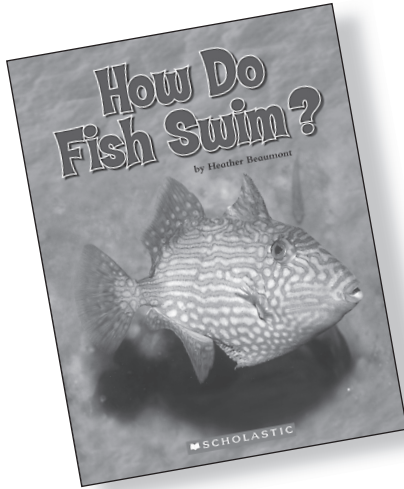


# How Do Fish Swim?



Written by Heather Beaumont

**Text Type:** Non-fiction: Description/Explanation — Report

**Guided Reading Level:** O

**Summary:** The author asks the reader to explore the many special bodily adaptations that allow fish to stay afloat, move, and control their direction in the water.

## Text Features

- ▶ table of contents
- ▶ index
- ▶ subheadings

## Visual Literacy

- ▶ inset photographs
- ▶ diagrams
- ▶ labels

## Text Supports

- ▶ strong illustration support
- ▶ labels
- ▶ diagram
- ▶ table of contents
- ▶ index
- ▶ subheadings

## Possible Text Challenges

- ▶ layout sometimes presents large amount of information
- ▶ complex sentence structure
- ▶ technical/scientific vocabulary, e.g., *caudal*, *pelvic*, *pectoral*, *dorsal*, *predator*, *cartilage*

## First Session (pages 3-11)

### Reading Strategies

#### Comprehension

- ▶ predicting
- ▶ synthesizing

#### Working with Words

- ▶ understanding technical/scientific words

### Assessment Opportunities

Note each student's ability to:

- ▶ predict based on text and photographs
- ▶ synthesize information to retell key information from the text
- ▶ recall and analyze information from text and photographs
- ▶ use illustrations to solve technical and scientific terms
- ▶ use index to locate information

### Oral Language Opportunities

- ▶ discussing with a partner
- ▶ discussing with a group

**Teaching Tip:** When assessing students' learning, make sure you observe them throughout the Guided Reading session and not just at the end.



## BEFORE READING

### Making connections: comparing

#### **Activating and Building Prior Knowledge**

Tell students they will be comparing the body features of various fish to answer the question “How do fish swim?” Discuss the concept of comparing, using students themselves as examples, e.g., say, *Let's compare heights. Who is the tallest in the class? If we compare hair, which students have curly hair and which students have straight hair? If we compare eyes, which students have brown eyes, which have blue or grey eyes, which have hazel eyes?*

### Inferring/predicting

Ask, *Has anyone ever gone swimming? How do you swim? What parts of your body do you use to help you swim?* Show students the picture on the front cover of the book. Say, *How do you think this fish swims? Does it have arms or legs?* Have students predict features (adaptations) fish have that enable them to swim. Make a chart on the board, comparing the features that allow humans to swim to the features that allow fish to swim.

Read the book's title and the author's name. Again, direct students' attention to the photo on the front cover, and say, *We know that fish propel themselves through the water with fins. How many different kinds of fins do you see on this fish? How many different names do you think there will be for each of these fins?* Give students time to share their ideas and express their opinions.

**ESL Note:** Use visual, tactile, and kinesthetic examples to help students understand. For example, have students demonstrate verbs such as *wiggle, flutter, vibrate, flap, and paddle*. As well, bring in some flippers to show students how they help push water out behind a swimmer.

### Text features/predicting

#### **Overcoming Text Challenges**

Hand out copies of the book. Turn to the table of contents and read it. Post a piece of chart paper with entries from the table of contents already written across the top. As you read the table of contents, invite students to predict what kind of information or facts might be in each section. If they cannot predict, ask them what kind of questions come to mind when they read the titles? Record students' predictions/questions. Explain that a table of contents helps locate information in a text but it can also help predict the contents of a text. Say, *By asking yourself, “What could this be about?” you can answer with your predictions. That helps you organize information as you read, and understand the information the text provides.*

Have students do a quick walk through the book to note the coloured boxes that appear on some of its pages. Say, *What is in those coloured boxes?* Discuss the fact that they contain more facts and pieces of information. Ask, *Do you think these pieces of information are part of the “story” the author is telling you,*

**Language predictability/  
visual literacy**

or are they extra things she thinks you might find interesting? When do you think you should read them—before you read the page, after you read the page, or while you're reading the page? Help students navigate the pages with more complex layout by reading the text itself first and then reading the captions and information in coloured boxes.

**Predicting**

Next, have students look at the back cover. Ask, *Has anybody ever heard the terms pectoral fins or swim bladder before? Look at where the labels point to. How does that help you understand something about what those terms mean? How do you think each of these might help a fish swim? Do you think all fish have pectoral fins and swim bladders? Do you think we might find out about that in the book?* Tell students to watch for labels within the book to help them understand the special vocabulary that relates to fish and how they swim.

**Setting a Purpose**

Tell students that as they read the book to page 11, they will be reading to see if their predictions about the information in each section of the book were correct.

**Teaching Tip:** Write the purpose for reading on chart paper or a board so it is visible to all students in the group. This will help them focus as they read and encourage independence when they finish reading.



**DURING READING**

Ask each student to read the book independently, thinking about the purpose that has been set.

Observe and listen to students as they read the text, assisting them with word-solving strategies, vocabulary, punctuation, and comprehension queries. Offer prompts to help students problem solve as they read. For example, ask, *Can you find a chunk to help you solve the word? Can you take apart that word to help you solve it?* Offer other prompts to help students solve unfamiliar words, such as, *Can you show me a place in the book where a word is defined right after the word appears?* (*contract*, page 6)

Note students' successful use of reading strategies and any difficulties they encounter.

If students finish before others have completed the reading, ask them to go back and reread then discuss with a partner whether their predictions were accurate.

**ESL Note:** Make a photocopy of the illustration on page 11, deleting the text at the bottom of the page. Post the page so students can readily see it. Discuss and help students with the pronunciation of each label before they begin to read, so they will be comfortable with these terms when they encounter them.



## AFTER READING

### Predicting

When students have finished reading the text to the end of page 11, refer them to the chart to check their predictions about the contents of each section. Discuss what they found helpful from the text to confirm or change their prediction for answering the question “How do fish swim?” (print illustration, photos, and picture comparison) Revisit specific cues that students found helpful. Record new ideas on the chart paper. Tell students that in the next session, they will be reading the rest of the book to find out more about some features fish have inside their bodies that help them swim. They will also find out about more unusual fish.

### Synthesizing

Revisit pages 6 and 7. Have students try to act out the movements of an eel using the diagram from page 7. This will be particularly helpful for ESL students. Say, *You can move like a moray eel. What else moves like a moray eel?*

Look at the next several pages, pointing to different types of fish and asking students to compare the ways in which each fish moves. Note on page 8 the way a fish’s fins are compared to paddles. Have students share their explanations of why the author would use this comparison. Encourage students to examine their own hands and how they use them to swim. For example, ask, *How do you position your hands when you want to push yourself forward through the water?* Encourage students to note that they point their hands forward when they move their arms to the front of their bodies to do the breast stroke. When they move their arms back to push themselves through the water, they angle their hands so that the flat of their hands can push away as much water as possible to help move them through the water.

### Word solving and building

Invite students to select any vocabulary they found challenging. Write the words on cards and have students sort them as action words or labelling words.

Model the positive strategies you observed during the lesson. For example, say, *I noticed Tanya studying the image on page 7 and trying out the actions in the fingers to block off parts of unfamiliar words in chunks, then putting the chunks back together in a whole word. That’s what good readers do.*

# Second Session (pages 12-16)

## Reading Strategies

### Comprehension

- ▶ predicting
- ▶ synthesizing

### Working with Words

- ▶ understanding technical/scientific words

## Assessment Opportunities

Note each student's ability to:

- ▶ predict based on text and photographs
- ▶ synthesize information to retell key information from text contents
- ▶ recall and analyze information from text and photographs
- ▶ use illustrations to solve technical and scientific terms
- ▶ use the index to locate information in the text

## Oral Language Opportunities

- ▶ discussing with a partner



## BEFORE READING

### Synthesizing

#### **Activating and Building Prior Knowledge**

Show and read the title of the book once again. Ask students the main things they learned in the last session about how fish swim.

### Predicting

Show the back cover of the book. Ask students what body features are shown on the back cover that allow fish to swim. Looking at the table of contents written on chart paper from the previous session, have students predict what kind of information they will find in each of the remaining pages of the book. Record their predictions. Focus on predictions for “Different Strokes.” Using the back cover, invite students to further predict what kind of movement is made by pectoral fins and what a swim bladder might contain to help a fish swim.

### Text features/visual literacy

#### **Overcoming Text Challenges**

Say, *You have seen a pectoral fin labelled on the back cover. You also read about it in the last session on pages 10 and 11. Do you think either of these terms might be mentioned anywhere else in the book? What if you wanted to read everything the book had to say about pectoral fins and swim bladders. Is there a way to find that information easily?* Some students may know how to use an index. If any do, give them an opportunity to demonstrate. If not, have students turn to the index at the back of the book and find the *pectoral* entry under “Fins.” Give them an opportunity to turn to the page numbers listed and allow them to look up some other terms in the index and practise using it.

Remind students to read all the parts of text, including the print in the coloured boxes, as well as any labels and diagrams.

## Synthesizing

### **Setting a Purpose**

Explain that today as they read this book, they are to think about what type of movement each body feature allows the fish to make.



## **DURING READING**

Ask students to read the text independently, thinking about the purpose for their reading. Encourage students to stop after every couple of pages to reflect on their reading and think about how a particular body part on a fish helps it make a certain type of movement.

Observe and listen to students as they read the text, assisting them with word-solving strategies, vocabulary, punctuation, and comprehension queries.

Note students' ability to decode unfamiliar words and any difficulties they encounter.

Encourage students who finish early to reread pages 12–16 independently or with a partner and to tell a partner what they have learned about how a fish's body parts help it make different kinds of movements.



## **AFTER READING**

### **Analyzing**

Ask, *What key body features do fish have that help them swim?* Elicit several responses from students. Have them turn to a partner and name several different types of fins. Invite them to dramatize the fin type to demonstrate the movement each fin is responsible for. Ask, *How does a shark stay afloat? Has anyone ever seen a seahorse move? Can you show me?* If no one knows how a seahorse moves, demonstrate the up-and-down motion for students.

### **Synthesizing**

Have students share with a partner two key things they learned about how fish swim. Once they have had an opportunity to share, ask, *What have you learned about swim bladders?* If students cannot recall any information, ask, *Where are swim bladders found on fish?* Give them the opportunity to explore their responses. Draw a Venn diagram on chart paper, and write “humans” on one side and “fish” on the other. Encourage students to elicit words for both sides of the diagram. Discuss the notion that humans and fish may share some common characteristics that help them swim. Write these characteristics in the centre of the diagram.

### **Rereadings**

Give students the opportunity to reread the book with a partner or take the book home to read with family members.

### **Focused Follow-up**

The following activities are optional. Choose those that best meet the needs of your students.

**Synthesizing**

***Contrasting and Comparing***

Give students a copy of the BLM. Have them fill in the chart to compare and contrast the features of several different types of fish. They can put Xs or checkmarks in the corresponding boxes.

**Analyze/synthesize**

***How Do Animals Swim?***

Invite students to write a brief report on how an animal of their choice swims, using print and drawings. Have them choose an animal with which they are familiar, e.g., a dog, a frog, a beaver.

**Synthesize**

***Fishy Behaviour***

Take students to the gym or outdoors and provide an opportunity to have them dramatize what they have learned. They can wiggle, swish, “swim” backwards and forwards, and in an up-and-down motion like a seahorse. They can pretend to be different kinds of fish, such as a shark or flatfish. They can demonstrate different kinds of fins with their hands.

**Language predictability**

***Word Webs***

Provide students with copies of semantic word webs. Set some exemplars of completed webs at your writing table. Have students graphically explore the meaning of one or two new and challenging words from the report.

# Comparison Chart

Name: \_\_\_\_\_

	Bone	Cartilage	Liver	Muscles	Caudal	Dorsal	Anal	Pectoral	Pelvic
Atlantic Cod									
Eel									
Parrotfish									
Sting Ray									
Sailfish									
Sea Lamprey									
Seahorse									
Shark									
Spotted Dogfish									
Swordfish									
Tuna									