Exploring Saltwater Habitats

Written by Sue Smith with wildlife illustrations by Cynthia A. Belcher and cartoon illustrations by Miriam Katin

KEY IDEA  This book explores five saltwater habitats: coral reefs, kelp forests, deep seas, tide pools, and Antarctica. For each habitat, the book defines the habitat, provides facts about fascinating plant and animal species, and charts the life cycle of one type of animal.

LITERACY STANDARDS ADDRESSED IN THIS PLAN

RI.5.3  MAIN FOCUS Key Ideas & Details
Sessions 1, 2, 3
Explain the relationships or interactions between two or more individuals, events, ideas, or concepts in a historical, scientific, or technical text based on specific information in the text.

RI.5.4  Craft & Structure
Sessions 2, 3
Determine the meaning of general academic and domain-specific words and phrases in a text relevant to a grade 5 topic or subject area.

RI.5.5  MAIN FOCUS Craft & Structure
Sessions 2, 3
Compare and contrast the overall structure (e.g., chronology, comparison, cause/effect, problem/solution) of events, ideas, concepts, or information in two or more texts.

RI.5.8  MAIN FOCUS Integration of Knowledge & Ideas
Sessions 2, 3
Explain how an author uses reasons and evidence to support particular points in a text, identifying which reasons and evidence support which point(s).

RI.5.10  Range of Reading & Level of Text Complexity
By the end of the year, read and comprehend informational texts, including history/social studies, science, and technical texts, at the high end of the grades 4–5 text complexity band independently and proficiently.

SL.5.1  Comprehension & Collaboration
Sessions 1, 2, 3
Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 5 topics and texts, building on others’ ideas and expressing their own clearly.

L.5.4c  Vocabulary Acquisition & Use
Additional Instruction
Consult reference materials (e.g., dictionaries, glossaries, thesauruses), both print and digital, to find the pronunciation and determine or clarify the precise meaning of key words and phrases.

L.5.6  Vocabulary Acquisition & Use
Session 1, Additional Instruction
Acquire and use accurately grade-appropriate general academic and domain-specific words and phrases, including those that signal contrast, addition, and other logical relationships.

RF.5.3  Phonics & Word Recognition
Additional Instruction
Know and apply grade-level phonics and word analysis skills in decoding words.

RF.5.4c  Fluency
Session 2
Use context to confirm or self-correct word recognition and understanding, rereading as necessary.

W.5.2  Text Types & Purposes
Writing Task
Write informative/explanatory texts to examine a topic and convey ideas and information clearly.

W.5.8* Research to Build & Present Knowledge
Sessions 1, 2, 3
Recall information from experiences or gather information from provided sources to answer a question.
*standard adapted from another grade

W.5.10  Range of Writing
Write routinely over extended time frames and shorter time frames for a range of discipline-specific tasks, purposes, and audiences.
Session 1  Text Selection: pp. 3–10

Key Idea: Text Selection Coral reef and kelp forest habitats are explored. Coral reefs are formed slowly from the skeletons of millions of coral animals. Kelp is a massive seaweed that grows upward from the sea floor and is home to small plants and animals.

PREVIEWING THE TEXT  5 minutes
Read the book’s title and credits with students. Have students read the Contents page and read the first paragraph of the back cover.

What does the back cover tell you you’re going to read in this book?
- saltwater habitats, including the Great Barrier Reef, the deep sea, tide pools, kelp forests, Antarctica, animals in saltwater habitats

What do the chapter titles on the Contents page tell you?
- There’s a chapter for each of the habitats.

READING THE TEXT CLOSELY  10 minutes
Explain the learning focus to students and invite them to read page 3, including the map, illustrations, and labels. Check to see how they apply the focus to the text and provide support if needed. Then have them read the rest of the selection.

As we read, we’re going to notice lots of concepts, or ideas. When we read a new one, we’re going to relate it to the concepts we’ve already learned. Let’s inspect this page about coral reefs. What’s the main scientific concept on it?
- A coral reef is a habitat that’s built from the skeletons of millions of sea creatures.

What’s a related concept that the page also explains?
- A coral reef takes thousands of years to grow.

Let’s see how those two concepts are related. If something is made of millions of skeletons, why would it take that long to grow?
- I think it would take that long for that many skeletons of tiny animals to collect.

Yes. You’ve related how the coral grows to why it grows that way.

If students show they can apply the focus, set the reading assignment for the session. If not, ask them to reread pages 3–4 and list all the ideas they have learned on those pages. Then have them write a sentence relating two of the ideas to each other. Students may not read the entire selection during the session.

As you read, look for new scientific concepts and see how they relate. Remember to use text evidence when explaining relationships between concepts and ideas. For today’s reading, read up to page 10.

DISCUSSING THE TEXT  10 minutes
Invite students to state two scientific concepts or ideas they learned on pages 3–10, and to explain their relationship or interactions.
We’re going to review some of the many concepts we read about. We can discuss concepts that relate to the same habitat, as well as concepts that relate to different habitats. As we discuss these concepts, listen to each other’s contributions so you can add more. Let’s try that out. What does the text describe on page 7?

*kelp forests*

Let’s have one person tell us a concept about kelp forests.

A kelp forest has three layers: the canopy, the mid-water, and the floor area.

Now I’d like a different person to tell us a concept about the creatures on that page.

Each layer has different creatures living in it; each creature lives in a certain layer.

You’ve related a concept about the layers of the forest to one about the creatures of the forest. As I said earlier, we can relate concepts about different habitats. Let’s relate kelp forests to coral reefs. They’re very different. But how are they the same?

They’re both in the sea. They’re both habitats for sea creatures.

Does anyone else have ideas to share?

Coral reefs and kelp forests are saltwater habitats for animals. Animals can live in habitats made of other animals.

**Focus on the word *kelp* on page 7.**

Let’s talk about how we learned the meaning of *kelp*. What sentence on page 7 gives a definition of *kelp*?

the first sentence

What other information does the page give about *kelp*?

It tells about kelp forests.

First the text gave you the definition; then it expanded the definition with more information. As you read this book, look for information that helps you understand new words.

Confirm students’ good use of the focus and encourage them to keep it in mind whenever they read reports.

You did a great job using the focus of relating concepts in this first part of the book. As you read and reread, you’ll keep noticing more concepts including ones you didn’t notice the first time around.

**E-resource** ✅ Formative Assessment: Comprehension Using the Quick Start Planner, note this session’s learning focus. Observe each student’s articulation and use of text evidence to evaluate their effective use of the learning focus.

**Teacher’s Choice**

**COMPREHENSION: MAKE CONNECTIONS**

**E-resource** Formative Assessment Have students use the blackline master on page 10 to make connections about the habitats, animals, and plants they read about. Review students’ answers as you evaluate their mastery of the learning focus.

**Constructive Response: Collect Text Evidence**

**E-resource** ✅ Formative/Summative Assessment Have students use the blackline master on page 11 as they read. Students will collect details from the text to answer the question: *How are the habitats in the book alike or different?* *Use details in the text and illustrations to answer the question.* Review students’ collected evidence as you evaluate their mastery of the learning focus.
Session 2  Text Selection: pp. 3–10

RETURNING TO THE TEXT  5 minutes
Ask students to reflect on the text read previously. Guide them to recall how they applied the learning focus to their reading.

- Who’d like to remind us of what we read about last time?
  - We read about coral reefs and kelp forests.
- And what reading focus did we use to learn and talk about them?
  - We related the scientific concepts.
- Now we’ll return to the same part of the book and add new focuses while we keep relating concepts.

READING THE TEXT CLOSELY  10 minutes
Explain the learning focuses. Invite students to read page 6 and page 10. Check to see how well they have understood the focuses. If you are satisfied that students can apply it, set the reading assignment for the session. If not, provide corrective feedback as suggested on page 2 of this lesson plan.

- Today we’re going to look at the structure of the information in this book. Reread pages 6 and 10 silently. What do you notice about how they’re both structured?
  - They’re both about life cycles. They both focus on one kind of sea creature. They go from when it’s an egg, to when it hatches, to when it grows to adulthood.

  Yes, they go in order from the earliest events in the life cycle to the later events. So you have two pages in different parts of the book that are structured the same way but are about different creatures. Why do you think that is?
  - It helps you compare both creatures by seeing what their life cycles are.

- There’s something else that both pages include: evidence about the life cycles. What evidence does the text give to relate green sea turtle eggs and swell shark eggs?
  - Green sea turtles lay 50 to 150 eggs, which hatch after 43 days. Swell sharks lay 2 eggs, which hatch after 241 days.

- Why would the author need to include evidence?
  - So we know the facts are correct.

Formative Assessment: Fluency Listen to each student read a portion of the text. Observe students’ fluency. If students need additional practice with fluency, provide the necessary support at the end of the session. Ask students to note words or phrases they find challenging for discussion after reading.

DISCUSSING THE TEXT  10 minutes
Facilitate a discussion in which students find text structures from the reading and connect them to how concepts in the two chapters relate. Encourage students to ask questions and share ideas to check understanding of how the author uses reasons and evidence to support the points presented in the text.
We’ve found a text structure that repeats in this book: the life cycle page. Now we’re going to find out that there are a lot of other structures that repeat in this book. You may have noticed some of them as you read. What do you notice about the coral reefs chapter and the kelp forests chapter? They look similar; the same types of pages repeat in both.

Look at the first page of each chapter. What does that page do in both chapters?

It introduces the habitat.

Now look at the second page in each chapter. What similarities do you see?

In both chapters, there’s a heading, “Let’s explore,” and then there are text boxes telling about a different creature in each box.

And we already know what the last page of each chapter is about. What is it about?

the life cycle of a creature

We’ve figured out the structure of chapters in this book. Because of that, you’ll have an easier time relating scientific concepts. How do you think you could find a concept that’s similar in two chapters?

You could compare the matching pages in both chapters.

And once you’ve found the related concept, how would you use the structure of the chapters to find the author’s evidence?

You could go to the pages in both chapters that have the same structure, and search the facts the author gives and decide which ones support specific points.

How have we already tried that on two life cycle pages?

We matched evidence about green sea turtle eggs and swell shark eggs.

As you match facts and ideas from one chapter with another, you’ll get a deeper understanding of how creatures interact with their habitats.

Focus on the phrase life cycles in the heading and text on page 6.

We’ve been tossing the science term life cycle around. Does the book define it? Does the glossary define it?

Neither the book nor the glossary tells you what it is.

There’s no direct definition of life cycle in this book, but I think that by reading the life cycle pages, we have a good idea of what a life cycle is. I would like a brave person to explain what a life cycle is.

It’s how a creature’s life goes from the beginning all through the stages of its growth, from when it’s young to when it’s old.

I think it’s interesting that you understand this term without ever reading a definition of it. How did you come to understand it?

The book uses it a lot. I understand what the words life and cycle mean. The life cycle pages give a lot of factual evidence about how life cycles work. The illustrations also give evidence about life cycles.

Basically, to understand this term, you kept reading about it and the information sank in. That’s similar to using context clues, but with a bigger context. This time, the context isn’t just a few words that are near the term life cycle. The context is everything that the page says about life cycles.

Encourage students to spot science terms and other words in the text that give them trouble and to share them with the class so students can help each other figure out the meanings.
To wrap up the discussion, invite students to share how they used the learning focuses in their discussion groups. Remind them that collaborating during discussions helps each person gain a new understanding by taking in other people’s understandings.

In our discussions of this book, we’re often going to refer to the text, going over it together to share our understanding of its concepts, evidence, and structures. Why do you think science books often need a lot of discussion?

I think they need a lot of discussion because science books contain a lot of new information.

They do, and members of a group can fill in the gaps in each other’s understanding.

Formative Assessment: Comprehension Using the Quick Start Planner, note this session’s learning focus. Observe each student’s articulation and use of text evidence to evaluate their effective use of the learning focus.

FLUENCY FOLLOW-UP

Fluency Practice Have students read aloud brief, difficult passages, such as the boxed text about a creature. Ask them to describe their mistakes and hesitations; compare their observations with what you have observed. Have readers repeat the words or phrases that gave them trouble and explain the facts or concepts in their own words. Have classmates offer corrective explanations as necessary. Then have the readers read the text aloud again so that their increased understanding improves their pronunciation.

CONSTRUCTED RESPONSE: COLLECT TEXT EVIDENCE

Formative/Summative Assessment Have students continue to use the blackline master on page 11 as they finish reading. Then ask them to write a response on a separate piece of paper that answers the question: How are the habitats in the book alike or different? Use details in the text and illustrations to answer the question. Review students’ collected evidence as you evaluate their mastery of the learning focuses.

CLOSE READING OPTIONS

Summative Assessment Print the online blackline master for independent close reading. Ask students to read a portion of the Session 3 text selection independently, as indicated on the blackline master. Then have them respond to the prompts (summarize author’s message, identify critical vocabulary, respond to constructed response questions) before returning for Session 3’s small-group discussion. Alternatively, you can use the completed blackline master for summative assessment.

COMPREHENSION SHARE

As you read, keep track of ideas and concepts with notes or sticky notes. Think about how the concept in one note relates to the concept in another note. You may want to jot those relationships as part of your notes; for instance, in a note on page 4 you might write, “see note on page 9 about _____.”
**Session 3  Text Selection: pp. 11–22**

**Key Idea: Text Selection** In deep seas, many creatures adapt to living in darkness by making a light of their own called bioluminescence. At tide pools, waves change the temperature and conditions of the habitat on a daily basis. Icy, rocky Antarctica is home to whales, seals, terns, and penguins.

**RETURNING TO THE TEXT** 5 minutes

Explain that the class will go on to the final portion of the book, continuing to use the same reading focuses.

Briefly remind us of what we learned last time.

We learned that the structure of a text, such as the life cycle page in each chapter, can help us relate concepts and find evidence.

**READING THE TEXT CLOSELY** 10 minutes

State the learning focuses and invite students to read pages 12 and 16. Check to see how they are doing with application of the focuses, as you have done previously. Then have students read pages 11–22, paying specific attention to concept relationships, structural relationships, and the reasons and evidence that support them.

Look at the structures of pages 12 and 16. How can you tell that they’re similar?

Both have headings that say, “Let’s Explore!” and have three boxes underneath that tell about about three different creatures form that habitat.

Let’s think about how the concepts on the two pages relate. Who’ll make a suggestion?

On both pages, there’s a special environment and the creatures have unusual ways of eating and moving.

The author has given us a chapter-by-chapter structure that helps us relate concepts about habitats. Let’s see how the author supplies reasons and evidence for these concepts. On page 12, we learn that some deep-sea creatures have lights on their bodies. What’s the reason for that?

So they can see where they’re going and see each other.

What evidence shows those reasons?

Shrimp use lights to see their prey. Lanternfish have individual light patterns on their body so they can recognize each other.

**DISCUSSING THE TEXT** 10 minutes

Facilitate a discussion that links the three learning focuses. Remind students to build their own ideas by listening to and thinking about the ideas their classmates have expressed.

I’m going to challenge you to state something about the structure of the text that hasn’t been stated so far. Who’ll share one?

The structure of the very end of the book is different because it contains the glossary and the index.

**LEARNING FOCUSES** RI.5.3, RI.5.5, RI.5.8

Students return to text to read closely and continue to explain the relationships between scientific concepts using text evidence. They compare and contrast the structure of information in different sections of the text, with an emphasis on chronological structure. They explain how the author uses reasons and evidence to support specific points.

**VOCABULARY** RI.5.4

Have each student state the name of a creature in the book whose way of life they found interesting, or assign a creature to each student. Tell students to look up the creature in the index and then go to the appropriate page(s) to read about it. Finally, have each student write a glossary entry that includes the information from the book. You might want to combine all the students’ entries into an alphabetized list.

**SL.5.1 DISCUSSION Collaborative**
Many informational books end with a glossary and an index. In this book, you can see these clearly because they’re different from the rest of the book’s structure. How do the glossary and index relate to the concepts in the habitat chapters?

The definitions in the glossary help you understand specific concepts, such as adapt or camouflaged.

What about the index?

The index tells you where to find information that will help you understand a concept, such as life cycles.

Does the index help you find evidence about the author’s points?

Yes, it gives the location of information about each creature the author discusses.

Support students as they reread and discuss the text.

As you read and talk about each habitat separately, locate the concepts, reasons, and evidence in the chapter. Think about how those ideas relate to previous habitats. Finally, share ideas to find concepts that apply to the whole book and also to habitats in general.

**CONSTRUCTED RESPONSE: WRITE TO SOURCE**

Formative/Summative Assessment Have students continue to use the blackline master on page 11 as they finish reading. Then ask them to write a response on a separate piece of paper that answers the question: How are the habitats in the book alike or different? Use details in the text and illustrations to answer the question. Have students use the text evidence they collected to support their writing.

Writing Task: Informative

Summative Assessment Explain to students that they will write a report about two habitats and the creatures living in them. Then they will conclude their report by comparing and contrasting the two habitats. First they will choose two habitats to write about. They will state the name of each one and describe what’s special about it. Then, they will describe a fascinating creature that lives in each habitat. They will conclude their report by comparing and contrasting the two habitats. Students will work independently to write their reports, using the planning organizer on page 12 and the text evidence they have collected. Consider having students publish their reports by reading them aloud.
Sometimes a creature’s name tells you something about the creature, like starfish or lanternfish. Other times, it doesn’t, like kelp. The book has told us what kelp is, but we can find out extra information by looking up its name in the dictionary. My dictionary tells me that kelp is a large seaweed and that it is usually brownish. It tells me that sometimes people burn it because its ashes contain iodine, which is a medicine people put on wounds. What if I wanted to learn even more about kelp? What reference book should I look it up in?

the encyclopedia

When you first read the word incubates on page 20, you might not have understood it. What does the nearby text tell you?

Incubating is something a male emperor penguin does with an egg when winter approaches.

Does this context tell you exactly what incubating is?

no

What other feature on the page gives you a clue?

The illustration shows a penguin resting an egg on its feet.

Now I’m thinking that incubating might mean resting something on your feet. But that just doesn’t sound right to me. It doesn’t explain anything. I’m wondering why the emperor penguin performs this strange action. Incubate must mean something else. Then I remember there’s a part of the book that might define this word. What is it?

the glossary

What definition does the glossary give for incubate?

“to keep warm in order to hatch”

Aha, the mystery is solved! Putting the glossary definition, the text box, and the illustration together, what do you know about incubation?

Male penguins keep the eggs warm for hatching by resting them on their feet.

This word is a mouthful. You can figure out its pronunciation by dividing it into syllables. Who’ll volunteer to do that?

bi/o/lu/mi/ne/scence

The sentence it appears in tells you its meaning. What is it?

a light that animals make on their own

Word parts help you with the definition, too. The root lumin means “light.” Does anyone know what the prefix bio- means?

“life”

The suffix -ence usually indicates a noun. Put them together, and bioluminescence is . . . .

light that a living thing makes
Comprehension: Make Connections

You read about coral reefs and kelp forests and the many plants and animals that live there. Answer the questions below using information in the text and illustrations of Exploring Salt Water Habitats.

1. How is a coral reef different from other reefs? How does the Great Barrier Reef compare to other reefs?

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

2. Choose a fish that you read about. Describe how it is similar to and different from other fish living in the same habit.

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

3. Choose another animal or plant that you read about. Describe how it is similar to and different from other animals or plants living in the same habit.

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

Score: _________
Collecting Text Evidence

How are the habitats in the book alike and different? Use evidence about the traits of each habitat and the creatures living in it.

Use multiple copies of this chart to collect evidence you can use to answer the question. Include page numbers as you take notes.

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Score: _________
Writing Task: Planning Your Report

Write a report about two habitats from the book, and one creature from each habitat. Conclude your report by comparing and contrasting the two habitats. Use the text evidence you have collected to support your writing.

Title:

I. First Habitat

A. definition and description

B. creature living in this habitat

II. Second Habitat

A. definition and description

B. creature living in this habitat

III. Conclusion: compare and contrast the habitats

NOTE: Write your response on a separate piece of paper or on a computer. Read your writing when you are done and make any necessary revisions.

Score: __________