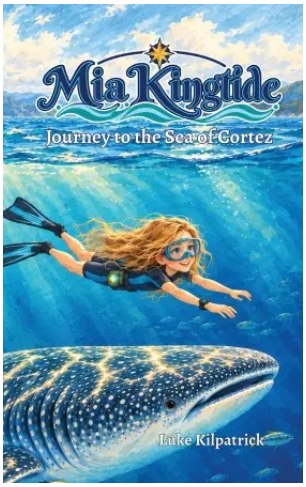
Journey to the Sea of Cortez

A teacher's and reader's guide



BOOK 3 | MIA KINGTIDE OCEAN ADVENTURES

Suggested teaching focus: ages 10-14, grades 5-8. Use selected read-aloud passages and shared mapping for younger learners. These are guide recommendations, not a measured reading level.

Big question: How does a journey change when we learn to observe carefully, listen locally and question our assumptions?

Aboard Pegasus, Mia travels with Luke and Grandpa Jim along California and Baja California. Encounters with wildlife, coastal communities and the practical work of a voyage invite readers to connect adventure with geography, scientific inquiry and responsibility.

Inside: A flexible reading plan; chapter connections; vocabulary; 22 discussion questions; four classroom projects; six writing prompts; teacher response notes; two reproducible student sheets; assessment and sources.

Find it quickly: Teaching plan 2 | Chapter map 3 | Word bank 4 | Discussion 5-7 | Projects 8-11 | Writing 12 | Teacher notes 13 | Student sheets 14-15 | Curriculum and sources 16.

Prepared for classrooms, libraries, book clubs and families. Discussion pages contain spoilers. Read the relevant chapters first.

Based on the novel by Luke Kilpatrick. Guide structure adapted from the reader's guide included in Book 4, The Vanishing Sanctuary.

Teaching a long voyage

Six phases, with time to linger

This longer novel benefits from an ongoing reading journal. Each phase below may take several meetings. Allow 25-40 minutes for discussion in addition to reading time; do not expect students to finish the novel in six short lessons.

Learning goals: Connect setting to decisions; support a character interpretation with evidence across chapters; distinguish observation, inference and fantasy; compare sources; use a simple mathematical model with stated assumptions; consider local perspectives and engineering tradeoffs.

1. Chapters 1-6: preparation and departure. Start a route map. Track equipment, weather, family roles and historical connections. Ask how preparation changes what an adventure can become.

2. Chapters 7-12: islands, uncertainty and crossing borders. Discuss the lost shell, dependence on others and what an observer can know. Begin the evidence log on page 14.

3. Chapters 13-18: migration and family. Compare the travelers' route with an animal migration. Explore how family visitors and protected habitats change Mia's experience.

4. Chapters 19-24: many coastal places. Slow down to distinguish communities and habitats. Investigate whose knowledge appears in the story and whose voice a reader should seek elsewhere.

5. Chapters 25-27: Bahía de los Ángeles. Explore Ricardo's role and the whale shark encounters. Complete the marine-ally field dossier on page 9.

6. Chapters 28-31: a different kind of return. Evaluate the proposed changes to Pegasus. Complete the engineering comparison, then revisit the opening map and question.

Materials: Novel, a map or atlas, paper, pencils, calculators and teacher-selected sources. All projects are land-based classroom work. The novel is not a navigation or diving manual.

Support: Divide chapters among read-aloud and independent reading; provide a route outline and character list; accept audio journals. **Extend:** Require source comparison, explicit uncertainty and a counterargument. Complexity should come from reasoning, not just length.

A route through the story

Chapter clusters and inquiry stops

Map the book's route as literature, not as instructions for taking a vessel to sea. Place names and events can be checked against the text without calculating a safe passage.

Chapters 1-4 | Delta, Monterey and Point Sur

The voyage begins with preparation, family knowledge and connections to earlier exploration. Ask what a boat, a lighthouse and an old research vessel reveal about the people who use the coast.

Chapters 5-9 | Morro Bay, Santa Barbara and the islands

Travel choices and the Farnsworth Bank episode bring uncertainty into the adventure. Trace what changes when Mia cannot rely on the shell and must depend on others.

Chapters 10-14 | San Diego, Ensenada and the Baja coast

The story crosses a national border and reaches new habitats and communities. Track the gray whale encounter and compare the family's journey with migration.

Chapters 15-18 | Cabo and Cabo Pulmo

Family reunions sit alongside underwater discoveries. Consider how a shared experience can mean different things to visitors, residents and wildlife.

Chapters 19-24 | North through the Gulf of California

Stops include La Paz, island anchorages, Puerto Escondido, Bahía Concepción and Santa Rosalía. Record details that make the places distinct rather than treating the coast as one backdrop.

Chapters 25-27 | Bahía de los Ángeles

Ricardo's knowledge and the whale shark encounters become a major destination of the voyage. Compare a visitor's first impression with knowledge developed through long familiarity.

Chapters 28-31 | Southbound, the boatyard and home

The family considers Pegasus's future; bread, friendships and practical work connect the return to places already visited. Explain why leaving the boat on land can still move the story forward.

Journal rhythm: At each stop, record a place, a chapter detail, a question and a revised assumption. Use a question mark where the text leaves something uncertain.

Words for an expedition notebook

Geography, inquiry and design

Peninsula: Land mostly surrounded by water but connected to a larger landmass. Locate Baja California on a map.

Gulf / sea: Names used for large bodies of salt water. The Gulf of California is also commonly called the Sea of Cortez.

Waypoint: A reference position used in planning or describing a route. A classroom dot on a map is not a verified navigational waypoint.

Nautical mile / knot: A unit of distance / one nautical mile per hour. Keep units consistent when modeling travel time.

Migration: Movement between regions, often seasonal and related to feeding or reproduction.

Filter feeding: Taking food particles or small organisms from water. Whale sharks are fish that filter-feed; they are not whales. [R1]

Biodiversity: The variety of living things, considered at different scales.

Observation / inference: A recorded notice or measurement / an explanation drawn from information. An inference may be reasonable and still need testing.

Baseline: A starting description or measurement used for comparison. A single visit may be an incomplete baseline.

Constraint: A limit a design must work within, such as weight, cost or available energy.

Efficiency: Useful output compared with the input needed. State what is being compared rather than calling a system simply "efficient."

Local knowledge: Understanding developed through experience with a place. Ask who holds it and how it complements other evidence.

Fantasy, history and science

Mia's powers are fictional. Real whales and whale sharks do not provide human-language interviews. Gray whale migration connects distant habitats, but an individual animal's route or behavior cannot be inferred from a story alone. [R2]

Steinbeck and Ricketts traveled in the Sea of Cortez aboard Western Flyer in 1940. Use that historical connection to ask how scientific questions, methods and perspectives change over time. [R3]

Discuss: setting out and depending on others

Questions 1-8

Support answers with a chapter detail. For a larger claim, look for evidence from more than one part of the voyage.

1. Preparation as part of adventure | Chapters 1-2

Which practical task matters to the journey? Explain how the novel gives maintenance or planning a role in the story rather than treating it as an interruption.

2. Three generations aboard | Chapters 1-6

How do Mia, Luke and Grandpa Jim contribute differently? Find a moment when experience matters and a moment when curiosity opens a new possibility.

3. Following an earlier voyage | Chapter 3

What does the Western Flyer connection add to Mia's journey? How can an earlier expedition inspire new questions without becoming the only way to understand a place?

4. Coastlines with histories | Chapter 4

How does the Point Sur episode connect a visible landmark with stories of human risk and assistance? What would you want to verify in a historical source?

5. A setting that changes a choice | Chapters 5-7

Choose a scene in which location or conditions affect the family's plans. Explain the cause-and-effect relationship using the text.

6. Without the shell | Chapters 8-9

What does the lost-shell episode reveal about Mia's vulnerability? Which relationships or qualities still matter when a magical advantage is unavailable?

7. Help and uncertainty | Chapter 9

How does the recovery of the shell depend on other beings? Separate what the narration shows from what a character assumes about another being's intention.

8. Crossing a border | Chapters 10-12

What changes as the family reaches Mexico? Name a practical or social adjustment and a question a respectful visitor should ask rather than assume.

Reading move: Mark a statement T for directly supported by the text, I for interpretation or R for a real-world claim needing research. Some answers contain all three.

Discuss: movement, community and habitat

Questions 9-16

9. Two kinds of journey | Chapters 13-14

Compare the family's travel with the gray whales' movement. Where does the comparison help you think, and where does it break down?

10. Seeing a problem as a visitor | Chapter 12 or 14

How does Mia respond to an environmental concern away from home? What additional local knowledge would a real visitor need before deciding what should happen?

11. A shared place, different experiences | Chapters 15-17

How do visiting family members change Mia's experience of Cabo and the surrounding coast? Compare two characters' interests or reactions.

12. What makes a habitat valuable? | Chapter 18

What does the Cabo Pulmo section invite readers to notice? Explain a value beyond scenic beauty, and identify a claim that would need a scientific source.

13. Evidence of change | Chapter 19

When an animal describes a changing environment, how does the magical conversation move the plot? What observations over time could a real researcher use to investigate change?

14. More than a stop on a route | Chapters 20-23

Choose one community or anchorage. Which details make it distinct? What perspectives are absent from the family's account?

15. Friendship across distance | Chapters 24-25

How do recurring animal relationships and Ricardo's welcome connect earlier experiences to new ones? Compare magical recognition with a human relationship maintained over time.

16. Learning from a local guide | Chapters 25-27

What does Ricardo contribute that a visitor might overlook? How could a student researcher seek local knowledge respectfully and credit it accurately?

Partner task: Choose one answer and identify a statement that is too broad, such as "everyone there" or "all sharks." Rewrite it to match the evidence you actually have.

Discuss: scale, technology and returning

Questions 17-22

17. Beside a giant | Chapter 26

How does the whale shark encounter create a sense of scale or wonder? Explain how a descriptive detail affects the reader, then distinguish that literary effect from a scientific claim.

18. A week of noticing | Chapter 27

What could repeated visits reveal that one quick encounter could miss? Design a question a visitor might investigate through photographs or notes without disturbing wildlife.

19. A cleaner boat? | Chapters 28 and 30

What hopes motivate the proposed changes to Pegasus? Identify two tradeoffs an engineer would need to study before claiming that one propulsion system is best.

20. Returning to a familiar place | Chapter 29

Why does the bread and Santa Rosalía episode matter in a novel full of dramatic wildlife encounters? How can an ordinary exchange show a relationship with a place?

21. An ending that pauses a boat | Chapters 30-31

What changes when Pegasus is left at the boatyard and the family goes home? Explain how the ending combines completion with future possibility.

22. Revising the big question | Whole book

Choose an assumption Mia, another character or you as a reader had near the beginning. How has the voyage challenged it? Use evidence from two distant points in the book.

Reflection seminar

Ask each student to bring one passage, one map annotation and one research question. Discuss how these three forms of evidence illuminate different aspects of the journey.

Short book-club selection: Questions 2, 6, 12, 16, 19 and 22.

Exit ticket: "A place I understand more carefully is ___. A perspective I still need to hear is ___. A source I could consult is ___."

Project 1: Build an annotated voyage atlas

Map decisions, not just destinations

Time: Two 40-minute sessions. **Materials:** Blank California/Baja map, atlas, novel, pencils and calculator. **Product:** A labeled route map and a one-page commentary.

1. Select eight to twelve stops. Include the starting region, several California stops, a Pacific Baja stop, Cabo, a Gulf of California stop and Bahía de los Ángeles. Add the return and boatyard location. Check order against the chapter map and novel.

2. Use two kinds of labels. A geographic label locates the place. A literary label records a chapter, an important event and how the setting influences a choice. Use approximate connecting lines; do not present them as safe navigational tracks.

3. Add a perspective note. At three stops, distinguish the family's experience from a question you would ask a resident, scientist or worker. Avoid treating the novel as a complete account of a community.

4. Try a classroom calculation. For a fictional passage of 60 nautical miles at a constant 6 knots, calculate time: distance divided by speed = 10 hours. Then repeat at 5 knots: 12 hours. These are invented teaching values, not a route recommendation or a claim about a chapter.

5. Explain the model's limits. List at least three omitted factors, such as currents, weather, stops or speed changes. State why a calculated duration alone does not establish that a trip is safe or feasible.

6. Write the commentary. Explain one pattern in the route, one setting-driven decision and one question that mapping raised. Credit the geographic source used.

Success criteria: Correct relative locations and story order, useful chapter annotations, consistent units and explicit limits.

Support: Supply numbered stops and let students add captions. **Extend:** Compare the family's route with a simplified gray whale migration map, carefully labeling seasonal and individual variation.

Teacher check: The mathematical answers are 10 and 12 hours. Assess the explanation of assumptions as well as arithmetic.

Project 2: A marine-ally field dossier

Research the life behind a memorable encounter

Time: 60 minutes plus optional revision. **Materials:** Novel, two reliable species sources and paper. **Product:** A two-page dossier with a clearly labeled fictional vignette.

1. Select an encounter. Choose a whale shark, gray whale, giant sea bass or another identifiable species in the novel. Record the relevant chapter and why the encounter matters to Mia.

2. Research five categories. Identify classification, habitat or range, food, an adaptation and a documented conservation concern. Record a source for each. Avoid copying a species description wholesale; explain it in your own words.

3. Check a tempting claim. Choose a statement about size, range, rarity or behavior. Does your source support the exact wording? Distinguish "found here" from "found only here," and a typical behavior from a guarantee.

4. Design an observation question. For example: "What visible features help distinguish this species from another?" Describe observations a class could make using an existing educational video or image collection. Do not design an experiment that approaches, feeds or handles wildlife.

5. Write the imagined voice. Create a 100-150-word conversation with Mia that uses two researched details. Label it fiction. Add a note explaining what real evidence cannot reveal about the animal's thoughts.

6. Peer review. A partner traces three factual statements to their sources and checks that every image or quotation is credited. Revise any claim that exceeds the source.

Success criteria: Accurate species identification, traceable information, careful wording and a clear fact/fiction boundary.

Support: Offer a preselected species and two short sources. **Extend:** Compare a scientific account with a tourism description and explain differences in purpose and evidence.

Useful distinction: Whale sharks are sharks and therefore fish. Their large size and common name do not make them marine mammals. [R1]

Project 3: Compare designs for Pegasus

Use a model, then question the model

Time: 50-60 minutes. **Materials:** Chapters 28 and 30, calculator, paper. **Product:** A design recommendation with calculations, assumptions and unanswered questions.

Scenario: Students advise an imagined boat owner considering propulsion changes. The numerical values below are invented for classroom reasoning. They are not specifications for Pegasus or instructions for modifying a vessel.

1. Define the goal. Choose priorities such as reducing engine noise, reducing fuel use on short trips, maintaining range or controlling cost. Explain why different owners might rank these differently.

2. Try an energy model. Suppose an electric drive uses a constant 4 kilowatts and the usable battery energy is 24 kilowatt-hours. Idealized operating time is 24 divided by 4 = 6 hours. At a constant 6 kilowatts, it becomes 4 hours.

3. Add a second source of energy. Suppose solar panels provide a total of 6 kilowatt-hours during a day. At a constant 4-kilowatt demand, that equals 1.5 hours of energy in this simplified model. It does not mean the panels always produce 4 kilowatts while the boat moves.

4. State what is missing. Identify losses, reserve requirements, weather, other electrical loads, weight, battery condition and maintenance. Choose three and explain how each could change the result. Do not invent a real-world safety reserve.

5. Compare three concepts. Discuss conventional propulsion, battery-electric propulsion and a hybrid approach. For each, name a potential advantage, a constraint and information needed. Avoid assuming that electricity has no environmental footprint.

6. Recommend a next investigation. Instead of specifying a purchase, identify the measurements and qualified advice an owner would need. Connect the recommendation to the family's hopes in the novel.

Success criteria: Correct units and calculations; distinction between power and energy; a fair comparison; explicit uncertainty.

Support: Supply equations and worked examples. **Extend:** Create a sensitivity graph for several hypothetical power demands while keeping battery energy constant.

Project 4: Compare expedition questions

From Western Flyer to a modern inquiry

Time: Two 35-minute sessions. **Materials:** Novel, Western Flyer Foundation history, one modern research or education source, paper. **Product:** A comparison chart and a proposed research question.

1. Begin with a connection. Identify how the novel invokes Steinbeck, Ricketts or Western Flyer. Write what that connection means to the characters before researching the historical expedition.

2. Establish a small factual foundation. Use the Foundation's account to identify the 1940 voyage, its participants and scientific purpose. Distinguish the historical expedition from the later novel and from the modern restored vessel. [R3]

3. Compare methods and questions. Choose a modern public research project or educational account. Compare what is being asked, what is observed or collected, which tools are used and how findings are shared. Do not assume newer technology automatically answers every question better.

4. Ask whose knowledge appears. List named observers or authors in each source. Identify a local perspective you would want to seek. An absent voice is a reason to broaden inquiry, not permission to invent what someone would say.

5. Design a non-invasive classroom study. Use photographs, public datasets or an aquarium video to propose a question about a habitat or species. Specify what you would record, what you would compare and what your evidence could not show.

6. Write a short proposal. Explain how the historical and fictional journeys inspired the question. Include two sources, a method, one limitation and one reason the answer might matter.

Success criteria: Keeps historical, fictional and modern accounts distinct; compares specific methods; acknowledges perspective and limits; proposes an answerable question.

Support: Provide paired short excerpts and a comparison frame. **Extend:** Discuss how collecting practices, access and ethical expectations can change over time, using evidence rather than assumptions.

Reflection: Which question became narrower or more useful after you checked your sources?

Six invitations to write

Let form shape the inquiry

Aim for 250-500 words, or an equivalent supported oral presentation. Cite chapters for literary claims and sources for scientific claims.

1. Two entries, one changed traveler

Write a journal entry near the beginning and another near the end in Mia's imagined voice. Use a recurring object or question to show growth. Include an author's note explaining the textual evidence behind your choices.

2. The shell is missing | Chapters 8-9

Analyze how the lost-shell episode changes the tension of the story. Explain what it reveals about dependence, identity or trust. Consider how the scene would differ if Mia could solve everything alone.

3. A letter to a future visitor

Choose one place on the route. Write a thoughtful letter that combines two researched facts, one story connection and questions the visitor should ask locally. Avoid presenting the novel as a travel guide or speaking for residents.

4. A giant's imagined perspective | Chapter 26

Write a short whale shark scene from an invented nonhuman viewpoint. Follow it with a factual note separating scientific knowledge from your imaginative choices. Make wonder come from precise detail rather than exaggerated claims.

5. A recommendation for the boatyard | Chapters 28-30

Write an advisory memo identifying the family's goals, two design tradeoffs and three measurements needed before deciding on changes. Use the classroom model only as an illustration, clearly labeled hypothetical.

6. What makes a journey meaningful? | Whole book

Argue whether the voyage's greatest change comes from spectacular encounters, everyday work, relationships or something else. Use three scenes from different stages and address an alternative interpretation.

Revision checklist: Does the opening establish a clear purpose? Do examples come from across the book? Are geographic and species claims checked? Have I acknowledged uncertainty or another perspective? Does the ending show what the journey helped me understand?

Teacher response notes

Discussion and project checks

1-4: Look for preparation as a condition of exploration, complementary family roles and history as a source of questions. Require external evidence for historical claims beyond what the novel says.

5-8: Strong answers connect a setting or event to a specific decision. The lost shell should prompt discussion of vulnerability and relationships, not a reenactment of risky diving. Separate an animal's narrated action from inferred intention.

9-12: A family voyage and animal migration differ in causes, constraints and choices. Visitors' experiences are partial accounts. Students may identify ecological, cultural or community value, but real claims about a protected area's outcomes need sources.

13-16: Useful research designs compare observations over time and acknowledge limits. Encourage precise descriptions of individual communities and credit for local expertise. Students should not invent a resident's views or treat one guide as speaking for everyone.

17-18: Literary analysis explains how language creates wonder; scientific inquiry asks what can be observed or measured. Repeated visits may reveal variation, but a short series is not proof of a long-term trend.

19-22: Strong answers connect design choices to goals and constraints, recognize ordinary exchanges as meaningful, and support a growth interpretation across the novel. An ending can resolve a voyage while leaving an ongoing project unfinished.

Calculation key and common confusions

Atlas: 60 nautical miles / 6 knots = 10 hours; at 5 knots = 12 hours. Actual passage planning requires much more information.

Energy model: 24 kWh / 4 kW = 6 hours; 24 kWh / 6 kW = 4 hours; 6 kWh / 4 kW = 1.5 hours. These idealized results exclude losses and reserves.

Power versus energy: Kilowatts describe a rate of energy use; kilowatt-hours describe an amount. Solar production over a day is not a promise of constant instantaneous output.

Species: Whale sharks are fish, not whales. [R1] A species occurring at a site is not necessarily unique to that site. A fictional animal's statement is not a research dataset.

Feedback: Reward careful narrowing of a claim. "I cannot establish that from these sources" can be a stronger conclusion than an unsupported confident answer.

Student sheet: an expedition evidence log

Name: _____ Chapter / place: _____

What happens in the story? Include a specific detail.

What do I infer about a character, place or relationship?

What real-world claim do I want to check?

Source, author or institution, and date consulted:

What does the source support? What does it leave uncertain?

Whose perspective would improve this account?

A revised question or conclusion:

Student sheet: model and recommendation

Name: _____ Project: _____

Question, goal or decision:

Information used, including units and sources:

Calculation, diagram or comparison:

Assumptions and one important limit:

Recommendation and information needed next:

Assess the reasoning

Score each area 1-3 and identify a revision.

Evidence: 1 = unsupported claims; 2 = relevant details with sources; 3 = multiple sources or scenes connected carefully to conclusions.

Model: 1 = unexplained result; 2 = clear method and units; 3 = method, assumptions and limitations explained.

Perspective: 1 = one account treated as complete; 2 = another perspective identified; 3 = a respectful plan to broaden or check the account.

Communication: 1 = unclear organization; 2 = clear purpose; 3 = precise wording, traceable sources and meaningful revision.

My next improvement:

Curriculum, extensions and sources

Connections across subjects

Language arts: Setting, narrative structure, characterization, journal writing and argument. **Geography:** Relative location, routes and relationships between places. **Science:** Migration, biodiversity, observation and uncertainty. **Mathematics:** Rates, units and model assumptions. **Engineering:** Goals, constraints and tradeoffs. **Social studies:** Historical accounts and whose perspectives they represent.

These are suggested connections, not a claim of formal standards alignment. Adjust reading load and mathematical expectations to the class.

Before reading: Map what students think they know about Baja California. **During reading:** Add questions and source notes in a second color. **After reading:** Explain one corrected assumption and one perspective still missing.

Extensions: Create a class atlas exhibition; compare a historical expedition account with a modern public research video; analyze a small public dataset selected by the teacher; invite a marine educator to discuss how observations become evidence.

Source notes and further reading

Primary text: Luke Kilpatrick, Journey to the Sea of Cortez, Book 3, print proof ISBN 9798992482836. Chapter references are used because pagination varies. New activities follow the structure of Book 4's included reader's guide.

R1. Florida Museum, Whale Shark species profile. Classification, feeding and species background.

https://www.floridamuseum.ufl.edu/discover-fish/species-profiles/whale-shark/

R2. NOAA Fisheries, Gray Whale. Species and migration context.

https://www.fisheries.noaa.gov/species/gray-whale

R3. Western Flyer Foundation, The Sea of Cortez Expedition. Historical background on the 1940 voyage.

https://www.westernflyer.org/the-boat/the-sea-of-cortez-expedition/

R4. NOAA Fisheries, Marine Life Viewing Guidelines. Responsible observation; local requirements vary and should be checked separately.

https://www.fisheries.noaa.gov/topic/marine-life-viewing-guidelines

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