

Focus Question:

How are animals from the four ocean zones connected by the undersea food web?

Book Summary

Text Type: Nonfiction/Informational

Phytoplankton, the most universally eaten organism in the sea, takes readers through the various ocean layers. *The Amazing Undersea Food Web* reveals how ocean organisms are linked through the intricate food web. The book can also be used to teach students how to distinguish fact or opinion and the proper use of commas in a series.

The books and lesson are available for levels X and Z2.



Lesson Essentials

Instructional Focus

- ☐ Ask and answer questions while reading
- ☐ Determine whether a detail is a fact or opinion
- ☐ Describe information provided by photographs
- ☐ Recognize and use commas in a series
- ☐ Identify and use synonyms and antonyms

Materials

- ☐ Book—*The Amazing Undersea Food Web* (copy for each student)
- ☐ Fact or opinion, commas in a series, synonyms and antonyms worksheets
- ☐ Discussion cards
- ☐ Book quiz
- ☐ Retelling rubric

Vocabulary

Boldface vocabulary words also appear in a pre-made lesson for this title on VocabularyA-Z.com.

• Words to Know

Story critical: *abyssal zone* (n.), *aphotic zone* (n.), *disphotic zone* (n.), *euphotic zone* (n.), *photosynthesis* (n.), *phytoplankton* (n.)

Enrichment: *accumulation* (n.), *anemone* (n.), *bioluminescence* (n.), *chlorophyll* (n.), *faults* (n.), *snorkeling* (n.), *submersibles* (n.), *trenches* (n.), *zooplankton* (n.)

- **Academic vocabulary:** *convert* (v.), *enough* (adj.), *fragile* (adj.), *process* (n.), *provide* (v.), *support* (v.)

Guiding the Reading

Before Reading

Build Background

- Create a KWLS chart on the board. Review or explain that the *K* stands for knowledge we know, the *W* stands for questions we want to know, the *L* stands for the knowledge we learned, and the *S* stands for the questions we still have.
- Discuss what students know about the ocean's food web, phytoplankton, and photosynthesis. Use the information generated to fill in the *K* column of the class KWLS chart.
- Ask students what they want to know about the ocean's food web. Write their questions in the *W* column of the KWLS chart.

Introduce the Book

- Give students their copy of *The Amazing Undersea Food Web*. Guide them to the front and back covers and read the title. Have students discuss what they see on the covers. Encourage them to offer ideas as to what type of book it is (genre, text type, and so on) and what it might be about.
- Show students the title page. Discuss the information on the page (title of book, author's name).
- Preview the table of contents on page 3. Remind students that the table of contents provides an overview of the book. Ask students what they expect to read about in the book, on the basis of what they see in the table of contents. (Accept all answers that students can justify.)

Introduce the Reading Strategy:

Ask and answer questions

Explain to students that having prior knowledge about a topic, and asking and answering questions while reading, can help readers understand and remember information in a book. Direct students to the "Words to Know" box on the copyright page and model asking questions about the list of words. Have students create a KWLS chart on a piece of paper. Review the section titles with students. Have students work with a partner to write down what they already know about the section titles in the

Guiding the Reading (cont.)

K column. Have students write at least one question they have while reading in the W column.

Introduce the Comprehension Skill:

Fact or opinion

- Review with students the difference between fact and opinion. Write the words *Fact* and *Opinion* on the board. Remind students that a *fact* is a detail that is true and can be proven and an *opinion* is what someone thinks, feels, or believes about something.
- Have students work in small groups to read page 4 and identify the facts in the text. Invite each group to share facts with the rest of the class. Record this information on the board under the *Fact* heading. Then have students create opinions about the same information. Record this information on the board under the *Opinion* heading. Have students work in groups to review the information on the board and discuss the difference between fact and opinion.

Vocabulary

Have students turn to the “Words to Know” box on the copyright page. Discuss each word with students. Then, have students turn to the glossary on page 23. Explain that the glossary provides definitions for the vocabulary words in the book. Point out the use of each content word and academic vocabulary word in the book, and then use each word in a different model sentence. Have students work in groups to create posters for these words. Have them include on each poster the word and its part of speech, the definition, the word in an example sentence, and a picture illustrating the meaning of the word.

Set the Purpose

- Have students read to find out more about how animals from the four ocean zones are connected by the undersea food web. Write the Focus Question on the board. Invite students to look for evidence in the book to support their answer.
- Have students make a small question mark in their book beside any word they do not understand or cannot pronounce. These can be addressed in a future discussion.

During Reading

Text-Dependent Questions

As students read the book, monitor their understanding with the following questions. Encourage students to support their answers by citing evidence from the book.

- What is at the center of the ocean’s food web?* (level 1) page 5
- What would happen to the food chain if herring went extinct?* (level 3) page 8

- How would you summarize the euphotic zone?* (level 2) pages 10–14
- How would you compare species in the disphotic and aphotic zones?* (level 2) multiple pages
- Why are giant squids still a mystery?* (level 3) page 16
- How is phytoplankton related to animals’ diets in the twilight zone?* (level 3) page 17
- What conclusions can you draw about life at the bottom of ocean trenches?* (level 3) page 20
- What facts support the idea that phytoplankton is important to the ocean’s food web?* (level 3) multiple pages

Text Features: Photographs

Explain that photographs help readers know exactly what something looks like. Have students work with a partner to read page 19. Have students review the photograph on page 18. Ask students: *How does the photograph support details in the text? Did the photograph match the image in your mind when you read about bioluminescence? Why are photographs important text features?* Have students review other photographs in the book and discuss in groups the details they provide. Invite volunteers to share their thoughts with the rest of the class.

Skill Review

- Model for students how you ask and answer questions while reading using the KWLS chart. Invite volunteers to share their questions and answers with the rest of the class. Discuss with students how searching for the answers to their questions helped them better understand what they read. Have students generate any remaining questions about the undersea food web that were not answered in the book and record them in the S section of their chart.
- Read page 5 aloud and model identifying fact and opinion.
Think-aloud: *This page says phytoplankton is algae. Algae are small plants with no roots, so they can float freely through the ocean. All of these details are facts because they can be proven. An opinion expresses a feeling or belief about something. An opinion from this page would be: “Some people might think it’s a raw deal to be food for everybody else, but I find it to be quite a powerful job.”*
- Model how to complete the **fact-or-opinion worksheet**. Have students read sentences from the book and identify whether they are facts or opinions.

After Reading

Ask students what words, if any, they marked in their book. Use this opportunity to model how they can read these words using decoding strategies and context clues.

Skill Review

Worksheet: **Fact or opinion**

Review the fact-or-opinion worksheet that students completed. Have students share their work in groups. Invite volunteers to share with the rest of the class.

Comprehension Extension

Discussion cards covering comprehension skills and strategies not explicitly taught with the book are provided for extension activities.

Response to Focus Question

Have students cite specific evidence from the book to answer the Focus Question. (Answers will vary. Samples: *Animals from all four ocean zones are connected by the food web because almost every sea creature eats another sea creature. At the center of this food chain is phytoplankton. It thrives in the euphotic zone because that is where it gets sunlight and creates its own food. Phytoplankton is known as "marine snow" as it drifts down to the disphotic zone. In the aphotic zone, deep ocean trenches spew hot water and minerals to support life. Animals have adapted to their ocean zone in order to find food and thrive.*)

Comprehension Checks

- **Book quiz**
- **Retelling rubric**

Book Extension Activities

Build Skills

Grammar and Mechanics: **Commas in a series**

- Explain to students that whenever a list of three or more items is made, a comma must be placed between the items. Listed items can be nouns, verbs, adjectives, or entire phrases or clauses. Remind students that this is only one of the many uses for a comma.
- Have students turn to page 11 and read the following sentence aloud: *Most species of fish, including salmon, tuna, mackerel, cod, and swordfish, stay up in the sunlight where there is plenty to eat and good light for hunting.* Explain that when the sentence is read aloud, the commas create pauses between the words or phrases. Point out the list of fish, the commas used to separate each item, and the use of the word *and* before listing the last phrase.
- Have students turn to page 13 and locate the following sentence: *Coral polyps are often killed by pollution, boat engines breaking them, or divers stepping on them, and once the corals die, all the other reef life suffers as well.* Point out the phrases separated by commas. Talk about the location of the commas within the list. Point out that the last phrase (*divers stepping on them*) is joined to the list by the word *and* following the comma.

- **Check for understanding:** Have students turn to page 8. Ask them to find a list of zooplankton (*krill, larvae and babies of crabs, jellyfish, shrimp, and other fish*). Ask them to circle the commas and notice that the last item is added to the list after the word *and*. Point out that other commas are used on the page, but not to separate a list of words.
- **Independent practice:** Introduce, explain, and have students complete the **commas-in-a-series worksheet**. If time allows, discuss their answers.

Word Work: **Synonyms and antonyms**

- Write the word *fierce* on the board. Ask students to suggest a word that means almost the same thing (*vicious, ferocious*, and so on). Review or explain that a word that means the same or almost the same as another word is called a **synonym**. Ask students to suggest a word that means the opposite of *fierce* (*calm, gentle*, and so on). Review or explain that a word that means the opposite of another word is called an **antonym**.
- **Check for understanding:** Have students turn to the first paragraph on page 4 to find the word that describes blue whales (*enormous*). Ask students to suggest a synonym (*gigantic, massive*, and so on). Ask students to suggest an antonym (*tiny, small*, and so on).
- Use a thesaurus to look up the word *enormous* and show how a thesaurus is used. Give students a thesaurus. Ask them to find the word *enormous* and have them confirm the synonyms suggested. If the thesaurus lists antonyms, have them find antonyms for the word. Explain to students that some dictionaries also list synonyms and antonyms for words.
- **Independent practice:** Introduce, explain, and have students complete the **synonyms-and-antonyms worksheet**. If time allows, discuss their answers.

Connections

- See the back of the book for cross-curricular extension ideas.