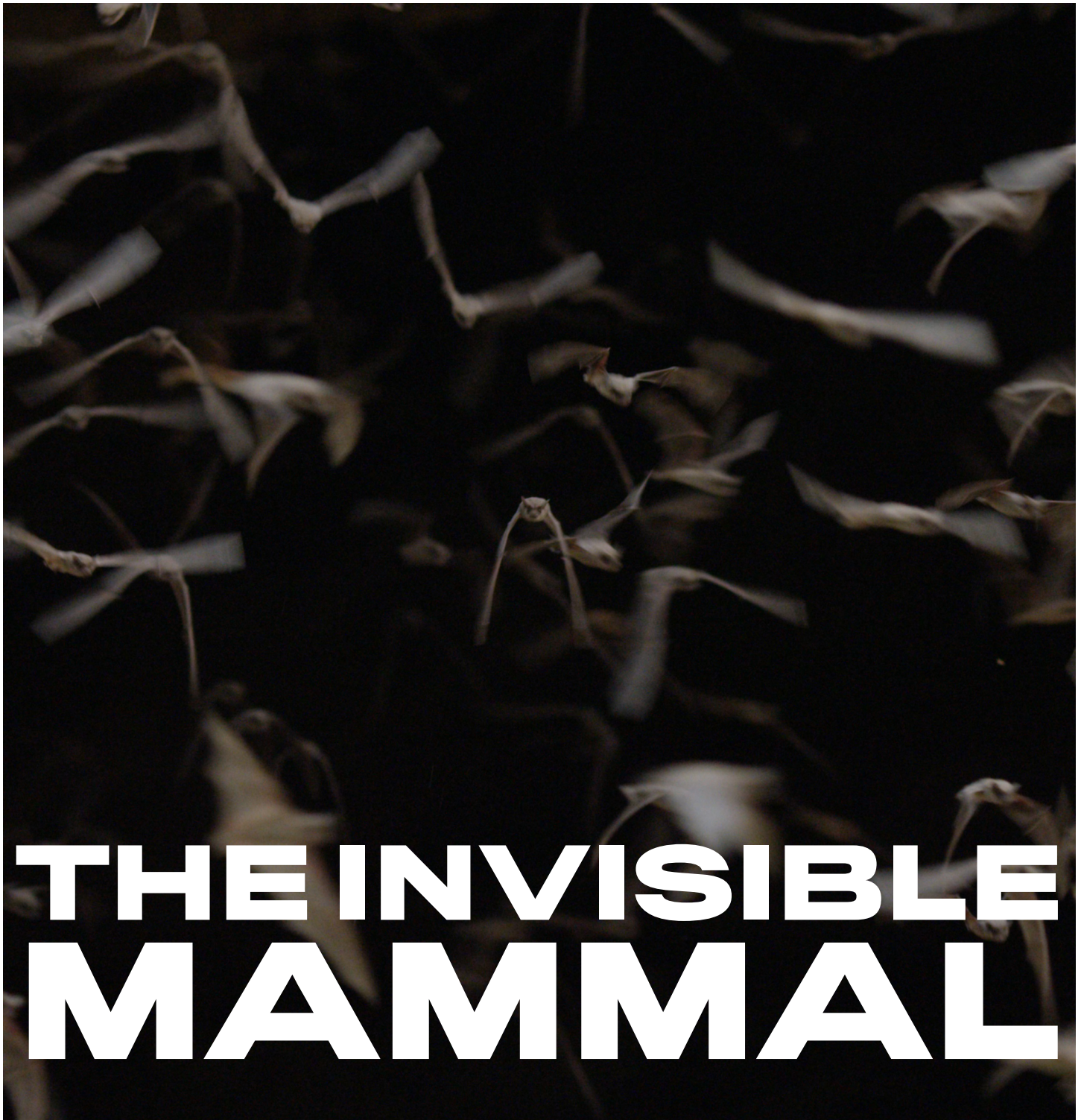




DOCLANDS

EDUCATION

APRIL 28 - MAY 2



THE INVISIBLE MAMMAL

CURRICULUM GUIDE
GRADES: 6-12

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Dear Educators,

Thank you for attending the 9th Annual DocLands Documentary Film Festival screening of the documentary feature film *The Invisible Mammal*. We are excited to return in our 2025 spring season with a combination of both in-theater screenings for local schools and online screenings for those of you joining us from afar.

As media educators, we support film as the literature of the twenty-first century. This powerful medium sits in a critical part of human culture, at the intersection of art, industry, technology, and politics. It is a universal language that lets us tell stories about our collective hopes and fears and gives us the opportunity to make sense of the world around us and the people in it. This year, our film selections for school screenings continue to focus on increasingly relevant issues of global empathy and active citizenship, and we believe this film will be a powerful and engaging text to use in your classroom. These curricular materials are designed to get students to engage deeply with the film by the common-core aligned skills of developing an evidence-based interpretation of a text both orally and in writing.

The discussion prompts have been crafted to offer students the opportunity to grapple with questions of ethics and social justice through representations of culture in film. They offer a variety of options for fostering small-group or whole-class dialogue by addressing the film industry in general and this film in particular. If your students are already familiar with the process of writing evidence-based interpretive essays, consider using the suggested essay prompts for a short writing piece, or consider the film review format as an alternative. Additionally, student handouts for a variety of thinking routines are provided for before, during, and after viewing the film with a particular emphasis on social-emotional learning. Extension activities offer further creative opportunities for students to consider the cultural impact of the film as both an art form and a political platform. We have also included a handout that provides some context for the film festival experience, which may help to introduce your screening experience.

Thank you so much for your tireless work! Enjoy the film!

Sincerely,
The CAFILM Education Team

DISCUSSION QUESTIONS

1. What are the central issues addressed in this documentary? What new insight did you gain from the beginning to the end of the film?
2. What are some surprising facts you learned from this film? How do these facts shape your understanding of the central issue of the film?
3. What is the significance of the film's title? How does *The Invisible Mammal* refer to both bats and, metaphorically, to women in the field of science and conservation? How does the film explore the invisibility of both?
4. How does the film challenge viewers to rethink human responsibility toward wildlife and the environment?
5. Why should we care about bats, and what might happen to ecosystems and human life if their populations continue to decline? Should we actively protect bats, or let nature take its course?
6. How does the film use science and storytelling to make invisible things like bats, environmental degradation, and marginalized voices visible?
7. How do fear and misunderstanding impact conservation efforts, scientific progress, and broader cultural attitudes?
8. Why is it important to tell stories that could change our historical narrative, save a species, protect a wildlife habitat, or make visible someone or something that deserves to be in the limelight? Besides bats, can you think of an example of someone or something that deserves to be recognized, understood, and celebrated?
9. What can we do as individuals to leave a planet that's worth living in for the next generation? What can we do to help sustain the balance between the health of humans, animals, and the environment?
10. Do you believe documentary film, or nonfiction storytelling, can be the catalyst for positive social and environmental change at the times we need it most?



DISCUSSION NOTECATCHER

Directions:

Use this notecatcher to record what you take away from discussing the questions above.

IDEAS I HEARD DURING DISCUSSION

MIND-POP IDEAS

Ideas that came to my mind during discussion.

ONE IMPORTANT THING I LEARNED DURING DISCUSSION

INTERPRETIVE ESSAY PROMPTS

1. **Life & Labor:** The title of the documentary refers to both bats and, metaphorically, to women in science and conservation. In what ways does *The Invisible Mammal* explore the invisibility of both, and thus critique the way society values, or fails to value, certain forms of life and labor? Support your argument with examples that show how bats and women are invisible forces of life and labor that are overlooked and undervalued.
2. **Fear & Misunderstanding:** The film presents bats as critical to ecosystems, yet widely feared and misunderstood. What does this say about the way humans interact with species they don't understand and how might this apply more broadly to other environmental or social issues? Support your argument with examples from the film. Support your argument with examples that show how fear and misunderstanding impact issues and identities.

ADDITIONAL RESOURCES

A Grub Hub for Bats - Bat Conservation International

<https://www.batcon.org/a-grub-hub-for-fat-bats/>

A Day in the Life of a Bat Filmmaker

<https://www.batcon.org/a-day-in-the-life-of-a-bat-filmmaker/>

Bats 101 Bats Conservation International

<https://www.batcon.org/about-bats/bats-101/>

USGS | Why Bats are Important

<https://www.usgs.gov/faqs/why-are-bats-important>

National Wildlife Health Center | White Nose Syndrome

<https://www.usgs.gov/centers/nwhc/science/white-nose-syndrome>

Environmental Protection Agency | Endangered Species Act

<https://www.epa.gov/laws-regulations/summary-endangered-species-act>

One Health

https://www.who.int/health-topics/one-health#tab=tab_1

ABOUT CAFILM

The nonprofit California Film Institute celebrates and promotes film as art and education through year-round programming at the independent Christopher B. Smith Rafael Film Center, presentation of the acclaimed Mill Valley Film Festival and DocLands Documentary Film Festival, as well as cultivation of the next generation of filmmakers and audiences through CAFILM Education programs.

Follow the California Film Institute on social media

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STANDARDS

Common Core State Standards ELA-Literacy

CCSS.ELA-LITERACY.RI.9-10.1

Cite strong and thorough textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.

CCSS.ELA-LITERACY.RI.9-10.2

Determine a central idea of a text and analyze its development over the course of the text, including how it emerges and is shaped and refined by specific details; provide an objective summary of the text.

CCSS.ELA-LITERACY.RI.9-10.3

Analyze how the author unfolds an analysis or series of ideas or events, including the order in which the points are made, how they are introduced and developed, and the connections that are drawn between them.

CCSS.ELA-LITERACY.RI.9-10.6

Determine an author's point of view or purpose in a text and analyze how an author uses rhetoric to advance that point of view or purpose.

CCSS.ELA-LITERACY.RI.9-10.8

Delineate and evaluate the argument and specific claims in a text, assessing whether the reasoning is valid and the evidence is relevant and sufficient; identify false statements and fallacious reasoning.

CCSS.ELA-LITERACY.W.9-10.1

Write arguments to support claims in an analysis of substantive topics or texts, using valid reasoning and relevant and sufficient evidence.

CCSS.ELA-LITERACY.W.9-10.3

Write narratives to develop real or imagined experiences or events using effective technique, well-chosen details, and well-structured event sequences.



Name: _____



ABOUT THE FILM

Against the backdrop of the sixth mass extinction, an all-woman team of biologists set out to save bats from a deadly fungal disease, but when the COVID-19 pandemic interrupts their works, they are sent down a path of discovery that illuminates the connections between bat conservation and the spread of infectious disease.

ABOUT THE FILMMAKER

KRISTIN TIECHE

Kristin Tieche is a seasoned filmmaker and editor based in San Francisco, CA. She has edited thousands of hours of film and television programming, specializing in non-fiction and documentary storytelling. Her work has been seen by millions of viewers on PBS, National Geographic, Smithsonian, Al Jazeera, LinkTV, Current TV, Court TV, Food Network, and HGTV. Her independent films focusing on environmental themes have screened at film festivals worldwide.

Tieche's feature documentary editing credits include Sundance Audience Award winning *Fuel* (2008), PBS/Independent Lens film *Power Paths* (2009), *Healing a Soldier's Heart* (2015), *We Rock Long Distance* (2015), *From India With Love* (2017), *Somebody Clap For Me* (2017), *Uberland* (2019), and *Onanya* (2023). She has edited non-fiction series for national broadcast such as *Building Impossible* (Nat Geo), *Someone They Knew* with Tamron Hall (Court TV), *Judgment* with Ashleigh Banfield (Court TV), *Aerial America* (Smithsonian), *Animals Gone Wild* (Nat Geo), *Design on a Dime* (HGTV), and *\$40 A Day* (Food Network). Tieche also received regional Emmy nominations for episodes she edited for *Eye on the Bay* (KPIX/CBS-5).

Tieche teaches film editing at Diablo Valley College in the Bay Area. She holds a Master of Arts in Television, Radio and Film from the S.I. Newhouse School of Public Communications at Syracuse University, where she received awards from the National Academy of Television Arts and Sciences in screenwriting and sound design. She also holds a certificate of Sustainability from City College of San Francisco. She is an active member of Women in Film SF Bay Area, National Academy of Television Arts & Sciences, and a founding member of the Wild Lens Collective.



THE FILMMAKER'S STATEMENT

I embarked on my journey as an independent filmmaker in 2010. From 2013 to 2017, I independently produced six short films all with little to no funding and support. From documentary to horror, all focused on themes about women, themes about the environment, or both. Inspired by their success with audiences at festivals globally, in 2019, I set out to make my first feature-length documentary, telling the story of women conservation scientists leading the charge in preventing the extinction of one of North America's keystone species - the little brown bat.

As a woman filmmaker, I was immediately drawn to this fascinating story of a team of pioneering women in science working to find a nature-based solution to save a bat from extinction. As soon as we scheduled our first day of filming with our lead participants, I knew that there was a lot more to the story than just bats. It was crystal clear that it was a film about the way that women work together, mentor each other, share in successes, strive for professional goals, see themselves as professionals, find inspiration and help each other overcome failures. It's also about women finding their place in the field of science and making contributions heralded by the global scientific community. This particular theme of *The Invisible Mammal* is what helped me develop my unique lens to this nature/conservation film. The world of the characters in

THE FILMMAKER'S STATEMENT

this film - one in which women are not only leading the way, but helping other women climb the ladder in a male-dominated profession - is not always represented in film and storytelling. Being a woman filmmaker gave me an opportunity to deeply connect with the women featured in my film, earn their trust, and more holistically portray them on-screen as real, relatable human beings.

I believe I will always tell stories about women's experience and environmental causes. Deep in my heart, I know that when audiences get immersed in a film, they feel it viscerally and emotionally, and something inside moves and changes them. Therefore it is crucial to tell stories that could change our historical narrative, that could save a species, that could protect a wildlife habitat, and that could make visible someone or something that deserves to be in the limelight.

My goal as a non-fiction storyteller is to create unforgettable characters with transformative story arcs. What I love most about making documentaries is taking a deep dive into an individual's journey with a social issue or movement that they care deeply about, and in turn, learning something I didn't know before. With that knowledge, I become a better human being on earth, and the film serves as a catalyst for positive social and environmental change at a time when we need it most.



BEFORE VIEWING

THE THREE WHYS

How to Use this Thinking Routine:

The film you are about to see is about an all-women team of biologists who set out to save bats from a deadly fungal disease. This thinking routine is for nurturing the ability to discern the significance of a situation, topic, or issue by keeping global, local, and personal connections in mind.

WHY might this topic matter to me?

WHY might it matter to people around me
(family, friends, community, nation)?

WHY might it matter to the world?

BEFORE VIEWING

ANTICIPATION GUIDE

Directions:

For each statement, decide whether you Agree or Disagree, then write a one or two sentence two-sentence explanation for your opinion.

STATEMENT	AGREE/DISAGREE	EXPLANATION
Everything is connected to everything.		
People fear what they don't understand		
Many species are at risk of extinction due to human activity.		
Bats are one of the most misunderstood animals in the world because they are invisible.		
Without bats and their quiet contributions, entire ecosystems would be at risk.		
Bats are responsible for infecting the human population with Coronavirus.		
People and bats can live side by side in harmony with the environment.		
Documentary film, or nonfiction storytelling, can be the catalyst for positive social and environmental change at the times we need it most.		

WHILE VIEWING

NOTICE & NOTE: PARTS, PEOPLE, INTERACTIONS

How to Use this Thinking Routine:

Everything is connected to everything. The film you are about to see is about how bats interact with the environment and why it is critical they avoid extinction. This thinking routine asks students to look closely at this system, identify its parts, recognize who participates in it, either directly or indirectly, and consider the consequences of changes in the system. While you are viewing, note what you notice using the notecatcher below.

NOTICE	NOTE
What is an interactive ecosystem? <ul style="list-style-type: none">• Think about how living and nonliving parts of the environment connect.• Consider how the variety of life within an ecosystem (biodiversity) is crucial for its health and stability and how different species play a unique role in maintaining the ecosystem's balance.	
How do bats interact with their environment? <ul style="list-style-type: none">• Note what they eat, where they live, and how they affect other species.• Consider their role in the food chain, habitat and shelter, and their relationship with plants and insects.	
Why are bats important to ecosystems? <ul style="list-style-type: none">• Note the ecological services bats provide.• Consider pollination, seed dispersal, and insect control	
What threats do bats face? <ul style="list-style-type: none">• Note the environmental dangers bats face.• Note the human-made dangers affecting bat populations.	

WHILE VIEWING CONT.

NOTICE & NOTE: PARTS, PEOPLE, INTERACTIONS

Why is it important to protect bats from extinction?

- Consider what might happen to ecosystems if bats disappeared.

What is one new or surprising fact you learned about bats?

- Consider how people fear what they don't understand.

How are bats an example of interconnectedness in ecosystems?

- Think about how everything is connected to everything.



DURING VIEWING

ELEMENTS OF DOCUMENTARY NOTECATCHER

Directions:

The elements of documentary are the different types of sound and image used to explore the subject of the film. There are six basic elements that can be found in all documentaries, though a film might not use all of them. While viewing, use the chart below to record impactful moments and scenes from the film in the appropriate box based on what element of documentary filmmaking is used. Then, after viewing, briefly analyze which of the elements were used most effectively in this film.

Narration Narration is the spoken word heard throughout a film. Sometimes the narrator is a person in the film, and sometimes it is a disconnected observer.	Actuality Footage Actuality footage refers to the unscripted footage recorded in the making of the documentary.	Archival Materials Archival materials are the pieces of film, video, photographs, documents, and sound recordings that were created for other uses prior to the documentary.
On-Screen Text Text is often used throughout a documentary to provide important facts, identify people, and present additional information.	Interviews Interviews are the recorded conversations with a person who has some connection to or knowledge about the subject of the film.	Animations/Reenactments Documentaries will sometimes use animation or staged recreations of situations and events in order to tell a story.

Which of the elements of documentary filmmaking were used most effectively in this film?

Explain Your Reasoning.

From CAFILM Education Resources: Documentary Film Analysis Toolkit
<https://www.cafilmedu.org/curriculum-resources/>

AFTER VIEWING RESPONSE QUESTIONS

Directions:

Respond to each question, referring to specific scenes, events, and dialogue from the film as evidence for your interpretation.

1. According to the film, what does the term ecological grief refer to and why is it important to understand?

2. What is white nose syndrome, and how is it impacting bat populations?

3. What is "Operation Fat Bat" and, according to the all-women team of biologists, how does it work?

4. How did the arrival of Coronavirus affect bats? How did the film illuminate the connections between bat conservation and the spread of infectious disease?

5. According to the film, why should we not only care about bats surviving, but thriving?

6. Revisit your responses on the Anticipation Guide. Has your opinion on any statement changed? Explain what details from the film either changed or affirmed your prior knowledge and beliefs.

AFTER VIEWING

THE FOUR C'S

How to Use this Thinking Routine:

This routine provides students with a structure for a text-based discussion built around making connections, asking questions, identifying key ideas, and considering application. Working in small groups, have students identify key passages from the film that correspond to each of the C's. In the group, discussion moves through each of the C's as members share and explain their takeaways.

CONNECTIONS

What connections do you draw between the film and your own life, or other learning experiences?

CHALLENGE

What ideas, positions, or assumptions do you want to challenge or argue with in the film?

CONCEPTS

What key concepts or ideas do you think are important and worth holding on to from the text?

CHANGES

What changes in attitudes, thinking, or action are suggested by the text, either for you or others?

A Thinking Routine Adapted from Harvard Project Zero, Harvard Graduate School of Education:
<https://pz.harvard.edu/thinking-routines>

EXTENSION ACTIVITY

ENVIRONMENTAL SYSTEMS: EXPLORING INTERCONNECTEDNESS

Directions:

The documentary asks what we can do as individuals to leave a planet that's worth living for the next generation. A scientist is someone who looks at the world in a specific way, asks questions, and investigates rigorously. This extension activity offers students the opportunity to analyze an environmental system of their choice, identify its components, and explain how changes to one part of the system can affect the entirety of the system and other systems.

Part One: Choose an environmental System.

- Cave ecosystem (to extend the bat connection)
- A coral reef
- A tropical rainforest
- A desert ecosystem
- A wetland or marsh
- Arctic tundra
- Grassland or prairie
- Urban green space

Part Two: Research and record. Use books, reliable websites, or documentaries to gather information about your system. Use a graphic organizer to record your findings.

NAME OF SYSTEM	
LOCATION(S)	
BIOTIC COMPONENTS (living things)	
ABIOTIC COMPONENTS (non-living things)	
KEY SPECIES (keystone species and ecosystem engineers)	
MAJOR THREATS TO THE SYSTEM (natural or human-caused)	
SOURCES (articles, websites, documentaries)	

EXTENSION ACTIVITY CONT.

ENVIRONMENTAL SYSTEMS: EXPLORING INTERCONNECTEDNESS

Part Three: Systems Web Diagram. Create a digital diagram showing how the parts of your system are connected.

Use visuals to represent the components of the system.

Use arrows to show relationships between components.

Include labels and brief notes.

Part Four: Cause and Effect Analysis. In writing (1-2 paragraphs), respond to the prompt below.

Describe one major change or disruption (like climate change, species loss, or pollution) and analyze how that change would ripple through the system.

Part Five: Small Group or Whole Class Presentations. Students share their digital diagrams and explain what they learned.

Part Six: Debate or Discussion for Deeper Thinking.

Should humans intervene to protect this system - or should it be left alone to evolve naturally?

Support your view with evidence from your research.



EXTENSION ACTIVITY CONT.

WOMEN IN SCIENCE: “MAKING THE INVISIBLE VISIBLE”

Directions:

Like the group of biologists in *The Invisible Mammal*, the lives, challenges, and achievements of women in science often work in underrecognized fields and face systemic barriers to visibility.

Part One: Research a Woman in Science. Choose a woman scientist from the past or present, who made, or is making, significant contributions in her field. Try to select someone outside of the usual list.

Requirements:

- Biographical overview (include background, education, career path, inspiration, mentors).
- Scientific work and major contributions.
- Challenges faced (gender bias, access to resources, failed recognition).
- Why her work matters, both scientifically and socially.
- Visuals (photos, diagrams, and infographics to support your research).

Deliverable Options:

- Google Slide or Canva Presentation
- Digital Poster or Zine
- One-Pager Infographic
- Short Video or Podcast Segment

Part Two: Connect to Broader Themes. Select from the following questions for a written response or to accompany an oral presentation of the deliverable options.

Reflection Questions:

- In what ways was this scientist “invisible” in her field or time? How has her visibility changed, if at all?
- How does her work contribute to our understanding of the interconnectedness of ecosystems, technology, or social structures?
- What connections can you make to her story and the women feature in *The Invisible Mammal*?
- What does her story reveal about who gets to do scientific work, whose work matters, who is recognized and revered, and who is overlooked or ignored?

Part Three: Advocate to Act. Take your research beyond the project by selecting one of the following actions.

Suggestions:

- Create a mini campaign (social media mockup, PSA, documentary script) to highlight the women in STEM.
- Write a letter to a local science organization or museum suggesting a spotlight of lesser-known, but important women scientists.
- Plan a school or community showcase that features marginalized voices.

EXTENSION ACTIVITY

FILM REVIEW

Directions:

After watching the documentary feature *The Invisible Mammal*, write a review of the film.

While a film review is an evaluation of a movie, it is not simply a viewer-response expressing the writer's feelings about the film. Instead, a film review attempts to do three things for the reader:

1. **Summarize** what the film is about (the story)
2. **Interpret** the film/filmmakers' intended meaning (the themes and claims)
3. **Evaluate** whether the film is successful in expressing the intended meaning (its effectiveness in conveying the themes and claims)

A review will support its perspective with evidence from the film, such as descriptions of important moments, characters, and scenes.

Suggested Structure

Introduction

- Introduce the film: title, director, and any relevant credentials (award wins for the film, other films by the director, origins for the film's story, etc.).
- Summarize what the film is about - briefly, and without any "spoilers" that give away plot twists and surprises.

Body

- Offer an interpretation of what the film/director is trying to say through this story. In other words, what is the film's theme, message, or primary claim?

Conclusion

- Evaluate whether the film is successful or not in conveying its intended message.
- Identify who the intended audience is and how effective the film is in meeting their needs. Is the film for a particular age group or social group?

Final Tip: Make sure to include some critical appraisal of the film in the first and last sentence, but try to weave it throughout the review as well.



From CAFILM Education Resources: Narrative Film Analysis Toolkit
<https://www.cafilmedu.org/curriculum-resources/>

EXTENSION ACTIVITY

FILM REVIEW

My Film Review

This image shows a full page of blank, lined paper. It features approximately 20 evenly spaced horizontal grey lines across its entire width, providing a guide for handwriting or typing. The background is a solid off-white color.

ABOUT FILM FESTIVALS



An opening night screening at the Mill Valley Film Festival.

What is a film festival?

A film festival is an event in which multiple movies are presented over the course of one or several days. Depending on the size of the festival, all of the screenings may take place in a single theater or may involve multiple venues throughout a city. Festivals also include special events like panel discussions with filmmakers and actors. Typically, filmmakers submit their works to a festival, where a team of curators selects the best entries for inclusion in the festival. For independent and international filmmakers, festivals are often an important way to raise awareness of a film, generate an audience, and/or attract a studio to purchase the rights to distribute a film in a wider release. Acceptance into a major festival can add significant prestige to a film, with some festival awards (such as the Cannes Film Festival's Palme d'Or) considered among the highest honors a film can receive.

There are many film festivals throughout the world, with some focusing on particular themes, such as highlighting LGBTQ films/filmmakers, specific cultural groups, or particular genres. While some of the more famous festivals may be in distant locations, there are hundreds of small festivals spread through every corner of the world and, increasingly, festivals are using streaming access to make it easier for the public to view their curated programs.

History of DocLands Documentary Film Festival

Presented by the California Film Institute, DocLands is a vibrant celebration of nonfiction storytelling held annually in Marin County, California. Expanding upon the exchange of ideas and inspiration through captivating screenings, networking, and engaging conversations, DocLands strives to foster dialogue, inspire connections, and

build an inclusive community around the art of documentary filmmaking. DocLands aims to illuminate filmmakers' diverse perspectives and ignite a passion for exploring real-world issues by showcasing compelling stories and the thought-provoking insights behind them. Join us as we embark on a journey to discover, connect, and celebrate the power of documentary cinema.



The Smith Rafael Film Center, home of the Mill Valley Film Festival

Questions to Consider:

1. What is the purpose of a film festival? What are the benefits for filmmakers? For the audience? For the community?
2. How might the films at a festival differ from the films available to watch at your local movie theater?
3. What qualities do you think festival curators might look for in a film? If you are watching a festival film with a class/school group, what aspects of the film do you think made it appealing to the curators?

Get Involved!

Many film festivals, including the Mill Valley Film Festival, have student film categories. If you are a filmmaker, explore FilmFreeway (www.filmfreeway.com) for a database of worldwide film festivals where you can submit your film. The call for entries for MVFF opens in late February and closes in June. Youth filmmakers do not have to pay an entry fee. MVFF also offers many opportunities for volunteering. Find out more at <https://www.cafilm.org/volunteer/>.