing irritant – and the part it plays in our world – than most people realise.

» CREDITS

PRODUCER: SALLY INGLETON: Sally Ingleton's company, 360 Degree Films, works across many genres, including wildlife, environment, science, history, arts and people-based stories. Sally has produced more than 40 hours of quality documentary programming for broadcasters all over the world including the BBC, National Geographic Television, PBS in the US and ABC in Australia.

WRITER & DIRECTOR: TOSCA LOOBY: Tosca Looby is a writer and director with considerable experience across natural history, contemporary and magazine format television. She trained in the UK before returning to Australia to take up a position as producer with the ABC Natural History Unit. She works as a freelance writer and director and has worked for ABC TV, SBS, 360 Degree Films, Electric Pictures and Artemis International.

EDITOR: TONY STEVENS: Tony Stevens is one of Australia's most sought-after editors with more than 30 years experience cutting music clips, short films, TV drama, documentary and features.

COMPOSERS: ANTONY PARTOS & DAVID MCCORMACK: Antony Partos is one of Australia's most awarded film composers. His passion lies in creating innovative scores that morph acoustic with an eclectic mix of bespoke elements. ARIA award winning composer David McCormack has spent the last 25 years performing, writing and scoring his way across the globe.

NARRATOR: JOHN DOYLE: John Doyle is one of Australia's finest writers for stage and screen. John started life as a jobbing actor in 1980 appearing in several productions before creating the character of Roy Slaven in 1985, for ABC radio Triple J. Since 2006 John has teamed up four times with Dr Tim Flannery for the documentary series *TWO MEN IN A TINNIE*, *TWO IN THE TOP END*, *TWO ON THE GREAT DIVIDE* and most recently *TWO MEN IN CHINA*.

RUNNING TIME

A 55-minute nature documentary and social commentary by 360 Degree Films. <<http://www.360degreefilms.com.au>>



TOSCA LOOBY
© SALLY INGLETON



CHRISTINE LAMBKIN
& NOEL STARICK
© GAIA NOBEL



CHRISTINE LAMBKIN
© PETER WADDINGTON



JAMES WALLMAN

» THE TALENT

THE FLIES

◆ FLIES

Flies are classified in the order Diptera, which means 'two wings'. Flies and other members of Diptera (including mosquitoes, midges and sand flies) use only two wings (one pair) in flight, unlike other insects that use four (two pairs). Flies have club-like appendages behind the forewings, known as 'halteres', which are used for balance in flight. According to the Australian Museum website:

"Common characteristics of the order (Diptera) include:

- *One pair of wings (forewings)*
- *Hindwings reduced to club-like halteres*
- *A large and moveable head*
- *Compound eyes that are often very large*
- *Sucking, piercing and or sponge-like mouthparts (all adapted for a liquid diet)*
- *The mesothorax (middle segment of the thorax or mid-body) is enlarged, with the prothorax and metathorax small*
- *Complete metamorphosis, with larvae (maggots) that are always legless, with chewing mouthparts or mouth-hooks, and that often pupate within a hardened case (puparium)."*

Reference: <http://australianmuseum.net.au/Flies-and-mosquitoes-order-diptera#sthash.5H4W7ffn.dpuf>

There are nearly 30,000 species of native flies in Australia, many still undescribed. The documentary tells the story of the three most widely recognised 'nuisance flies' – the house fly (*Musca domestica*), bush fly (*Musca vetustissima*) and sheep blowfly (*Lucilia sericata*).

◆ LOUIE THE FLY

Animated fly character developed for advertising in the 1950s and 1960s for Mortein flyspray. For more see <https://www.facebook.com/louiethefly>

THE PEOPLE IN THE FILM

DR CHRISTINE LAMBKIN: Christine is the Curator of Entomology responsible for the Queensland Museum's collections of Diptera (flies), Coleoptera (beetles), Orthoptera (grasshoppers), Hemiptera (bugs), Phasmatodea (stick insects), and a number of smaller insect orders.

ASSOCIATE PROFESSOR JAMES WALLMAN: Dr James Wallman works in the School of Biological Sciences in the Faculty of Science, Medicine and Health at the University of Wollongong.

DAVID SHELDON: Dave's family run business, Sheldon's Bait, is Australia's largest supplier of maggots.

GEOFF PIKE & CAM FORD: Geoff and Cam both worked in advertising in the 50's and 60's and were animators on the original 'Louie The Fly' fly spray advertisement campaign.

FRANK WOODLEY: Frank Woodley is a much loved Australian comedian. Since emerging from the acclaimed duo Lano and Woodley in 2006 Frank has created four new stage shows and his own ABC series *Woodley*. 2013 saw Frank open at the Sydney Festival, collaborating with acclaimed acrobat Simon Yates in *INSIDE*. In 2015 Frank will perform in a new show *Fool's Gold*, appearing at Adelaide Fringe, Brisbane and Sydney Comedy Festivals, and of course the Melbourne International Comedy Festival.



FRANK WOODLEY
© JESSICA COOK

» SUMMARY OF EDUCATIONAL SUITABILITY

Level: Most suitable for middle secondary students (Years 9–10) for a cross curriculum study.

Could also be adapted for use in Senior Secondary English and Senior Science/Biology: Unit 1: Biodiversity and the interconnectedness of life

Reference: ACARA <<http://www.australiancurriculum.edu.au/Science/>>

NATIONAL CURRICULUM LEARNING AREAS AND STRANDS:

- English: Language/Literature/Literacy
- Arts: Media Arts
- Humanities and Social Science: Geography
- Science: Understanding, Enquiry skills & Science as Human Endeavour
- Cross-curriculum links: Sustainability

Note: See detailed list at the end of this guide. Australian Curriculum code numbers are provided after each of the detailed outcome below for ease of reference.

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

Discussion starters

» BEFORE VIEWING

Discuss with students their existing understanding of and attitudes to flies prior to watching the film.

Focus attention on the topic of the film by asking:

- 1 What do you think a film entitled *The Great Australian Fly* might be about?
- 2 Do students have an impression of flies as disease-carrying pests? Do they have an understanding of the fly's role in the ecosystem?
- 3 What do you know already about Australian insects (e.g. how they are classified)? Where did they come from? Are flies endemic to Australia? Were they here in the same numbers in the past or have their numbers grown with white settlement?
- 4 What is a fly? What firsthand experience can students recount of flies influencing their lives? Ask students to share stories of flies (or other insects) in their lives?
- 5 Where in Australia do you think flies live today? Are other places in the world also inhabited by flies? Does Australia have more flies than other parts of the world? Why might Australia be a good habitat for flies? Are they across the country? Are there places in Australia without flies?
- 6 What is the natural habitat of flies? What role do they play in Australian natural ecosystems? Are there good flies and bad flies? How many types of flies do you think exist in Australia?
- 7 What approach would you take to make a film about flies interesting?



- 8 Use Worksheet 1 *When I hear and see flies I think ...* to focus the discussion on students existing knowledge of and disposition towards flies before viewing *The Great Australian Fly*.

» VIEWING QUESTIONS

The following is a list of possible questions and discussion starters that teachers can consider using depending on their study focus in using the program. The questions are divided into four groups covering about a quarter of the program each:

- 1 Our flies: The fly as a topic of conversation
- 2 People and flies: The extreme reactions people have to flies
- 3 Some actions and responses
- 4 Rethinking flies

The above sections could be used to divide the viewing and responding activities.

The questions below are time stamped for ease of reference, allowing quick review of pertinent questions and sections. These starters link directly to the activities that follow in this study guide.

Teachers should make selections from these questions for students to consider during viewing.

A selection of the listed questions could be given as a handout for students (individually or in groups) to record responses during viewing. Ask students to note any information they find disturbing/new/interesting, or that evoke other questions about flies, (e.g. health, environmental issues and sustainability issues) while they are viewing the film.



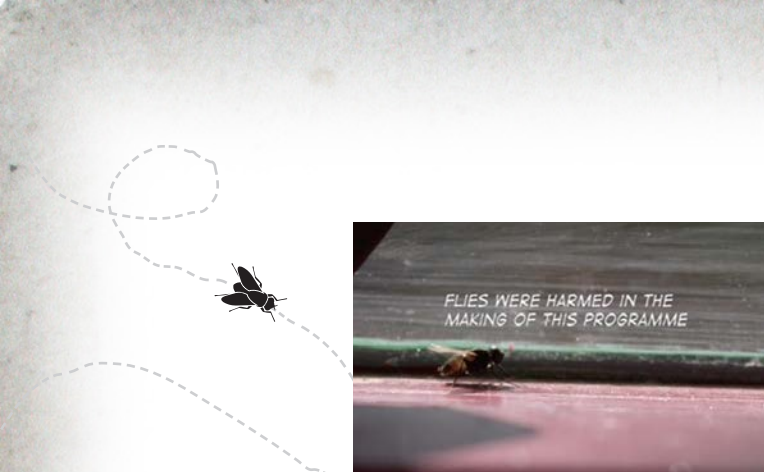
» RESPONDING TO THE FILM

Section 1 (Time 0.00–14.00mins) Our flies: The fly as a topic of conversation

- 1 What do you think is the message of the introductory section of the film? (Timestamp: 0.15–2.00)
- 2 Why does the film suggest we need to 'swat up' on the *Great Australian Fly*? (2.00)
- 3 What are the main types of fly you might recognise? (3.00 - 4:30)
- 4 How do you feel about the idea of fly aesthetics, as for example, described by the researcher who appreciates their great design and abilities? (6.00–6.48)
- 5 How did Aboriginal people traditionally deal with the problem of bush flies? (6.30–7.00)
- 6 The early explorers recorded their experiences of flies in Australia. What did they say? (6.30–7.30)
- 7 How harmful do you think flies are to people? Where does your knowledge of flies come from? (7.00–13.48)

Section 2 (14. 00–28.15mins) People and flies: The extreme reactions people have to flies.

- 8 What is entomophobia? (14.30–15.10)
- 9 Do you think it matters that flies were harmed in making the program? (14.00–15.00)



- 10 Describe aspects of fly behaviour: its life cycle, instincts, role in ecology, farming and use of maggots in therapy. (15:10 - 28:00)
- 11 What might cause someone to have a more extreme response to flies or other insects? (14.30-28.15)
- 12 Are there reactions or attitudes to flies that you find surprising, disgusting or alarming? (14. 00-28.15mins)

Section 3 (28.00 -39.00mins) Some actions and responses

- 13 What chemical controls have been developed to combat flies? (28.50 -31.35)
- 14 How successful are the comedian Frank Woodley's skits, and *Louie the Fly*, at putting fun into the film? (31.35-33.10)
- 15 Why are there more cow pats lying around paddocks in Australia than in Europe and what was done to try and overcome this? (33.45 -35.00; 39:00- 47:41)
- 16 Can you imagine being a field biologist? Do you have a keen eye for detail? How would it feel to discover a new species? Can you relate to the scientists in this film? (35.00-38:30)
- 17 Do you think we are dissociated from nature and does that matter? How is this idea presented in the film? (38.30-39.00)

Section 4 (39.00-55.00mins) Rethinking flies

- 18 How are the African dung beetles helping people by devouring cowpats? (39.00-42.00)
- 19 How are flies assisting forensic scientists? What is

forensic entomology? (46.30-47.00)

- 20 What are some effects of insecticides that were not wanted or expected? (47.08)
- 21 What does the film say about evolutionary biology? In what ways do flies 'like climate change'? (47.24 - 50:00)
- 22 How are flies involved in the food chain at the moment? Can you imagine eating flies or other insects? How important do you think flies will be for our future? (50.00 -55:00)

» AFTER VIEWING: FILM REVIEW DISCUSSION STARTING POINTS

"Flies. Many of us hate them. Some of us love them. But few of us know anything about them. *The Great Australian Fly* looks at how a national nuisance has shaped Australia and its people."

- 1 The film aims to be amusing and intriguing, and reconsiders the fly as a much-maligned invertebrate that influences our world in many ways. Has the film changed your thinking about flies? Do you now see yourself as more able to be an advocate for flies?
- 2 Ingleton said: 'Many [of the people who study flies] were over the moon that we were doing the film; that there was someone else who appreciated flies.' Who was your favourite character in the film and why? Do you think you are likely to take anything from this documentary film into your life?
- 3 The start of *The Great Australian Fly* has the sound of flies as background noise. What do you think this is meant to achieve? How is ambivalence towards flies created in the film?

- 4 The film explains the life cycle of the fly: How long does a fly live on average? Does it have a greater urge to breed than other animals? How does it attract a mate? Are you surprised at how flies interact with each other? Is their world more socially complex than you had previously imagined?
- 5 Much of *The Great Australian Fly* explores how various people view flies. Do you think this was a good way to find out about this subject and how effective was it for you as a viewer?
- 6 What is your favourite joke about flies in the film? What do you think the use of comedy does for the film?
- 7 Did you have any personal stories about flies before coming to this documentary? Did this influence how you went about watching?
- 8 How was viewer interest maintained in this film?
- 9 Would you have chosen *The Great Australian Fly* as a title, or would you have chosen something completely different?
- 10 Why do you think 'flies' have a bad reputation? How do you think these opinions and attitudes are formed? Have you ever tried to question your existing ideas on a subject? If so, what did you discover?
- 11 *The Great Australian Fly* enters a 'macro world' – the miniature world going on around us that we can't see. What other miniature worlds would you like to explore in more detail? Does seeing flies so close up change your ideas about how they look, move and behave?



Activities

» 1. WHEN I HEAR AND SEE FLIES, I THINK ...

(Worksheets 1 & Information sheet 1)

- (Suitable as presented for Years 9–10, designed for use before and during watching the film; working in pairs; Integrated Cross Curriculum foci: English, Media arts, Humanities and Social science, Sustainability; Science)
- Teaching strategy: Group discussion: Grouping strategy: 2-4-whole group)

2. See if you can make a fly juggle like in the film. You will need to glue a fly on its back to a pointy object and then place a small ball of paper or a matchstick on its legs. Why does a fly do this?

3. Explore You Tube and see if you can find examples of how people make homemade fly traps. Can you invent a fly trap?

4. Explore You Tube and find 5 funny tourist videos about flies. Share these with the class and vote for the best and funniest videos.

5. Can you organise a day/night 'bug catch' with your class or school as seen in the documentary? You will need butterfly nets and a large light trap and should set this up in a nearby park or local creek area. See if you can enlist the help of your science or environment teacher, someone from your local council, Museum or Department of Environment. See how many species you can find.





◆ THE TASK

Purpose: This Worksheet activity scaffolds opportunity for students to:

- examine their own and others attitudes towards flies and other insects (and invertebrates) in the Australian environment;
- examine what might underpin their and others ideas and attitudes, how they may have developed and consider reasons they might be changed;
- explore their own responses to flies by considering the relationship between disposition, reason, evidence and culture in their own and others feelings towards and ideas about 'flies'.

◆ WHAT TO DO:

Prior to watching:

- 1 In pairs, discuss the various opinions that people might have on flies (see Before viewing discussion starters above). What information or experience are your ideas based on? Where do you think these ideas come from?
- 2 Hand out Worksheet 1 and ensure students understand they are to record their starting point feelings and ideas about flies prior to watching the film. Discuss their right to keep their ideas private if they so choose.
- 3 Students complete the Worksheet, in pairs, (or as negotiated with the class).

After watching the first quarter of the program:

- 4 Working as a group of four: Discuss how the beginning of the film presents flies in Australia. Discuss ideas presented in the film so far.
- 5 Read Information sheet 1.
- 6 Has the film influenced your thinking as recorded on the



FLY-PHOBIC
KELSIE MILLER
© SALLY INGLETON

Worksheet?

- 7 Discuss what they think might come next in the film, in content and the way it's presented.
- 8 View the next sections of film, asking students to note as they view, any quotes or aspects of interest to them for later discussion.

After watching the whole film:

- 9 Discuss the film as a class, with the focus dependent on their interests and the purposes of the lesson in your curriculum subjects and program.

Extension activity: (*Links to Activity 3*): Reread Information sheet 1, The Director's statement, for students to read and consider how Tosca Looby's ideas about the film fit with their own ideas and those expressed by the class.

» 2. ABOUT FLIES & WHAT PEOPLE SAY ABOUT FLIES?

(Worksheets 2 & Information sheet 2)

- (Most suitable for Years 9–10)
- Curriculum focus: Integrated study of English; Media arts; Science, Geography, Sustainability; General



capabilities/Ethical understanding & Critical and creative thinking.

- Teaching strategy: Jigsaw in groups of four (home group -expert group - home group)

◆ THE AIM

Designed for use after watching film, exploring basic biological, cultural and social facts about flies. The jigsaw activity provides opportunity for students to work co-operatively to integrate subject study and develop General Capabilities. It allows students to explore basic knowledge of fly biology and the various cultural views expressed in the film and how the film represents these ideas by:



- examining the ways the documentary film as a whole influences the audience through verbal and visual features, expressions and development of ideas (Media arts: ACAMAR078 &);
- analysing aspects of language use for a purpose and reflection on how this use might be assessed (English: Year 9: (ACELA1553); (ACELT1635); Year 10: ACELY1742; (ACELA1566) (ACELT1641) ACELY1749));
- exploring their range of views on flies in culture and the environment and consider the relationship between mode of presentation and expression of viewpoints and the influences on the viewer (Geography: Year 9 (ACSSU176); Year10: (ACSSU185) Sustainability: Systems OI.2);
- identifying science research into flies aims and approaches. (Science: Inquiry Skills (AC SIS169 & ACSIS170 and ACSIS204 & ACSIS203) and specific understandings in Biology Year 9 (ACSSU176) or 10 (ACSSU185; Sustainability: Systems OI.2).

◆ THE TASK:

Working in **Home groups** of four:

1. Distribute Worksheet 2: About flies & what people say about flies?
2. After completion and discussion, provide the answers to the fact sheet for students to self-correct the quiz (see below).



◆ QUIZ ANSWERS

- 1 Legend has it that Australians have adapted to speak with their mouths half shut to avoid swallowing flies. True.
- 2 Flies are fastidious. True - Their bodies are covered in hairs sensitive to touch, taste and smell. The smallest fragment of gunk can block their fine-tuning. When a fly rubs its legs together it's cleaning.
- 3 Flies evolved to annoy us. False. Bush flies descend on humans and animals to dine on protein from sweat, tears and saliva.
- 4 Fly sprays and other methods of killing insects are safe for humans. False. Some methods for killing flies are dangerous to us and the environment.
- 5 Flies lay eggs anywhere. False. They lay eggs in moist areas where their maggots can get food e.g. dung, which provides a source of protein, for the maggot, or baby fly.
- 6 Flies have taste buds on their feet. True. If something's good under foot, they release their feeding tube, or proboscis. At the end is a pad that works like a sponge, sopping up liquid.



6. Have each expert report back to home group the discussions in their expert group.

What I would like to know: Extended project activity:

Consider ideas in Information sheet 2 and discussions so far as initial sources of possible projects, have students in home or expert groups, design and carry out a project task (information gathering or practical research) based on an area of interest. Outline the system that will be used for negotiating the task prior to students commencing work.

» 3. CREATE A SHORT SKIT: FLIES ARE ...

(Worksheet 3 and Information sheet 3)

- (Years 9–10: Paired preparation of class presentation)
- Curriculum focus: English; Social studies; Media studies
- Time allowance: Approximately 120 minutes class time as negotiated
- Groups: In pairs (or in small groups as negotiated). Assessment: negotiated Rubric).

◆ WHAT TO DO:

Working in pairs:

1. Handout Worksheet 3 and review the task outlined and negotiate details of requirements: To choose two (or more) characters from the film and decide where you think they might fit on an *entomophobia* scale. Students are asked to

3. Ask home groups to write at least four questions from their discussion, one each related to:

- fly biology and evolution (Science);
- fly history, ecology and sustainability (Humanities and Social science/Geography)
- the text and language use in expressing cultural and personal attitudes to flies (English); and
- technical and symbolic elements in the medium (Arts/Media arts).

Move to work in **expert groups** (Science; Humanities and Social science/Geography; English; Arts/Media arts)

4. Share the questions raised by your home group for your expert area.

5. Have students use a graphic organiser to document the ideas expressed in the film. Information sheet 2 could be distributed or shared with the class to help guide their recording of ideas.

Return to **Home groups**:



write a short five minute or two page dialogue between the two characters about how they think and feel about flies.

Working as a class:

2. Discuss what we do know and what is yet to be discovered about flies by people who have researched them, such as:

- museum entomologists and ecologists
- forensic scientists
- researchers in medicine
- sustainability scientists and ecologists as part of the human food chain

3. How did you feel about the film and the people in it? Read Information sheet 3.

What are some of the ways topics can be approached for informational talks and films? What was the perspective taken in *The Great Australian Fly*? Discuss the perspective of director, Tosca Looby, who describes the key requirement as keeping the film “fast and funny”.

“The biggest challenge is to create a film about flies that people want to watch. Flies are very instinctive creatures and have very few neurons, but sometimes they do things that are almost human. We hope viewers can appreciate the inherent comedy in flies as well as learn about some of their interesting aspects.”

How successful is the film in achieving this? Did you find the film and the people in it interesting? ...funny? ...strange?

4. **Prior to commencing work** on the scenario and script, develop ideas with students of different angles any story can take, with sustainability, scientific knowledge development, phobias and relationships with the natural world being some possibilities.

5. Discuss and develop a timeline of the task and a general assessment tool by negotiation with the students, such as the rubric sample below. Begin with a discussion of what criteria the students think might be suitable for assessing the content and the performance of the project and then the levels on which each of these may be rated e.g. Rubric Criteria and Level

CRITERIA	LEVEL 1	LEVEL 2	LEVEL 3
Content coverage	Many factual inaccuracies	A few inaccurate facts	No apparent inaccuracies
Interest/engaging audience		Somewhat engaging	Most Engaging
Issues raised	Difficult to understand		Well represented
Method/Medium	Lacking practice and refinement		Smooth performance/recording

Working in pairs:

6. Students complete and perform/present recording of their *media projects* and conduct assessments.

Links to National Curriculum: Detailed Learning Area outcomes

CROSS-CURRICULUM PRIORITY: SUSTAINABILITY.

Systems OI.2 All life forms, including human life, are connected through ecosystems on which they depend for their wellbeing and survival.

World Views OI.3 Sustainable patterns of living rely on the interdependence of healthy, social, economic and ecological systems.

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.

Futures OI.7 Actions for a more sustainable future reflect values of care, respect and responsibility, and require us to explore and understand environments.

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

THE ARTS / MEDIA ARTS

Years 9 and 10 Evaluate how technical and symbolic elements are manipulated in media artworks to create and challenge representations framed by media conventions, social beliefs and values for a range of audiences (ACAMAR078)

ENGLISH

Language / Text structure and organisation

Year 9 Understand that authors innovate with text structures and language for specific purposes and effects (ACELA1553)

Year 10 Compare the purposes, text structures and language features of traditional and contemporary texts in different media (ACELA1566)

LITERATURE / RESPONDING TO LITERATURE

Year 9 Explore and reflect on your understanding of the world as a result of what you've read in various texts. (ACELT1635)

Year 10 Analyse and explain how text structures, language features and visual features of texts and the context in which texts are experienced may influence audience response (ACELT1641)

LITERACY / INTERPRETING, ANALYSING, EVALUATING

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 Analyse and evaluate how people, cultures, places, events, objects and concepts are represented in texts, including **media texts**, through language, structural and/or visual choices (ACELY1749)

HUMANITIES AND SOCIAL SCIENCES/GEOGRAPHY

Year 9 Unit 1: Biomes and food security. The distribution and characteristics of biomes as regions with distinctive climates, soils, vegetation and productivity (ACHGK060)

Unit 2: Geographies of interconnections. The perceptions people have of place, and how this influences their connections to different places (ACHGK065)

Year 10: Unit 1: Environmental change and management
The application of human-environment systems thinking to understanding the causes and likely consequences of the environmental change being investigated (ACHGK073)

Unit 2: Geographies of human wellbeing. The different ways of measuring and mapping human wellbeing and development, and how these can be applied to measure differences between places (ACHGK076)

SCIENCE

◆ SCIENCE UNDERSTANDING/ BIOLOGICAL SCIENCES

Year 9: Ecosystems consist of communities of interdependent organisms and abiotic components of the environment; matter and energy flow through these systems (ACSSU176)

Year 10 The theory of evolution by natural selection explains the diversity of living things and is supported by a range of scientific evidence (ACSSU185).

Year 9 & 10 Science Inquiry Skills/Processing and analysing data and information. Analyse patterns and trends in data, including describing relationships between variables and identifying inconsistencies (AC SIS169 & AC SIS203)

Use knowledge of scientific concepts to draw conclusions that are consistent with evidence (AC SIS170 & AC SIS204)

Resources

ONLINE RESOURCES FOR STUDENTS AND TEACHERS

◆ GENERAL

FLIES

Fly facts <http://www.flypower.com/facts.html>

This is the most important and factual site about flies in Australia; it includes biology, identification to family, family information, images, and morphology.

http://anic.ento.csiro.au/insectfamilies/order_overview.aspx?OrderID=26547&PageID=overview

Here is a good forensic entomology link:

<http://www.forensic-entomology.com/>

BugGuide is a fantastic resource for diverse fly (and other insect) images. The fly page is here:

<http://bugguide.net/node/view/55/bgpage>

The physics fact book (Frequency of Fly Wings) <<http://hypertextbook.com/facts/2000/NancyLee.shtml>>

The "Motor" That Allows a Fly to Flap Its Wings 50 Times a Second <<http://io9.com/the-motor-that-allows-a-fly-to-flap-its-wings>>

50-time-1553888593>

DUNG BEETLE

CSIRO

<http://www.csiro.au/Outcomes/Food-and-Agriculture/DungBeetles/History-of-dung-beetle-introductions-to-Australia.aspx>

Queensland Museum

<http://www.csiro.au/Outcomes/Food-and-Agriculture/DungBeetles/History-of-dung-beetle-introductions-to-Australia.aspx>

PHOBIA

Definition <http://www.mayoclinic.org/diseases-conditions/phobias/basics/definition/con-20023478>

Insect phobias

<http://www.anxietycare.org.uk/docs/insect.asp>

COMEDY AND ENTERTAINMENT

Louie The Fly Facebook site

<https://www.facebook.com/louiethefly>

The fly in your eye

A book published in 1989 and updated in 1998 and 2007. Explores the following questions:

Why bush flies pester you?

How to keep flies out of your home?

What the dung beetles are doing?

Why flies come at certain times of

the year?

How long flies live?

An easy way to tell bush flies from house flies?

What blow flies are good for?

The extraordinary way that flies taste things?

What's impressive about a fly brain?

How bush flies came to Australia?

Practical results of CSIRO research

Bush flies: are they doomed?

<<http://www.viacorp.com/flybook/fulltext.html>>

Jan 1998 Update: the impact of dung

beetles on bush fly populations

Dec 2007 Update: are birds eating too many dung beetles?

<http://www.viacorp.com/update.html>

YOU TUBE VIDEOS

Australian fly attack

<https://www.youtube.com/watch?v=K2FO4GmQM3E>

Catch Hundreds of House Flies In Days With A Homemade Trap

https://www.youtube.com/watch?v=f1SV4Tg_CZE

Worksheets

See separate file

Additional content and editing by 360 Degree Films



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When I hear and see flies, I think ...

Working in pairs, answer the following on your own individual Worksheet

1. PRIOR TO WATCHING

What do you think of when you hear or see a fly?

What do flies sound like to you? List five words that you associate with the sound of a fly. What do you think of when you hear a fly inside the house? Rate your reaction on a scale of 1 -10. What makes the sound? Is it the fly's mouth or wings or legs?

What is the "Aussie salute" and how can someone recognise it?

Draw a fly in the space provided.

What good are flies?

What would you expect to see in a film named *The Great Australian Fly*?

2. AFTER WATCHING THE FIRST 14 MINUTES

Revisit your answers above and make any changes you wish, explaining why you would change your answers.

How do you feel about insects in general and flies in particular? How reasonable or rational are these feelings? Where do you think your attitudes towards flies come from?

3.

What would you now, after watching the film, want to know about flies?

Name _____

Create a drawing that expresses your feelings about flies.
You can be as creative, realistic, impressionistic or abstract as you wish.

Draw a scientifically accurate image of a fly.
You can include names for its parts if you know them.

© SALLY INGLETON

Director's statement by Tosca Looby

It hasn't been the most glamorous project – assaulted by 300,000 blowflies in a blowfly poo encrusted room; forced to pick maggots off dead possums, and to wait for hairy maggots to cannibalise smooth maggots – but it's made me laugh.

Flies don't necessarily light the fire of public interest. They're never going to draw the enthusiastic crowds like meerkats, or Kardashians. And yet, flies are fascinating (much more than Kardashians).

It's been a little like scuba diving: In the making of *The Great Australian Fly* we've descended into a micro world I barely knew existed. I discovered thousands of Australian fly species – most endemic – flitting around me, previously unseen.

The world of flies – seen in all its detail – is diverse, colourful, busy, quick and productive. It's filled with beautiful colours and textures, as well as remarkable examples of engineering and evolutionary success.

This is not news to the fly enthusiasts in our midst. While it's true they are seriously outnumbered by fly detractors, Australia's small army of entomologists and lay collectors are doing a remarkable job of interpreting the mysterious world of Australian flies. It's been a pleasure to spend time among them. And instead of seeing flies as pests (as I did at the start of this project), I now see flies as a vital piece in the puzzle that

is our ecosystem. It's an eccentric thing to have a love for flies but I get it now. Flies are anti-heroes, and as entomologist Christine Lambkin says, they have and will survive beyond human time on this planet.

All that said, I don't need any more blowflies pupating in my fridge. I don't need to wrangle flies that simply will not listen or take direction. I don't need to breathe in the fragrances of decomposition as flies do their forensic work. And that's a good thing.

With no welfare laws protecting the rights of insects, we haven't been bound by the usual protections that ensure animals are not hurt in the making of a documentary. So while I did carefully remove the wax from the back of our 'juggling flies', as well as liberate our participants once their work was done, flies proved plentiful and disposable. That's a rare luxury in natural history filmmaking. I could never hurt a dragonfly but I wasn't averse to vacuuming up a house-fly. The making of this film has taught me that even flies have a pecking order.

While the flies themselves might not have enjoyed the experience, I think the humans working on this film delighted in its oddities. It was a surprisingly light-hearted romp into the kingdom of insects. And while I still like to sit on the right side of a fly-screen, I'm grateful to have had the chance to don my scuba gear and peer into the macro world of Australia's myriad flies.



About flies & what people say about flies?

Home group Name(s) _____

A. WORKING IN HOME GROUP:

1. Here are a few true fly facts. Read and circle what you find interesting or did not know before. Add a group comment below each statement.

» *Flies are Insects classified into the Order Diptera, having one pair of wings (forewings) with the hindwings reduced to club-like balancing devices called halteres. They have a large and moveable head with large compound eyes and piercing and sucking mouthparts adapted for taking up their liquid diet.*

Group comment: _____

» *The fly's wings beat 200 times a second – as fast as a formula one engine travelling at top speed.*

Group comment: _____

» *In one second, the fly can travel 300 times the length of its own body - turning faster than a fighter jet.*

Group comment: _____

» *In less than a week, one cowpat can grow 2000 new flies.*

Group comment: _____

B. TRUE/FALSE

Please indicate whether you think the statements below are correct or not by circling either **True** or **False** and give your reason in one sentence below each statement.



I. Legend has it that Australians have adapted to speak with their mouths half shut to avoid swallowing flies.

True

False

II. Flies are fastidious.

True

False

III. Flies evolved to annoy us.

True

False

IV. Fly sprays and other methods of killing insects are safe for humans.

True

False

V. Flies lay eggs anywhere.

True

False

V. Flies have taste buds on their feet.

True

False

C. WHAT I WOULD LIKE TO KNOW

After checking your answers list one thing you would like to find out about flies.



Fly fact and fiction: Research project ideas

1. WHAT RESEARCH IS BEING DONE INTO FLIES?

We know from research that within half an hour of you being dead, you're going to have flies visiting you ... at least in um Australia.

Forensic Entomologist Ian Dadour

Create a fly science story that gives an accurate scientific answer to a particular 'fly' question:

eg Why would we need to know the mating rituals of flies?

- » In what ways might it matter if climate change wipes out thousands of species?
- » How can flies help solve crimes?

2. FLIES WERE HARMED IN MAKING THIS PROGRAM.

One of the good things about studying flies is that we don't have animal ethics issues. It's considered amongst most scientists that insects don't feel. We use cyanide... so by the time I can get them home and they haven't got hard and crisp and I can pin them.

Christine Lambkin, Curator of Entomology, Queensland Museum

- » Should animal ethics be applied to flies? (and other insects or arthropods)
- » Do you think flies feel pain? What makes you think that?

3. FLY AESTHETICS

... decomposition is not really appealing to most people, so we left some of those scenes out and we have used time-lapse photography to make it less confronting. It also had to be a human story. We were interested in why

these people were interested in flies." "There's so much more diversity than I could have possibly imagined and they can be so beautiful. There are some really gorgeous flies and I certainly wouldn't have said that or imagined that before doing this film - it's surprising how diverse and enchanting they can be.

Tosca Looby, The Great Australian Fly film Director

- » Are there any ways in which you can think of flies as enchanting?
- » Have you got a favourite/least favourite fly? Explain why they get this title...

4. ARE FLIES A HEALTH THREAT TO HUMANS?

- » What disease/s are they thought to spread? What disease/s are they proven to spread?

Flies are covered in germs, which of themselves could potentially be dangerous. But people have evolved, you know have developed, over time a resistance to germs.

Associate Professor James Wallman, Entomologist, University of Wollongong

- » Do flies really spread germs and disease?

5. ARE INSECTS THE FOOD OF THE FUTURE?

Insects are the food of the future... We don't know what's around the corner. Things are changing. And yeah, I could be like Coles or Foodland (laughs) with a truckload of maggots...

David Sheldon, Fly & Maggot Farmer

- » If you had to eat flies how would you do it?
- » In what countries do people regularly eat insects?

6. SOME MORE IDEAS

Student records:

Create a short skit: Flies are ...

FOCUS QUESTION: HOW DO YOU FEEL ABOUT FLIES?

Entomophobic Kelsie Miller (Timestamp: 14:04:18): "I can't even really cope with seeing them on television"

Researcher James Wallman (Timestamp: 14:04:18 - 19:24:05): "...can display what you might regard as, you know, micro-personalities. The small hairy maggot blowfly, for example, is particularly interesting because it has this very well-developed courtship ritual".

Human responses to insects and other arthropods are classified on a five point entomophobia scale:

- I. React hysterically (show entomophobia);
- II. Go on a killing spree (believing that the only good insect is a dead insect);
- III. Tolerate insects (when no serious or permanent harm is seen to be done);
- IV. Appear indifferent (do not respond); or
- V. Respond pro-environmentally (protect living things, and denounce all insecticides and repellents) (Reference: Coulson and Witter, 1984)

THE SCENARIO

You are a scriptwriter/filmmaker/blogger/environmentalist creating a piece about flies using the ideas and debates in *The Great Australian Fly* to explore the various viewpoints people have on flies. You might consider viewpoints of

- a phobic
- forensic scientists
- researchers in medicine
- sustainability scientists and ecologists as part of the human food chain
- museum entomologists and ecologists
- comedian
- tourist visiting Australia

You might include feelings, values, ethical understanding and sustainability. A story about peoples feelings towards flies could include many different angles – the people who loathe them and the people who love them.

YOUR TASK:

To create a short scripted media product to explore the story of *The Great Australian Fly* from the perspectives of two (or more) characters.



WHAT TO DO:

Working in pairs:

1. Exploring STORY ANGLES

Review Information sheet 1. Discuss the perspective in the film director Tosca Looby considered was key, of wanting to keep the film fast and funny.

"The biggest challenge is to create a film about flies that people want to watch," Looby said. "Flies are very instinctive creatures and have very few neurons, but sometimes they do things that are almost human. We hope viewers can appreciate the inherent comedy in flies as well as learn about some of their interesting aspects."

2. Planning the story and division of labour. Read information sheet 3 to get background on each of the characters in the film. What do they contribute to the study presented in the film?

Choose two characters from the film and decide where you think they might fit on the above entomophobia scale. Write a short two page dialogue between the two characters about how they think/feel/relate to flies.

3. Message and Medium

You need to decide on the medium and form of presentation of your 'dialogue about flies' and how you will share it with others. You could for example create a short play (comedic, news item or other form) for a science drama competition, make a video clip or use some other medium or context.

NB You must decide what your chosen report form will be and have it approved before proceeding.

4. As a group discuss how you will make sure

- a. sustainability, ethics, aesthetics, science and/or human interest are considered and
- b. that there are roles for all group members in creating the final product.



FRANK WOODLEY



GEOFF PIKE & CAM FORDE

© TOSCA LOOBY

The talent: The Cast in 'The Great Australian Fly'

THE FLIES

Flies are classified in the order Diptera, which means two wings. Flies and other members of the Diptera (including mosquitoes, midges and sand flies) use only two wings (one pair) in flight, unlike other insects that use four (two pairs). Flies have club-like appendages behind the forewings, known as 'halteres', which are used for balance in flight. Reference: <http://australianmuseum.net.au/Flies-and-mosquitoes-order-diptera#sthash.5H4W7ffn.dpuf>

LOUIE THE FLY

Animated fly character developed for advertising in the 50's and 60's for Mortein fly spray.

Geoff Pike & Cam Ford Geoff and Cam both worked in advertising in the 1950s and 1960s and were animators on the original 'Louie The Fly' fly spray advertisement campaign. See <https://www.facebook.com/louiethefly>

THE COMEDIAN

Frank Woodley Frank Woodley is an Australian comedian who is best known for his work alongside Colin Lane as part of the comedic duo, Lano and Woodley. Frank performed his hilarious fly songs on ABC TV popular music quiz show SPICKS & SPECKS.

"Once uh, I was just by myself in the backyard and a fly landed on my cheek and started walking across my top lip. And just before I went like that (he swipes), I just had this weird thought where I... I thought, "I could catch that fly". And just as it went under my nose, I went (sniff) and sucked it up my nose. And I went "Oh! Ugh..." and I caught it and I... shouldn't have" (FRANK WOODLEY: 10:13:15:03).

THE SCIENTISTS

Dr Christine Lambkin Christine is the Curator of Entomology responsible for the Queensland Museum's

collections of Diptera (flies), Coleoptera (beetles), Orthoptera (grasshoppers), Hemiptera (bugs), Phasmatodea (stick insects), and a number of smaller insect orders. Christine is fascinated by the evolution of flies and has discovered many new species amongst Australia's thousands of flies. Her passion led her to partner entomologist Dr Noel Starick. Together they have scoured the Australian bush searching for new species.

Associate Professor James Wallman Dr James Wallman works in the School of Biological Sciences in the Faculty of Science, Medicine and Health at the University of Wollongong. Since 1990 he has studied the biology of flies that infest both living and dead animals (including humans), with a special focus on their application to forensic science. A recent topic of investigation in his lab, with the assistance of researcher Stephanie Jones, has been the elaborate courtship behaviour of a common carrion-breeding species, the small hairy maggot blowfly.

FLY FARMER

David Sheldon Dave's family run business, Sheldon's Bait, is Australia's largest supplier of maggots. Originally the business bred the humble maggot for use in fishing, but over the years the business has expanded and their maggots now also play an important role in crop pollination. Dave loves his work and is happiest surrounded by millions of flies.

Other questions & ideas

- » Do you know of any fly species that haven't appeared in this film?
- » Why might they have been left out?
- » How destructive are flies?
- » Is the mosquito a fly? (It contributes to more deaths than any other living creature on Earth...)
- » Map out the two week life of a fly: What does it do in its short time on Earth? Where does it travel? What does it eat? What does it interact with? How many young does it produce? How does it die? Has its short life left a mark on the planet?
- » If you could choose between the jobs in this film, whose would you choose? Why?