

“You will be fascinated, angered,
and charmed in turn by this
beautifully written story.”

—Jane Goodall,

PhD, DBE, founder, the Jane Goodall Institute,
and United Nations Messenger of Peace

WHAT ELEPHANTS KNOW

ERIC
DINERSTEIN

A
NOVEL

DISCUSSION GUIDE

Disney • HYPERION BOOKS

ABOUT THIS GUIDE

Enrich your students' understanding of literature, geography, history, science, and the world by teaching *What Elephants Know* in your classroom! This guide features a variety of discussion questions, activities, and writing prompts—all aligned with Common Core State Standards and tailored to grades 5 to 7—so you can choose the ones that are right for you. Whether you study the novel as a class, make it a focus for small-group study, or take a book-club approach, you'll find plenty of room for rich discussion around the wide range of issues the novel touches on, including race, class, religion, identity, prejudice, equality, family, adoption, bullying, friendship, and conservation.

As students read the book, they're bound to have ideas about the person who wrote it. At the end of this guide, you'll find an extensive Q&A with author Eric Dinerstein, which you can share with your students so they can check the inferences they made about the author during their reading—and discuss how understanding the background of an author affects how they read and reflect on his work.

COMMON CORE ALIGNMENT

This guide is aligned with the College and Career Readiness Anchor Standards (CCR) for Reading (Informational Text), Writing, and Language. The broad CCR standards are the foundation for the grade level–specific Common Core State Standards. Each question and activity in this guide includes a reference for the CCR strand, domain, and standard that is addressed. To support instruction, also reference your grade level–specific Common Core State Standards to scaffold the questions for your students.

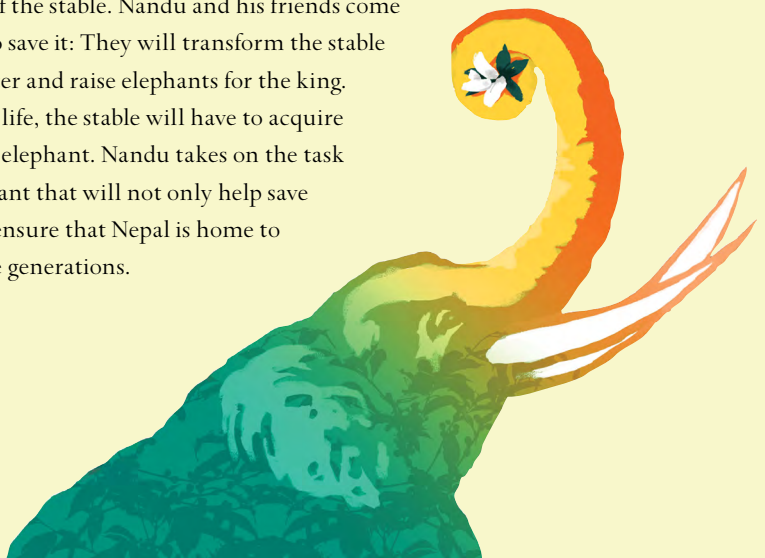
ABOUT THE BOOK

What Elephants Know presents the story of a boy who looks different from and has been raised differently than other people in the village of Thakurdwara in the Borderlands region of southern Nepal. Abandoned in the jungle when he was two, Nandu was rescued by *Subba-sahib*, the aging head of the king's elephant stable, and an affectionate elephant called Devi Kali. Nandu grows up working in the stables and comes to regard Subba-sahib as his father and Devi Kali as his mother.

Nandu learns much from Subba-sahib and Devi Kali about jungle wildlife and is schooled in math and reading by the mother of a fellow stable worker. But Subba-sahib fears the world is changing and decides that Nandu must be better educated. The king's government has plans to close the elephant stable, and Nandu is Subba-sahib's hope for the future

At boarding school, Nandu learns to deal with bullies who don't accept him. He is recognized by his teacher, Father Autry, as being an exceptional student, but Nandu still prefers the jungle to school. When Father Autry moves to Thakurdwara to continue his own work as a naturalist, Nandu is able to combine his love of nature and his interest in learning under Father Autry's tutelage.

But his joy at returning to the jungle is diminished by the death of Devi Kali and the imminent closing of the stable. Nandu and his friends come up with a scheme to save it: They will transform the stable into a breeding center and raise elephants for the king. To bring the idea to life, the stable will have to acquire a strong young bull elephant. Nandu takes on the task of finding the elephant that will not only help save the stable, but will ensure that Nepal is home to elephants for future generations.



BEFORE READING

Getting to Know Nepal

Share with students that *What Elephants Know* follows Nandu, an orphaned boy who becomes a great elephant driver in the threatened rain forest of Nepal’s Borderlands region during the 1970s. Ask students to reflect on the title of the book: *What Elephants Know*. What do they think they will learn about elephants and what they know? What do they think Nandu will learn about elephants? Have students write their predictions.

For students with little exposure to Nepal, impressions of the country may be limited to snowy expeditions on Mount Everest. Have students assess what they know about Nepal and what they’d like to learn using a K-W-L chart to organize their thoughts. Work together as a class to generate and record student knowledge about Nepal in the *K* column of the chart.

- Where is Nepal located?
- What comes to mind when you think of Nepal?
- What do you know about Nepal’s geographic features, plants and animals (especially elephants), and people and their customs?

<p style="text-align: center;">K</p> <p style="text-align: center;">What do I know (or think I know)?</p>	<p style="text-align: center;">W</p> <p style="text-align: center;">What do I want to learn? (or: As I read, what questions do I have?)</p>	<p style="text-align: center;">L</p> <p style="text-align: center;">What have I learned?</p>

Questions for the *W* column are likely to be generated as students consider what they know. After adding these to their charts, have students work in small groups to generate at least five additional things they want to learn about Nepal, particularly about its geographic features, plants and animals, and people and their customs.

Provide a nonfiction article about Nepal for students to read, and then have them work in pairs to fill in their K-W-L charts. As students share their questions and answers, encourage them to add new questions and answers to the *W* and *L* columns.

Have students keep their predictions and K-W-L charts handy as they read the novel, gain new knowledge, and develop additional questions. When they encounter information that adds to their ideas or knowledge, they should add it to their chart. Be sure to point out the book's glossary of important terms and author's note, which may help both answer and generate questions. As students read the novel, frequently review the K-W-L chart as a whole class and add any new questions that may arise. As they read, students should also update their predictions. Review their predictions and charts after reading to discuss all they have learned. If they still have unanswered questions or greater curiosity, encourage students to seek out additional resources listed in this guide or talk to your school or public librarian for help finding additional books and information.

CCSS.ELA-Literacy.RI.5-7.1; RI.5-7.2; CCSS.ELA-Literacy.SL.5-7.1



Field Guide to the Borderlands

Generate anticipation for the novel’s unique setting with a collection of flora and fauna that appear in the book. Gather photographs of the birds, animals, and plants that Nandu encounters. Look online for images of:

Asian elephant	tiger	leopard
barking deer	one-horned rhinoceros	great hornbill
peacock	lesser flameback	shrike
minivet	amaranth flower	simal tree
cormorant	gharial crocodile	rosewood tree
dhole	wild sugar cane	Gangetic dolphin
drongo	barbet	baruwa grass
babiyo grass	sambar deer	langur monkey
stork-billed kingfisher	griffon vulture	churi tree
myna	cobra	krait
kadam tree	gurjo (moonseed)	spleenwort
mohwa tree and flower	kusum tree	sloth bear
verditer flycatcher	Asian (Indian) paradise flycatcher	

Complete the display with a pair of binoculars!

As students read the novel, have them keep a “field journal,” taking notes on the various species mentioned and any observations and feelings about nature expressed by characters in the book. Encourage students to examine the photographs in the display and do their own research about any of the plants and animals they read about. Provide access to a variety of field guides for students to review, and talk as a class about essential elements of an engaging field guide. Then have each student (or pairs of students) thoroughly research a different plant or animal and contribute an entry to a class-created “Field Guide to the Borderlands.”

CCSS.ELA-Literacy.W.5-7.2; W.5-7.6; W.5-7.7; CCSS.ELA-Literacy.RST.6-8.4

DISCUSSION QUESTIONS

Part I: Defying the King

- 1 Nandu wants to ask Subba-sahib if there is another way the king could enjoy the jungle rather than hunting a tiger. But he doesn't ask. Why do you think Nandu keeps his thoughts about the royal tiger hunt to himself and yet stops the king from shooting a mother tigress?
- 2 At the beginning of the royal elephant hunt, Nandu thinks: "When you ride an elephant, you are a king, no matter your rank in the world." What does he mean by that?
- 3 Why does Nandu call Devi Kali his mother? Why is it unusual for Subba-sahib, a Tharu man, to have adopted a Tibetan child?
- 4 Describe Rita. What is her relationship with Nandu? Is she the type of person you would want as a friend? Why or why not? Nandu notes, "It is impossible for a girl to be a *mahout*." How do you think Rita feels about that?
- 5 When birds chatter loudly and then a tiger appears out of the bush, Subba-sahib tells Nandu and Rita that "if we remain silent and learn to listen, the animals tell us what we need to know." How does this relate to the title of the book?
- 6 Nandu feels like a "single red amaranth flower rising up in the middle of a field of mustard flowers. Taller than the rest, and a different color." Why does he feel so different from others? Why do you think he does not embrace his uniqueness? Would you prefer to stand out or blend in?
- 7 Nandu feels strongly about looking out for the orphaned baby rhino: "I knew what it was like to be abandoned in the jungle. I felt it almost every day of my life." Why do you think Nandu still has such strong feelings of abandonment?

- 8 Subba-sahib sees that the world is changing and that Nandu must have more education to become the leader of the stable in a new world. What is Nandu's reaction? If you were Nandu, what would your reaction be to the news that you were being sent away to school? Share how you have responded when you have disagreed with something that your parent or caregiver wanted you to do.

Part II: A Mahout's Education

- 1 As he travels to school, Nandu feels lost, with no idea who he is. Why do you think Nandu feels this way? Can you describe a time you felt like you didn't belong? As he progresses as a scholar, Nandu finds that he belongs to two worlds—the jungle and the world of books. Share evidence of how Nandu brings those two worlds together.
- 2 Subba-sahib gives Nandu advice for dealing with the bullies at school. Describe his advice. Can you think of a situation from your own experience where this might be a good way to deal with bullies? Nandu shares Subba-sahib's advice with his friend Ballam, but then does not follow it himself. What does Nandu do instead? Do you agree with his actions? Why or why not? What would you do if your friend was being bullied?
- 3 Explore the idea of fate. Dilly tells Nandu, "There are things we do not know about our fate. Things no one can ever answer. But we have to trust that the world is showing us the way." How does Nandu feel about letting fate guide his path? How do Nandu's upbringing and background affect the choices or plans he makes? How much control do you think you have over your own future? Do you agree with Nandu's idea that "life can be interesting when you let it take you where it wants to take you"? Why or why not?
- 4 Nandu has witnessed the violence and cruelty of the Maroons, yet when he and his friends are ambushed on the road from Gularia, Nandu chooses to fight the bandits. Why? Do you think Nandu's choice is brave or foolish? Why?

Part III: A Mahout's Trials

- 1 Why do you think Nandu is put in jail and then ignored? What do you think of the way the system of justice works in Gularia? How might things have gone for Nandu if Father Autry were not involved? Do you think Father Autry's involvement is important in getting Nandu's case heard? Why or why not?
- 2 During Nandu's time in jail, something changes in him, but he cannot name it. What do you think he is feeling? How would you feel if you were treated as Nandu was? Have you or has someone you know ever been falsely accused? What was that experience like?
- 3 Discuss the relationship between Nandu and his father. Find evidence in the text that shows how Nandu's experiences away from his home and the elephant stable (in school and in the jail) affect their relationship.
- 4 Though he was opposed to the royal tiger hunt, Nandu is excited to help Father Autry collect birds, even though it means killing them. Do you think collecting birds for scientific study is right or wrong? Why? What leads Nandu to commit his own "crime against nature"?
- 5 Who is the Baba? Describe him. What are his values? What is his relationship to the jungle and its animals? Why do you think he has chosen the life of a holy man? How is he able to help Nandu?
- 6 Nandu has seen many animals in the jungle die. Review evidence in the text of how he has reacted to seeing animals die. Do you think those experiences helped prepare him for Devi Kali's death? Why or why not?



Part IV: In the Python's Courtyard

- 1 Nandu feels he has lost everything with the death of Devi Kali. Nandu's father tells Nandu that his grief over Devi Kali's death is natural and will pass in time. Discuss how Nandu's friends help him feel less isolated and alone. What advice would you have given Nandu? What are some things you have done to help a friend who is feeling a loss?
- 2 The Baba says to Nandu, "What we do and what happens to us is the same thing." Explain what the Baba means. Do you agree or disagree with him? Why?
- 3 The planned closing of the elephant stable and the relocation of the elephants to Chitwan has been a great worry for Subba-sahib, Nandu, and the other drivers. Why does the stable have to close? How does Subba-sahib try to save the stable? Describe Rita's idea for saving the stable. What sparked her idea?
- 4 So much depends upon Nandu and Dilly finding a tusker. Why does Topsy help Nandu and Dilly try to find an elephant to buy? Do you agree with Topsy's bargaining tactics? What does Nandu learn from Topsy? How does it help him deal with the Python?
- 5 How does seeing the *muti* on the Python's elephant help Dilly and Nandu? What does the *muti* symbolize? What does the *muti* have to do with the name Nandu gives the elephant?



Part V: The Dhole Make a Discovery

- 1 “Subba-sahib says that what elephants know is greater than we can imagine.” What do you think elephants know? What in the text made you come to that conclusion?
- 2 Nandu’s feelings about the Baba’s vow of silence are “a mixture of sadness and wonder.” What about the Baba does Nandu admire? With the Baba’s silence, has Nandu lost the Baba’s friendship? Do you think it is a coincidence that Nandu meets Indra just after the Baba speaks to him for the last time? Why or why not?
- 3 Do you think the *dhole* purposefully share their discovery with Nandu, or is he just being observant? Why do you think the Maroons left their stolen goods unguarded? How does recovery of the stolen money and jewels help with the plans to save the elephant stable?
- 4 Do you think the elephant breeding center will be successful? Why or why not? What do you think Rita’s role will be in this new endeavor? How have Nandu’s feelings about Rita changed?
- 5 Why do you think Father Autry, the Baba, and Subba-sahib have all chosen to share their secrets with Nandu? How do these secrets affect how Nandu feels about each of these men? Do you think you would have been able to keep these secrets? Why or why not?
- 6 What has Nandu learned about himself, his family, his home, and his friends since the beginning of the book? Point to evidence throughout the book to support your answer. What do you think the author is saying about Nandu’s relationships and his relationship with nature?

CCSS.ELA-Literacy.RL.5-7.1; RL.5-7.2; RL.5-7.3; CCSS.ELA-Literacy.SL.5-7.1; SL.5-7.1.A; SL.5-7.1.C; SL.5-7.3; CCSS.ELA-Literacy.W.5-7.1; W.5-7.2; W.5-7.9

ACTIVITIES

Citizen Science

Father Autry collects samples of birds and plants for the U.S.-based Smithsonian Institution—the world’s largest museum and research complex—to increase and share knowledge about the unique and important species found in Nepal. By serving as a guide and collecting birds, Nandu contributes to Father Autry’s work to benefit science. Your students can also contribute to scientific knowledge and discovery through citizen-science projects.

Citizen science is people from all walks of life working with scientists and researchers to answer questions and better understand the world in which we live. Thanks to the Internet, volunteers can easily share and contribute data and be a part of scientific research.

As students discuss Nandu’s enthusiasm for Father Autry’s work and how and why his interest evolves, introduce them to the concept of citizen science. Ask students if they ever watch birds or observe wildlife. What do they do with their observations? Do they have any ideas that might help scientists with research?

Visit eBird to find out if the birds Nandu collects for Father Autry are still present in Nepal:

- Go to **eBird.org** and click on “Explore Data.”
- On the “View and Explore Data” page, click on “Species Maps.”
- Enter the name of one of the birds Nandu and Father Autry talk about in the “Species” search. (Note that the Asian paradise flycatcher, which plays an important part in the book, is also known as the Indian paradise flycatcher.) Type Nepal in the “Location” search.
- A map will appear to show you all the locations where the species has been seen. In the tool menu on the right, click “Show Points Sooner.”
- Search out those points near the border with India, where the story takes place, and click on the location symbol.
- A checklist containing the names of all the birds the observer saw on that outing will appear. Look on the list for the names of other species mentioned by Nandu and Father Autry. How many can you find?

The website eBird is run by the Cornell Laboratory of Ornithology and is a worldwide database for recording the sightings of birds. Just as Father Autry and Nandu helped scientists by gathering information about the wildlife of southern Nepal, your students can help ornithologists better understand the distribution and population of birds in your area. First find out what birds are in your area. You can do this by checking the eBird site:

- Go to **eBird.com** and click on “Explore Data.”
- Click on “Explore a Region.”
- Type in the name of your state, county, or province in the search.
- Select the name from the pop-up offerings. A list of birds that have been sighted and reported there will appear.

Your class can become a contributor to the sightings! Go to “Help” at the top of the screen and read “Getting Started” to learn how to become a participant. Your location can be your school grounds or a nearby park. By keeping track of the numbers and kinds of birds they see, your students are providing good information about the stability of bird populations and the migrations of birds in your area.

To help students learn how to identify bird species, contact your local Audubon chapter or other wildlife group. They are usually very willing to help students get started studying wildlife. You will also need field guides to birds in your area. Your library may already have these. *National Geographic Field Guide to the Birds of North America* and the *National Audubon Society’s Sibley Guide to Birds* are two of many good guides. There may even be a guide just to the birds of your state or county.

Give examples of other citizen-science projects and have students share their thoughts about the roles they could play in advancing scientific research. Have students further investigate a citizen-science project that interests them. Ask them to write an argument to persuade their fellow students to participate in the citizen-science project they have selected. After hearing arguments presented, consider how your class could participate in favorite projects or encourage students to follow their passions and participate independently.



Citizen Science Resources

- Getting Started on Going Green: Finding Citizen-Science Projects That Work
edutopia.org/getting-started-on-going-green
- *Citizen Scientists: Be a Part of Scientific Discovery from Your Own Backyard*
by Loree Griffin Burns (Henry Holt & Co.)
- The Citizen Science Association
citizenscience.org
- Scientific American: Citizen Science Volunteer Opportunities
scientificamerican.com/citizen-science

CCSS.ELA-Literacy.W.5-7.1; W.5-7.7; CCSS.ELA-Literacy.SL.5-7.4

Religion and Belief

The novel touches on many religions and a variety of religious and spiritual beliefs. At school, Nandu is faced with the prejudice of the high-caste boys against those who are dark-skinned or not Hindu. “I did not know what I was, Buddhist: like the red string necklace said I was; Hindu, like all of these boys; or animist, like my father.” Nandu’s Muslim roommate, Ballam, is also the target of religious prejudice. Nandu’s father “is not only a *Subba-sahib*. He is from a family of *jhankri*—healers who can see into the future. He is a medicine man for humans and elephants and a *shaman*.”

Have students compare and contrast two (or more) belief systems—animism, Buddhism, Christianity (Jesuit), Hinduism, Islam, shamanism—to better understand how the faiths featured in the novel influence the characters and shape the culture and society they live in.

Start with an introduction to the concept of religion, reminding students that this can be a sensitive and personal topic and that discussion should be respectful and free of bias. Note that the study of world religions can help students understand the various civilizations and cultures that have shaped history and society. Talk about why Ballam, a devout Muslim, would have studied “other religious customs, Hindu, Buddhist, and animist.”

Divide students into six groups, assigning a belief system to each. Provide a graphic organizer to help students plan and collect research for a presentation on their assigned religion that includes:

- fundamental concepts/beliefs
- deities
- special stories/sacred texts
- objects/symbols
- rituals and celebrations
- facts about Nepalese culture influenced by the religion
- where they found the information

Students can decide the format of their presentations, but they must research and include all the features on the graphic organizer. Work with your school librarian to direct students to good reference materials and informational texts at varied reading levels, as well as subscription databases and other prescreened online resources.

Students should cite any information they plan to present.

During presentations, have all students take notes using a new graphic organizer for each religion presented. Following the presentations, provide time for questions and discussion about some of the similarities and differences students see between the religions that were presented and time for you to clarify or correct any information presented.

Having been introduced to these belief systems, students should now choose two or more religions they would like to investigate further. They then may choose to compose a compare-and-contrast essay about those religions or an essay that looks at the influence of those religions on Nepalese culture, with examples from the book of how Nandu has been affected by them.

CCSS.ELA-Literacy.RH.6-8.2; RH.6-8.8; CCSS.ELA-Literacy.W.5-7.2; W.5-7.8; W.5-7.9

WRITING ACTIVITIES

It's a Jungle Out There

“It’s a jungle out there” is an expression that means things are dangerous and chaotic. But for Nandu, the jungle is a place where he feels comfortable and at home. Have students cite examples of places and situations where Nandu feels uncomfortable and discuss his questions and feelings about his identity, particularly his place in the caste system.

Then ask students to create a list of places they feel uncomfortable going. Have them share some examples and talk about why these feelings occur. What makes them feel uncomfortable or unwelcome? How do their reasons and feelings compare with Nandu’s? What things need to change for them—and for Nandu—to help them feel welcome and at ease?

Ask students to write an epistolary poem to someone in the place that causes them discomfort (or to the place itself). Have the poem describe the uncomfortable place, explain why the student feels he or she is unwelcome, and identify ideas that would help improve the situation. Students need not direct this letter poem to a specific person, addressing instead “the boys who hang out on the front steps,” “the restaurant owner,” or “the girls at the mirrors in the bathroom.” Or a student may choose to write the poem as a letter to himself or herself. Students may read their poems aloud or have them read aloud anonymously to the class to launch further discussion.

CCSS.ELA-Literacy.SL.5-7.1; CCSS.ELA-Literacy.W.5-7.2; W.5-7.4

Origin Story

Nandu loves to hear the story of how he came to live at the elephant stable after being found by Devi Kali. If *What Elephants Know* were a graphic novel, this background information would be part of our hero’s origin story. In the Q&A in this guide, the author shares his own origins and some of the transformative events that led him to his career as a biologist and writer. Have students think about their own past experiences and how and why they got started on something they love. Ask them to write their own “origin story” or create a comic that illustrates experiences that have helped shaped their interests or character.

CCSS.ELA-Literacy.W.5-7.3; W.5-7.4

Mahout Wanted

The elephant stable where Nandu lives employs many people. Have students collect information from the book about the various jobs at the elephant stable, including senior officer, *phanit*, *pachuwa*, mahout, and stable hand. Have students note specific duties, tasks, and responsibilities and how various characters fulfill them. Then have students use the information to create a job description for one of the jobs at the elephant stable.

Introduce students to the format by giving them samples of actual job descriptions (such as those on the website of the Association of Zoos and Aquariums: aza.org/joblisting) or ideas of what to include (find some at sba.gov/starting-business/hire-retain-employees/writing-effective-job-descriptions). Discuss who typically prepares job descriptions and how job descriptions are used in the workplace. Students should research additional information about working with elephants to include in their descriptions. Have some students share their writing and discuss ideas for how best to find and hire people who would be good for these jobs.

CCSS.ELA-Literacy.RI.5-7.4; CCSS.ELA-Literacy.W.5-7.4; W.5-7.7

Getting Booked

The book that catches Nandu's eye the first time he sets foot in a library is *The Jungle Book*. "The English was difficult, but I was relieved to find it was about a young boy who talked to wild animals, just like I do. And he was raised by wolves. I began to feel like the book was written about me."

Ask students to think about finding characters like themselves in a book. Why is this experience so important to Nandu? How does it make him feel? Discuss how books can give voice to issues and problems that mirror our own experiences. Have students share any book titles and descriptions in which they recognized themselves at some point in their lives.

Have students think about the other characters in the novel and choose one. Ask students to imagine they are the librarian at the Future Scholars Boarding School and that their character from the novel may borrow a book there. Ask them to recommend a book that the character might like to read. Have students think about the character's interests and longings. What book would the character they've selected find

meaningful? Have students write their book recommendation, including a note to the character about why they recommend it. If they can't come up with an appropriate title, have them imagine what the character would want to read and write a summary of a story their character would be happy to find on the bookshelf. Have students read their recommendations or stories aloud to the class.

CCSS.ELA-Literacy.W.5-7.2; W.5-7.3; W.5-7.4; CCSS.ELA-Literacy.SL.5-7.1

Animal Stories

Nandu calls Devi Kali his mother, and his feelings for her and the experiences they share are clear. Now get students talking about Devi Kali's role in their relationship. Does Devi Kali have feelings for Nandu? Does Devi Kali have a personality? What do they think Devi Kali knows? Do they think of Devi Kali in human terms because Nandu calls her his mother? Does she have human-like emotions or motivations?

Since the story is told from Nandu's point of view, readers can only imagine what Devi Kali thinks and knows. Some authors tell stories that give animals a human consciousness and a way to express their thoughts. Talk with students about anthropomorphism and personification. What do they think about stories in which animals act human or mostly human? How do such stories compare with stories in which animals behave as animals? Discuss and compare a variety of animal characters from children's literature, such as the wolf in *Little Red Riding Hood*, Wilbur in *Charlotte's Web*, Ulysses (the squirrel) in *Flora and Ulysses*, the rooster in *The Bossy Gallito*, Shiloh in *Shiloh*, and Ivan in *The One and Only Ivan*. How does the human point of view in animal stories support interaction and understanding among the characters?

Have students write a story from the point of view of an animal. They might tell a story from Devi Kali's perspective, choose another animal from the book, or pick their pet or a favorite animal. When students read their finished stories aloud to the class, encourage discussion about how they developed their animal character. Does their animal's voice sound human? How much of their animal character is based on how the animal actually behaves and real facts about the animal?

CCSS.ELA-Literacy.W.5-7.3; W.5-7.4; CCSS.ELA-Literacy.SL.5-7.1; SL.5-7.1.C

ABOUT THE AUTHOR

ERIC DINERSTEIN, PhD, attended Northwestern University and Western Washington University and did his graduate studies in wildlife science at the University of Washington. He is director of the Biodiversity and Wildlife Solutions program at RESOLVE, where he devotes his time to the conservation of wild populations of elephants, rhinos, tigers, and other endangered species. Previously, he was chief scientist and vice president for conservation science at the World Wildlife Fund for nearly twenty-five years. Dinerstein began researching tigers in Nepal in 1975 as a Peace Corps volunteer. He later continued fieldwork in the region, studying rhinos and tigers for the Smithsonian Institution.



Q&A WITH ERIC DINERSTEIN

- 1 **Nandu loves to hear the story of how he was found in the jungle and came to live in the elephant stable. What's your origin story?**

I suppose I owe it all to Disney. . . when my mother took my sister and me to see *Bambi* in the local movie theater back in Toms River, New Jersey. I also devoured Thornton Burgess's *Old Mother West Wind* stories when I was growing up and loved the characters. The idea that animals in nature lived together in such harmony was so appealing to me; it was easy to place myself in the scene. By extension, putting Nandu in the jungle in Nepal "where I grew up" was not much of a reach for me.

Then I think it was learning about the expeditions of the famous paleontologist Roy Chapman Andrews, who I understand inspired the character of Indiana Jones. Andrews's journeys to the Gobi Desert of Mongolia, where his team discovered the first fossilized dinosaur eggs, led me to drag adults to take me on several visits to the Museum of Natural History in New York, Andrews's employer and the source of funding for his explorations. It was a budding interest in paleontology that in the fourth grade inspired me to write a book about dinosaurs, illustrated by another classmate, with the intention of sending it to Dr. Andrews, perhaps to have him write the foreword. I only realized a few years ago when remembering this early attempt at

fiction that Dr. Andrews had died two years before our work was finished. I am glad my teacher showed restraint in keeping this piece of news to herself. I wish I still had that first edition.

At some fundamental level, the unremarkable arc of my own childhood must have fueled my other strong desire: to write a heroic adventure story, set in Nepal, featuring characters I would like to have read about if I were a child daydreaming through that fourth-grade classroom window in Toms River. The origin story of Nandu, although set in the Himalayan kingdom of Nepal in modern times, is at its essence globally and culturally ancient and told many times over in the tales of a hero, sometimes tragic but more often on a mythic quest. The elements are here: Nandu's dubious birth (a mystery to the reader); the search for the father in the classical stories (or in Nandu's case, his origins before being discovered by Clear Lake); his humble beginnings; his journey to find himself and quest for the elephant that could be the piece that rescues his world from collapsing; and the ethical choices Nandu must make.

2 Did you always want to be a biologist?

No! I lost sight of my affinity for wild nature soon after the fourth grade. In high school I started making films and even enrolled in film school at Northwestern University in Evanston, Illinois. It wasn't until my junior year that I had a change of heart and direction, deciding that I wanted to study wildlife biology. Part of my epiphany was utilitarian: I witnessed the most talented graduates of my film program starting out in a commercial company making a promotional film about a lightbulb factory. That had no appeal for me. The other aspect must have been a reaction to spending so much time indoors watching so many films instead of being outside climbing mountains and canoeing down wild rivers. Even a cold dunk after capsizing while running an Ozark river failed to diminish my desire to explore nature. Next came the more arduous academic rapids that such a shift in worldview entails.

That fall semester I took the full course load of the biology major's daunting prerequisites, the equivalent of academic torture: calculus, inorganic chemistry, physics—oh, what a shock after English lit classes and film studies! And I almost flunked out. In fact, I transferred the next semester to the University of Idaho, where I found myself surrounded by more normal students, not math whizzes who made me feel, shall we say, non-academically inclined. I had become a calculus refugee, and fell

in love with the wildness of Idaho and birding. I only stayed six months there and was on the road again, ending up at Huxley College of the Environment, in Bellingham, Washington. I spent the summer as a researcher on an undergraduate NSF-funded project to study black bears in Yosemite Valley. I was hooked. Soon after graduation, I found myself in the Peace Corps in Nepal, measuring tiger tracks in the sand.

3 **What was the spark that made you feel connected to the natural world?**

The spark was really a re-firing of the “love-of-nature neurons” that I believe exist in all of us, no matter how deeply buried. Even before my decision to drop the filmmaker’s path and switch to biology, I moved to a farmhouse twenty-five miles north of Evanston and started skipping classes to wander through the woods. Along a stream, I came upon a green heron and spooked it, and had no idea what it was. Looking it up in a bird guide introduced me to a world of nature that became my burning passion. My heron experience was nothing short of a conversion that set me on my course. That epiphany had less to do with the green heron itself (although the world-famous British biologist Kevin Gaston wrote to me that, coincidentally, an encounter with a green heron also set him on his professional course); rather it was the sense that I could be an explorer of the natural world and that every new bird I saw or new wildflower I identified was like it was being discovered for the first time. And it was, by me. Natural history merged with adventure.

I think, too, that cracking open a field guide to plants or birds or mushrooms must have connected me to the extraordinary diversity of life on Earth. Even at some unconscious level, this new awareness had a profound effect on the type of science I chose to pursue.

4 **You’ve written dozens of scientific papers and been widely published on large mammal conservation. What inspired you to write this novel?**

Technical papers and books have their place in the public and scientific discourse, and I have written both over the past forty years. But only through a novel could I express my deep emotional attachment to nature in a way that kids could feel it. I lived a most adventurous life when I was in my early twenties in the jungles of Nepal that are portrayed as “the Borderlands” in the book. I thought if I could capture some of that world on a page, it would be the adventure saga that would draw kids in

and expose them to the overriding theme in this coming-of-age story: how a young outcast's compassion for nature and wildlife helps him overcome his struggles and find his place in a changing world. It is this compassion that centers young Nandu. The adventure part was fun to write, but I was more interested in his emotional development and growth.

And I was interested in portraying through Nandu the deep bond he has with animals and use his example as a bridge to connect young readers to the animals they love. What young person hasn't wondered if their pets, and other living creatures around them, can think, feel sadness or joy, and love us as we have loved them? Do elephants know about happiness? Do tigers love their cubs? How can we tell?

5 Are there characters in *What Elephants Know* based on real people or animals?

Yes, of course. The elephant drivers and elephants left such an impression on me. The Subba-sahib is based on the lives of two dignified gentlemen, Ram Lotan and Baddhai Lal Tharu. They commanded the elephant stables near and in my research camp, respectively. Baddhai Lal was also our part-time shaman. Garibuwa—the name means “poor” in Tharu—helped build my tree blinds. He was one of my favorite people, so full of life. The elephants' names are from real elephants I knew. I once bowed namaste before the king but never went into the jungle with him. Father Autry is an imaginary priest based on a person I met once: a retired Jesuit named Father Sabolle who taught at St. Xavier's School in Kathmandu and also made his own wine (for the sacrament, he said!). Sometimes a single meeting in a country like Nepal can leave a lasting image, or the country itself attracted such charismatic people. The other parts of Father Autry—his naturalist side—come from imagining the esteemed E. O. Wilson as an avuncular teacher of natural history. Autry's character also reflects how I might end up: not as a Jesuit, but living in the Borderlands for at least one month a year, in my bungalow. All so I can hear the tigers roaring again, and be a naturalist.

6 Are the relationships between people and animals based on real relationships you observed?

I watched the drivers very closely and how they handled their elephants. I tried to model my drivers on those most skilled and gentle with their animals. Bir Bahadur Lama (Tamang), who I made into Dilly's father, was the best.

7 Is there a character like you?

The character most like me is oddly the youngest and the oldest: I had my second childhood in the Borderlands, where Nandu experienced his first. So I simply imagined myself growing up in an elephant stable. Although, when I was in Bardia in the Peace Corps in 1975, we had no elephants; I did all my research on foot. It wasn't until I came back after my PhD to study rhinos and tigers in Chitwan that I rode elephants. And, at the other end of the age spectrum, I share Father Autry's abiding love of natural history.

8 Your book introduces readers to a culture that they may not be familiar with. Which of your own experiences in Nepal did you include in the book?

I lived and worked around elephants for five years when I led a field project funded by the Smithsonian to study rhinos and tigers in Chitwan. Prior to that, I was in the Peace Corps in Bardia, so that gave me the idea of writing about the Borderlands. My assignment was to survey the tiger population in a newly created tiger reserve. At twenty-two years old, a dream come true.

9 What is it about the culture of Nepal that appeals to you?

Almost everything. It was so foreign to what I knew back in New Jersey, and so diverse. There is Nepalese culture for sure, but there are so many ethnic groups with their own languages, dialects, ways of dress, and customs. I used to joke that whenever I stopped being a biologist for the day, I could switch over and become an amateur anthropologist. The diversity of Nepalese culture has fascinated social scientists since ethnography became a field of study. (One Nepalese friend, who was quite the wit, once said that the average Nepalese family consists of thirteen members: the father, the mother, ten children, and the anthropologist studying them.) Probably more appealing than the culture are the people, especially the elephant drivers and trackers with whom I worked and lived. All were low caste, but so brave yet so gentle and fun loving. Nepalese lower-caste people are always laughing, even though they are so poor. We could use more of their way of looking at the world rubbing off on us.

10 What kind of research did you do to be able to give readers an accurate impression of Nepal during this time period?

Probably the biggest advantage I had, thanks to the Peace Corps language training and being sent to a place where few people spoke English, was to become fluent in Nepali and to speak conversational Tharu and Hindi. I even studied a bit of Tibetan at the time, hoping to someday spend more time in the Himalayas. That last part didn't happen, but I think there can be no better way for someone who aspires to write about a foreign culture than to be fluent in the language(s). Otherwise, you miss too much of the interesting detail (and you can't understand what they are saying about you). The wildlife research part—that was my day job anyway.

I watched how the Nepalese navigate everyday life, and that allowed me to infuse Nandu's character and give context to his achievements: how he bargains in the marketplace and with the Python; how he handles bullies and thieves; his brush with a possible first girlfriend (Rita); losing a mothering figure; how he deals with the caste system and his low status.

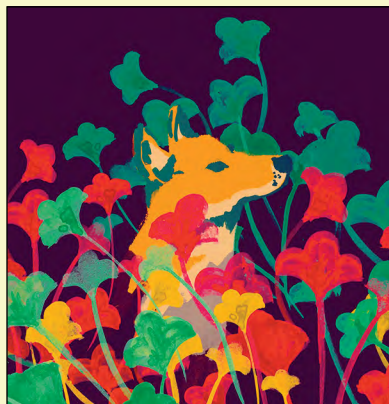
And finally, I had some friends and teachers who had brilliant insights into the country and culture that found their way into the book. I shared this story with some of them to get their feedback. Reminiscing about Nepal over the years with others I lived and worked with was another way to weave in a lot of cultural material. I am not the only person who discovered that life in Nepal and among poor villagers leaves such an indelible impression on you. I guess if you live in a foreign country for several years, and if you live outside the capital, where you have little contact with English speakers, you have the chance to absorb something vital and real, untouched by the pervasiveness of western culture.

When I was leaving Nepal for the first time after my Peace Corps stint was over, another volunteer said to me, "You may be leaving Nepal, but Nepal will never leave you." Then he added, "And you will always return." Many years later, after another five-year stay with the Smithsonian during the mid-1980s and over thirty visits since then, I suppose that parting comment showed a lot of foresight.

- 11 When sent away to school, Nandu finds comfort and inspiration in *The Jungle Book*. Are there books that inspired you to explore nature? What titles would you suggest to encourage budding young naturalists?

The smartest and best naturalist I know didn't read novels and comic books like I did when I was young. He devoured field guides and books about dinosaurs and paleontology. So a healthy dose of nonfiction books about wildlife would be a great start to balance out everything. Nandu may have been inspired by *The Jungle Book*, but in some ways his character, at least in my mind, may have been more inspired by Kipling's *Kim* than by Mowgli. And the best thing budding young naturalists can do is to spend as much time outdoors as possible, observing, making notes, in a book or mentally, and finding a mentor who can teach them about nature.

Monsoons and snowstorms periodically fall on the houses of young naturalists. So during inclement weather I would suggest the two most important books of our time: *A Sand County Almanac* by Aldo Leopold and *Silent Spring* by Rachel Carson. Both authors were exceptional naturalists who used natural history for a greater purpose. I loved *Robinson Crusoe* and anything by Robert Louis Stevenson. I guess I am venturing into adventure stories with a touch of natural history. The books about Roy Chapman Andrews's expeditions are a great place to start. I loved *Watership Down*, too, in part because the rabbits were great naturalists.



- 12 Nandu's friend Rita is also struggling to find her place in the world. How realistic is the role she plays in the development of the elephant breeding center?

This is where I took a few liberties. In the era in which this novel was set, her role as I created it would have been unlikely. But Rita would only take that response as an even greater challenge. I wouldn't count her out in finding her way even in the most traditional culture. She is irrepressible.

- 13 Any plans to share more of Rita's story in the future?

Yes. Stay tuned.

- 14 What do you want readers to walk away with after reading *What Elephants Know*?

From the conservation perspective, I want readers to know how remarkable jungles and other wildlands are, along with the wild creatures that inhabit them, and how we must do everything we can to save and restore wild nature. From the perspective of Nandu, I would want them to feel that even though his story is not their own, at least in terms of the geographic setting, it is universal in the sense of overcoming feeling like an outcast from society or one's family. We all want to be accepted, especially Nandu, having been abandoned once before and never knowing his birth parents. Nandu shows how through cultivating a sense of compassion for others and wild things he finds his compass to navigate through the ups and downs of life. Also, almost every young person suffers the loss of a pet, and some, even worse, the loss of a parent at an early age. Nandu's example illustrates how you put your life back together and move forward, never forgetting, as is in his speech at the grave site, your devotion to the guiding figure that has passed. Finally, another important theme that Melissa de la Cruz noted after reading my book—you can find family in unexpected places. Nandu gains guidance and wisdom from an adopted father who is an animist; a Hindu mystic tending a jungle temple, alone in the world; and a retired Jesuit. All serve as father figures to young Nandu, and of course Devi Kali is his mother and the other elephants are his family too.

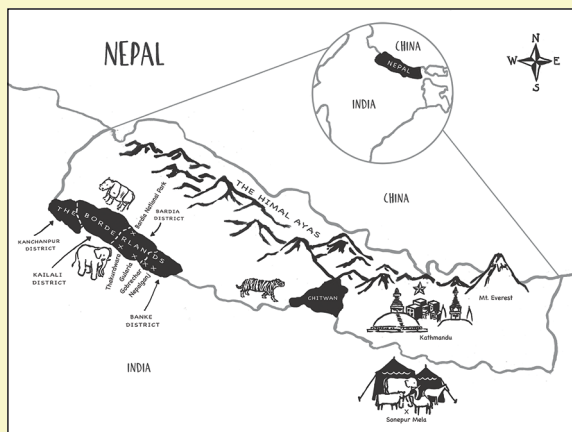
A book title is often an author's shortest possible expression of his or her theme. So I also hope that, working from my title, teachers can have a slightly different lens to teach about topics like knowledge, instinct, learning, and emotions in animals in general, in elephants, and in the people around them. I would love to hear about kids

who have read the book creating their own stories about what the animal of their choice knows, or a poem based on the experience of reading the novel or an image found in it.

I would be particularly interested in how kids react to the introduction to the caste system in the novel. Is it viewed as a social stratification so associated with Hindu society and far from our own? Or is ours just more subtle? For kids who have studied social justice, how they approach this novel would be something I would love to hear about. In one sense the bullying depicted in *What Elephants Know* is overt and familiar to Western readers—the two boys and their gang at Future Scholars bullying the smartest boy in the class and a minority and a Muslim. But there are more subtle hints of the indirect bullying inherent in the caste system that might make for interesting discussions. It is still salient today. In the political upheaval surrounding the writing of Nepal's new constitution, the lowland groups who are essentially the low-caste ethnics tried to form their own country or have their own autonomous region set aside so they would not be ruled by the elite.

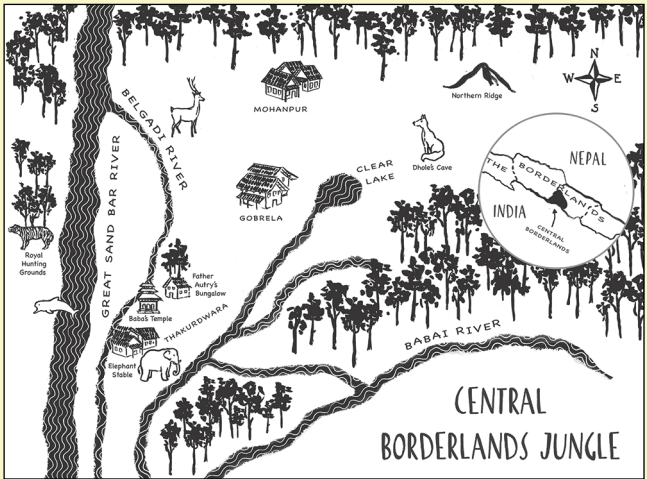
1) What have you learned from elephants?

Elephants are the strongest and yet gentlest of large mammals. They show kindness and feelings toward each other that put us humans to shame. I even believe that some elephants are very intelligent. And I believe they have a highly refined sense of humor. I think of them often and smile. My next novel will explore more of these thoughts.



16 Elephants are being poached in Africa at an alarming rate. What are four things kids can do to avoid feeling helpless?

- Support some of the groups directly involved in elephant conservation. Start a collection. Sell cookies, sell newspapers, use your imagination to find ways to generate funds, and then ask adults to match what you raise. Even ask for a two-to-one match! A first lesson in fund-raising for conservation.
- Join some of the efforts on social media to help stop elephant poaching and illegal trade. Social media is a powerful new tool that kids are more familiar with than adults.
- Organize student chapters to push our government to crack down on those who still trade in illegal animal parts.
- Make contact with kids in China and Vietnam who are also deeply concerned about some adults in their societies using elephant ivory, rhino horn, or tiger parts for traditional or new remedies for which there are more effective substitutes. The younger generations there think like we do and have formed their own animal-rights groups. Work together to empower each other. It is largely the older generations that are the problem here.



17 What are some good resources for educators and students who are interested in learning more about elephants, tigers, wildlife conservation, and Nepal?

Elephants:

- Mara Elephant Project
maraelephantproject.org
- Save the Elephants
savetheelephants.org
- Big Life Foundation
biglife.org

Tigers:

- Global Tiger Initiative
globaltigerinitiative.org

Wildlife Conservation:

- My own NGO, RESOLVE, and my program, Biodiversity and Wildlife Solutions
resolv.org
resolv.org/site-BiodiversityWildlifeSolutions
- Wildlife Conservation Society
wcs.org
- Wildlife Conservation Research Unit
wildcru.org
- Global Wildlife Conservation
globalwildlife.org

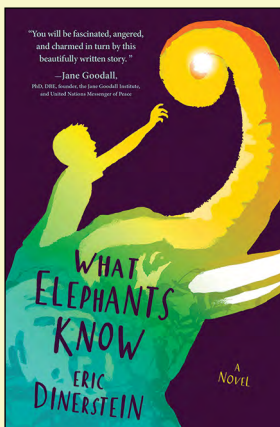
Nepal:

- (Nepal) National Trust for Nature Conservation
ntnc.org.np
- Government of Nepal Department of National Parks and Wildlife Conservation
dnpwc.gov.np/cnagleLanguage/en



Rachael Walker (belleofthebook.com) created this guide. She works in a middle school library in Arlington, Virginia, consults on a wide variety of educational programs and multimedia projects, and develops educational materials and reading resources for children, parents, and teachers.

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