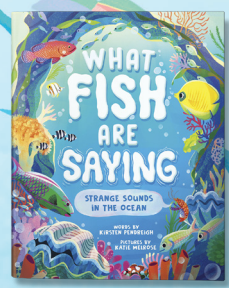


An Educator's Guide for **WHAT FISH ARE SAYING: STRANGE SOUNDS IN THE OCEAN**

Words by Kirsten Pendreigh | Pictures by Katie Melrose



Discussion & Activity Guide for Grades K, 1, 2 and 3

ABOUT THE BOOK

Did you know that deep in the ocean, fish are loud? Scientists have recently discovered that fish and shellfish grunt and groan, crackle and cluck, and even burp and boop to communicate. They warn each other, woo each other, and welcome each other with all kinds of sounds, making the ocean quite noisy!

ABOUT THE AUTHOR

Kirsten Pendreigh is a poet and author who lives in British Columbia. Kirsten loves being in, on, and beside the ocean: swimming, kayaking, and hiking along the shoreline. She has published multiple picture books about the wonder of our natural world.

<https://www.kirstenpendreigh.com>



ABOUT THE ILLUSTRATOR

Katie Melrose has always had a special love for the ocean and a curiosity about what lies beneath, including what the fish are saying. After graduating with a BFA in illustration, she found that nature continued to influence her artwork, shaping it into vibrant storytelling.

<https://www.katiemelrose.com>

PRE-READING QUESTIONS

Read the title of this book and look at the illustrations. Do students think that the fish will say actual words?

Do students think fish talk to each other? What would they say? How do animals other than fish "say" things, or communicate?

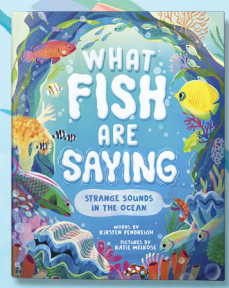
Look at the endpapers of the book. What do students think the grey, squiggly lines mean?

VOCABULARY

While you are reading the book, have students raise their hands when they hear unfamiliar words or phrases. Help students to derive the meanings from context and add each word to a list. Once you have finished reading the story, discuss these unfamiliar words again. Can students remember the meaning of the word or use it in a sentence?

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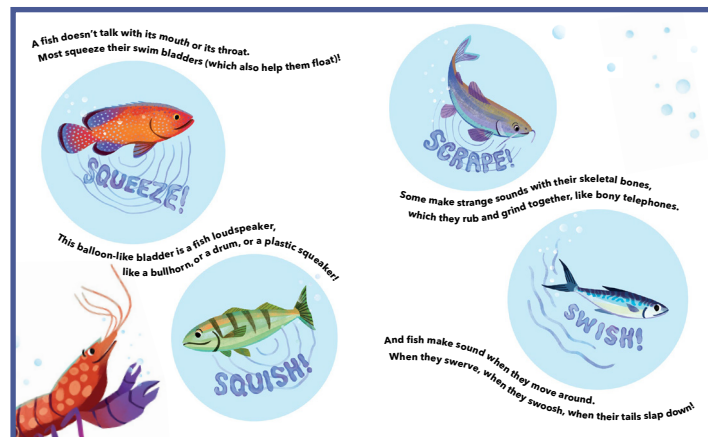
POST-READING QUESTIONS AND ACTIVITIES

QUESTIONS AND ANSWERS

- Do fish make noises?
- What do the white and grey squiggly lines in the drawings represent?
- What sorts of things do fish communicate with each other?
- What different body parts do fish use to make sounds?
- Does sound travel faster and farther in water or in air?
- How do scientists listen to fish?
- What body part helps fish float?
- How are the people in the beginning and end of the story moving across the water?
- Give an example of phrases or words repeated at different places in the book.
- What illustrations of the fish are the students' favorites?

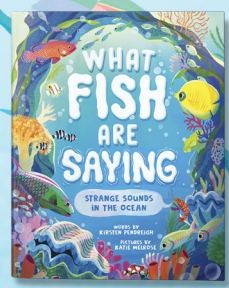
PICTURES AND WORDS

Picture books are unique. They use both words and illustrations to tell their story. As a class, re-read *What Fish are Saying* and look at the illustrations. How do the words and pictures work together to tell the story? What information do readers get from the pictures? What do they learn from the text? For example, when the text describes how animals make sounds by saying, "A fish doesn't talk with its mouth or its throat./Most squeeze their swim bladders (which also help them float)!" what are the pictures showing the reader? What do we learn from the text that we couldn't get from the illustrations? How do other parts of the story use words or pictures to tell what the fish are saying, and how they are saying it?



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ONOMATOPOEIA

Using examples from the book, discuss what onomatopoeia is with the class. These “sound- words” are often part of the illustrations as well as the text. Have students search through the book to make a list of “sound-words.”

WHAT DOES SOUND LOOK LIKE?

We can't see the sounds made by creatures under the sea. That makes creating a picture book about sounds a real challenge. Look at the illustrations in the book. How does the illustrator show the sounds the fish are making? What do the wavy lines represent? Starting with the web resources in the back of the book, search the internet to locate images of sound waveforms to “see” more examples of what sounds look like.

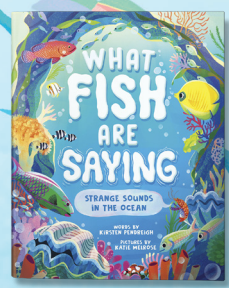
"MY LUNCH!", "I WANT THAT!", "SHARK?"

One spread shows fish speaking English. They say things like, “My lunch!”, “I want that!”, “Shark?” and more. Review this spread. How do we know the fish are making audible sounds? Are the fish really speaking English? What are these pages trying to tell the reader about what fish “say” or communicate to each other?



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FISH SOUNDS

Have students practice making the sounds fish use to communicate, as described in the book. Sounds for words like “bark” and “moan” are easier to make, but how would students make sounds like the “rasp” of a ghost crab? Use the web resources listed in the back matter of the book to find recordings of fish making their signature sounds. Did students sound like the fish? How close did they get?

CACOPHONY OF CRACKLES

There is one undersea animal who appears in the background of every illustration. This creature makes a distinctive noise, one that appears throughout the whole book. What is the name of the animal? How does it make its sounds? What function does this noise serve for the rest of the inhabitants of the ocean? How is this sound described when there is only one creature making it? When there are many?

PORTRAIT OF A FISH

Have students pick one fish from the book as the subject for an original poster drawing. Working with an adult as needed, have students research their fish, locating photos and illustrations to help them draw their picture. What features are most distinctive? Is it the shape of the body? The color? Patterns on the skin? How about the fins? When they are finished, come together as a class to discuss their posters. How are drawings of the same fish different? How are they the same? Create a classroom gallery of fish.

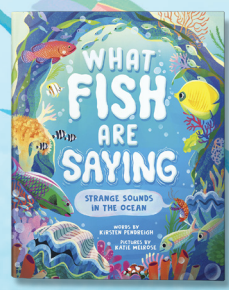
FISH TALK

Fish don’t “talk” like we do with words and sentences. They communicate with each other by making distinctive sounds. Using hydrophones, scientists have learned what sounds many fish make, and often what they mean. According to the book, what do fish “say” to each other, and why?

People also communicate. What are ways we can communicate besides using words? Have volunteers try to communicate something to the class without talking – using only noises, facial expressions, hand gestures, or actions. Which of these ways do they think are the most effective when we want to communicate?

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THAT'S WHAT FISH ARE SAYING!

The last spread of *What Fish are Saying* shows the fish from the book all having their “say.” Using what students learned from the book and the notes in the back matter, identify the individual sea creatures. What are their names? What noises are they making? What might they be communicating to each other?

For fun, have students imagine what the fish might be saying to each other if they could speak English. What are they talking about? Are they warning about danger? Looking for food? Telling knock-knock jokes? Let imaginations run wild!

NOTE:

Be sure to check out the back matter of *What Fish are Saying*. It contains more information about the fish featured in the book, as well as scientific explanations, diagrams, and web resources.