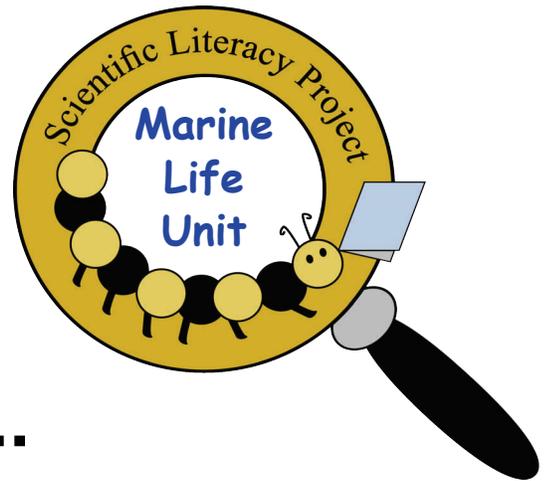


Teacher Book Guide



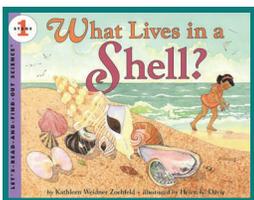
What Lives in a Shell?

by Kathleen Weidner Zoehfeld

What We'll Learn

This book gives children a basic introduction to what shells are, where they come from, and the living things that inhabit them. Key science concepts include:

- Living things come in many forms (head, legs, and tail are not required).
- Shelled animals inhabit many areas (land, shores, and underwater



- environments).
- Shells are animal homes and are critical for their safety and survival.
 - Shelled animals vary in shapes, colors, sizes, and methods of locomotion.

The colorful and age-appropriate illustrations are engaging for young readers and assist them in grasping the material presented.

Words of Science

- | | |
|---------------------|----------------|
| hard | hollow |
| shell | smooth |
| empty | home |
| safe | warm |
| nests | tunnel |
| cave | land |
| people | snail |
| enemy | head |
| foot | opening |
| slow | flat |
| race | paw |
| crab | sand |
| claws | armor |
| tight | whelk |
| conch | clam |
| oyster | hinge |
| underground | |
| frightened | |
| hermit crab | |
| surroundings | |

Before You Dive In...

Before reading the book, show the children the **cover**.

- What do you see on the cover?
- How many living things do you see?
- How many shells are there?
- What do you think makes these shells? *Let's read and find out.*

Indiana Academic Standards:

- *Language Arts (LA) Standard 1: Concepts about Print*
- *LA Standard 2: Structural Features of Informational & Technical Materials*
- *Math Standard 1: Number Sense*
- *LA Standard 2: Comprehension & Analysis of Grade-Level-Appropriate Text*

Open Your Books to Page...

Pages 4–5:

- *LA 2: Comprehension & Analysis of Text*
- On page 4 can you point to the animal that makes this kind of shell?
- What do you think the snail will do if the girl picks it up? *Let's read & find out.*

Pages 6–7

- *Math 1: Number Sense*
- *Math 2: Computation*

- *LA 2: Comprehension & Analysis of Text*
- Can you count how many ants there are in the tunnel underground? How about above ground? How many ants are there in all?
- Look at the picture. Why do you think the dog and its owner are in a hurry to get home? (It's raining.)
- Bears live in caves. Can you think of other animals that live in caves?

Science in Action

- | | |
|----------------|----------------|
| make | build |
| live | keep |
| grow | go |
| run | wait |
| leave | take |
| poke | use |
| inch | eat |
| pull | close |
| pat | cover |
| outgrow | find |
| buried | walk |
| look | throw |
| crawl | connect |
| move | swim |
| snap | watch |

Open Your Books to Page...

Pages 8–9

- *Science 2: Scientific Thinking*
- *Math 1: Number Sense*
- *Math 3: Algebra and Functions*
- Do our bodies begin as small as the snails? (Yes, even smaller. Just about the size of the period at the end of the sentence.)
- What do you think a snail uses its tentacles for? (For smelling & feeling)
- What do we use to smell & feel things?
- How many snails do you see here?
- Are all the snails the same size?

Pages 10–11

- *Science 4: Diversity of Life*
- *Math 1: Number Sense*
- Can you name some other animals that can go in and out of their homes? Do birds always sit in their nests? Do bees leave the beehive?
- Can you think of another animal that might never leave its shell or home?
- How many snails are on the plant?

Pages 12–13

- *LA 2: Comprehension & Analysis of Text*
- I wonder what the bird is doing in this picture... (trying to eat the snail)
- If you find a snail and pick it up, what do you think it would do? (hide in its shell)

Pages 14–15

- *Science 2: Scientific Thinking*
- *Math 1: Number Sense*
- Has anyone ever seen a turtle? Where were you? Did you get to touch it? Be careful touching turtles, some may bite.
- How many turtle eggs do you see?
- Are there more turtles on this page (p.15) or on this page (p.14)?
- What's on our fingers and toes that is hard like a turtle's shell? (nails)

Pages 16–17

- *LA 2: Comprehension & Analysis of Text*
- *Science 2: Scientific Thinking*
- Look at the legs of the turtle, the frog and the cat. Can you think of a reason why cats and frogs are faster than a turtle? (The longer legs you have, the farther you can step.)

- The turtle hides in its shell just like the _____ (snail).

Pages 18–19

- *Math 1: Number Sense*
- *LA 2: Comprehension & Analysis of Text*
- How many legs does the crab have?
- What do you think crabs eat?
*Crabs eat leftovers or scraps from the meals of other animals. Crabs are called **scavengers**. Dogs that eat dropped-food off the floor can be called scavengers, too.*

Pages 20–21

- *Math 1: Number Sense*
- *Math 2: Computation*
- *Science 4: Diversity of Life*
- *Science 6: Common Themes*
- How are these Pacific Coast shells the same? How are they different?
- How about the Atlantic Coast Shells?
- How many Pacific Coast shells are there?
- How many Atlantic Coast shells?
- Are there more Pacific Coast shells or Atlantic Coast shells?
- How many shells are there in all?

Pages 22–23

- *Science 2: Scientific Thinking*
- *Math 1: Number Sense*
- What do you think will be able to use the hermit crab's old shell? (Another hermit crab that fits).
- How many shells are in these pictures?
- Are there more rounded shells or more pointed shells?

Pages 24–25

- *LA 2: Comprehension & Analysis of Text*
- Where is the **hinge** that connects the two shells?

Pages 26–27

- *LA 2: Comprehension & Analysis of Text*
- *Math 1: Number Sense*
- Is the picture above or below water?
- What kinds of living things do you see?
- Are there more than five oysters in this picture or less than five?

Remember

This book coordinates with two activities in the Teacher Inquiry Guide:

Activity 10:

Creature Features

Activity 11:

Creature Features 2:
Puzzles

Indiana Academic Standards are indicated in *blue italics*. Questions for students are in non-italic black.

PURDUE UNIVERSITY

Developed by
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Understanding Opposites

Smooth: **bumpy** (p.5, 14)
Hollow: **solid** (p.5)
Tiny: **huge** (p.8)
In: **out** (p.10, 17)
Open: **close** (p.12, 26, 27)
Soft: **hard** (p.12, 18, 22, 24, 25)
Fast: **slow** (p.12, 16, 17, 18)
Old: **new** (p.19, 24)