



PATTERNS EVERYWHERE

LISA VARCHOL PERRON



ABOUT THE BOOK

Step outside. Let's find designs--branching, cracking, spirals, lines. Search the earth, the seas, the air. Patterns, patterns everywhere.

Look around and discover patterns in the natural world! You might see them in leaf veins, in coral reefs, in sand dunes, and in many other places. Rhyming verse is accompanied by stunning photographs and brief sidebars that explain how these different patterns form.

Grade Level K – 3 **Age Level** 5 – 9 **Page count** 32 **eBooks** also available

ABOUT THE GUIDE

This guide was created by Kari Allen, an educator with twenty years of classroom experience. For more information, please visit her website at kariallenwrites.com.

DISCUSSION BEFORE READING

What is a pattern? (See printable pages 6-7 in this guide for writing and drawing prompts.)

This book is nonfiction. Look at the cover. What clues do you see that help to identify the genre? What do you know about nonfiction? What do you expect to find while reading this book?

DISCUSSION DURING/AFTER READING

How does this book change your thinking about what a pattern is?

How would you define a pattern after reading?

What pattern was the most interesting to you? Why?

What patterns did you see in the photographs?

The book is told through rhyming stanzas and sidebars. How are the two kinds of texts different?

Examine the backmatter (the extra information at the back of the book). What do you notice about what information is included here? Look at other nonfiction books. Do they have backmatter? How is it the same? How is it different?

PATTERN WALK

1. What patterns do you see?
2. What patterns are you wondering about?
3. Record what you observe with photos, by drawing pictures, or with words. (See optional printable pages 11-13.)
4. Extension: Cut out the descriptive pattern words from the text (see printable pages 15-16) to create labels. (There are extra labels to write some of your own.) Take these labels on the pattern walk. When you find a pattern that matches one of the words, place the label next to the pattern and take a photo.

MAKE YOUR OWN PAGE

Create your own page for this book or make a class book. (Use printable page 13 in this guide.)

1. Explore outside or around your home or community.
 2. Look for patterns.
 3. Document your pattern with a photograph or drawing. Is your pattern similar to any of those described in the text? For example, is your pattern **every-other-one** (like ridges and valleys)? Does it include **repeated shapes** (like sand dunes)? Does it **branch** into smaller and smaller sections (like a snowflake)? Does it have a center point that can be traced in a **spiral** (like a nautilus shell)?
 4. Write about your pattern. Can you make a sidebar like the book?
 5. Extension: Put the pages together in a class pattern book.
-

MATH

Patterns are everywhere in Math!

1. Make a list of how patterns and math connect.
 2. Use a math material to demonstrate your knowledge of patterns (for example, pattern blocks, snap cubes, or tiles).
 3. Skip count by 2s, 5s or 10s. Record the count on a piece of paper. What patterns do you see?
 4. Look at a 100 chart. What patterns do you see? (See printable page 14 in this guide.)
-

SCIENCE ACTIVITIES

1. Drip water into sand or dirt. What do you notice happening? Does a pattern emerge for the path of water after a time?
2. Look at a topographic map. What patterns do you see when you look at the rivers, mountains, and valleys?
3. Fold, cut, and design paper snowflakes. How does changing the folding pattern change the snowflake pattern? (Use the picture book *Snowflake Bentley* by Jaqueline Briggs Martin to add an additional layer to this activity.)
4. Look at photographs of the Grand Canyon or visit the interactive National Park site: https://www.nps.gov/grca/learn/photosmultimedia/grand-canyon-in-depth.htm#CP_JUMP_829707

What patterns do you see? What are you wondering? (Use Jason Chin's *Grand Canyon* to add another layer to this activity.)

GROUP ACTIVITIES

During a Morning Meeting or Circle Time, play a pattern game.

1. Have one person lead a pattern with clapping, stomping, or using their body. The group repeats back the pattern.
2. Have one person do a gesture and the next person repeat the gesture, then add to it. See how far you can go around the circle, creating a **growing pattern**.
3. If you have access to different instruments, do the activities above with sound patterns!

ART ACTIVITIES

1. Collect different leaves. Place the leaves under a piece of paper and rub over the leaves with a crayon. Watch as the pattern emerges. Cut your leaves out and make a collage.
2. Look at photographs of spirals in nature. Paint or color paper. Cut spirals out of your designed paper. Make a spiral mobile.
3. Pick one of the lines from the book listed below. Make a piece of artwork to go with the section of text. Challenge: Can your artwork include patterns?

“Veins on leaves extend like shoots,”

“Ridges dip to valleys low—spaced and even, row by row.”

“Rivers bend like twisting snakes,”

“Ripples stretch across the beach, marking where the waves can reach.”

“Stripes of color paint the earth,”

“Tiny treasures dot the sky.”

PATTERNS IN LITERATURE

Stories can have patterns. Look and revisit some of your favorite picture books. Do you see any patterns in the story? Does the character repeat an action in a predictable way? Is there repetition in the text? Discuss with a partner what patterns you see.

RHYME

This is a rhyming book. Look at some of the rhyming pairs taken from the end of the lines. Use the printable pages 8 -10 in this guide to add more rhymes to each pair.

designs

lines

shoots

roots

green

seen

row

low

land

sand

star

far

snakes

lakes

seas

trees

light

bright

POETRY

When poems rhyme, they have a pattern called a rhyme scheme. Look at this example from the text:

Veins on leaves extend like **shoots**, A
bringing water up from **roots**, A
helping plants stay strong and **green**. B
Patterns, patterns to be **seen**. B

The rhyme scheme or pattern for this text is AABB. When words at the end of a line rhyme, they are given the same letter. Each new rhyme gets a different letter.

Examine other rhyming poems. Can you identify the rhyme scheme? Try labeling a poem with its rhyme pattern.

Make your own rhyming poem. Alternative Extension: Find a partner. Pick a topic or object. One person writes the first line of a rhyming stanza, the second person writes the next line with a rhyme.

COMMON CORE AND NGSS STANDARD CONNECTIONS

English and Language Arts

CCSS.ELA-LITERACY.RI.K.1

With prompting and support, ask and answer questions about key details in a text.

CCSS.ELA-LITERACY.RI.K.2

With prompting and support, identify the main topic and retell key details of a text.

CCSS.ELA-LITERACY.RI.2.3

Describe the connection between a series of historical events, scientific ideas or concepts, or steps in technical procedures in a text.

CCSS.ELA-LITERACY.RI.2.5

Know and use various text features (e.g., captions, bold print, subheadings, glossaries, indexes, electronic menus, icons) to locate key facts or information in a text efficiently.

CCSS.ELA-LITERACY.RI.2.7

Explain how specific images (e.g., a diagram showing how a machine works) contribute to and clarify a text.

Next Generation Science Standards

K-LS1-1 From Molecules to Organisms: Structures and Processes

Use observations to describe patterns of what plants and animals (including humans) need to survive.

K-ESS2-1 Earth's Systems

Use and share observations of local weather conditions to describe patterns over time.

2-PS1-1 Matter and Its Interactions

Plan and conduct an investigation to describe and classify different kinds of materials by their observable properties.

2-ESS2-2 Earth's Systems

Develop a model to represent the shapes and kinds of land and bodies of water in an area.

3-ESS2-1 Earth's Systems

Represent data in tables and graphical displays to describe typical weather conditions expected during a particular season.

Math Common Core Standards

CCSS.MATH.PRACTICE.MP2 Reason abstractly and quantitatively.

CCSS.MATH.PRACTICE.MP7 Look for and make use of structure.

Name:

Date:

What is a pattern?

Handwriting practice lines consisting of 10 sets of three horizontal lines: a solid blue top line, a dashed red middle line, and a solid blue bottom line.

Draw a pattern. Show what you know about patterns with your picture.

Name:

Date::

Write or draw other rhymes that match the rhyming pairs found
in the text of **Patterns Everywhere**

designs
lines

green
seen

air
everywhere

row
low

beach
reach

land
sand

star
far

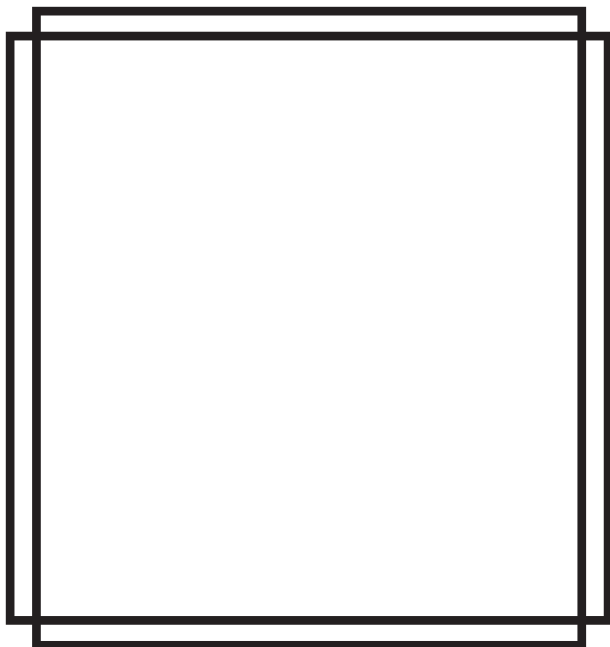
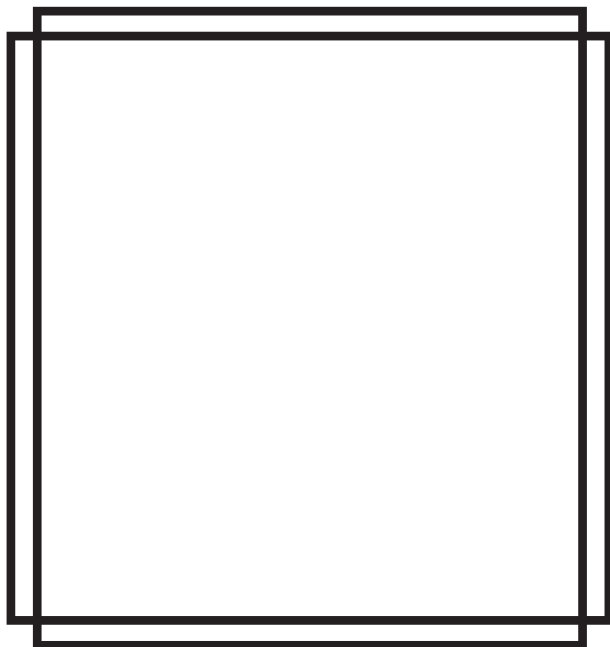
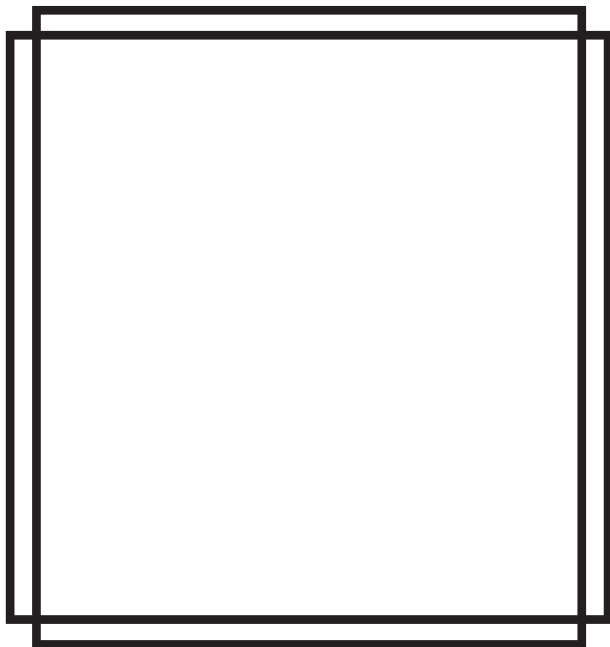
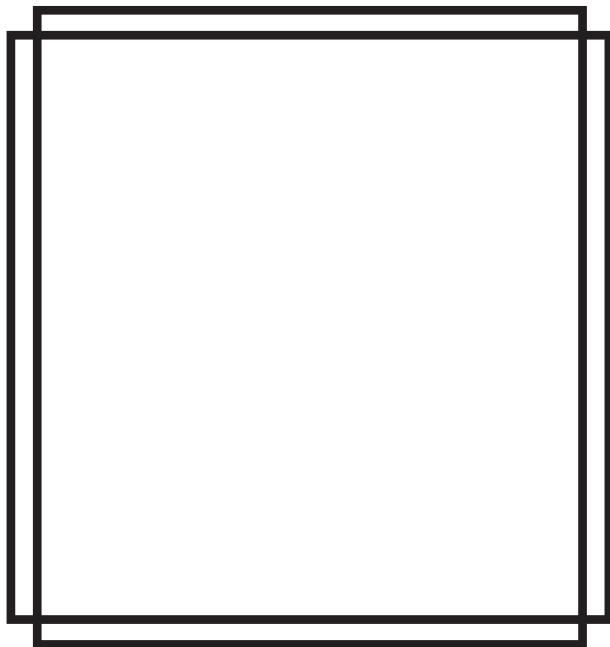
snakes
lakes

seas
trees

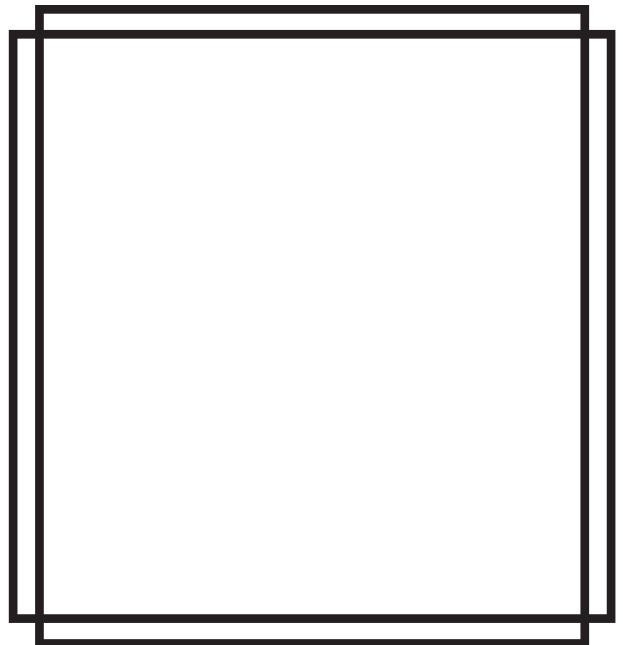
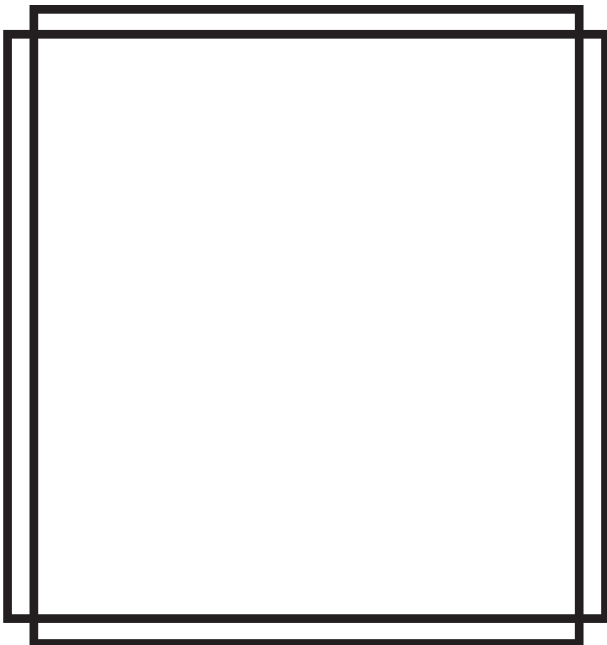
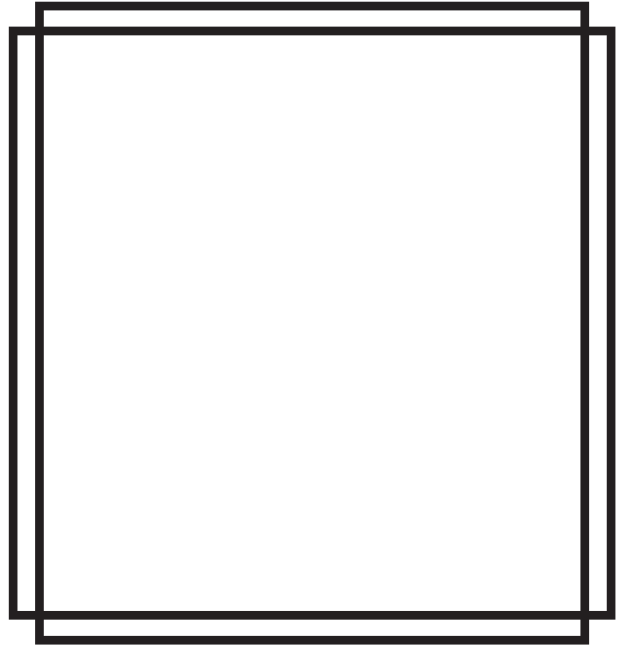
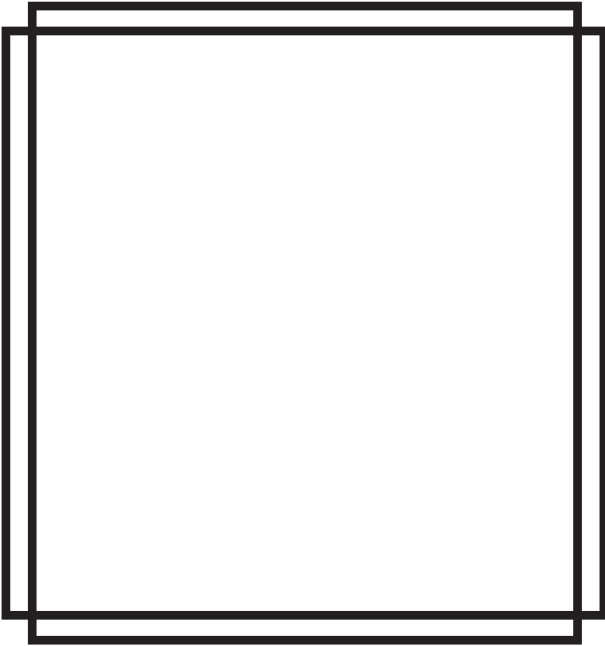
light
bright

PATTERN WALK

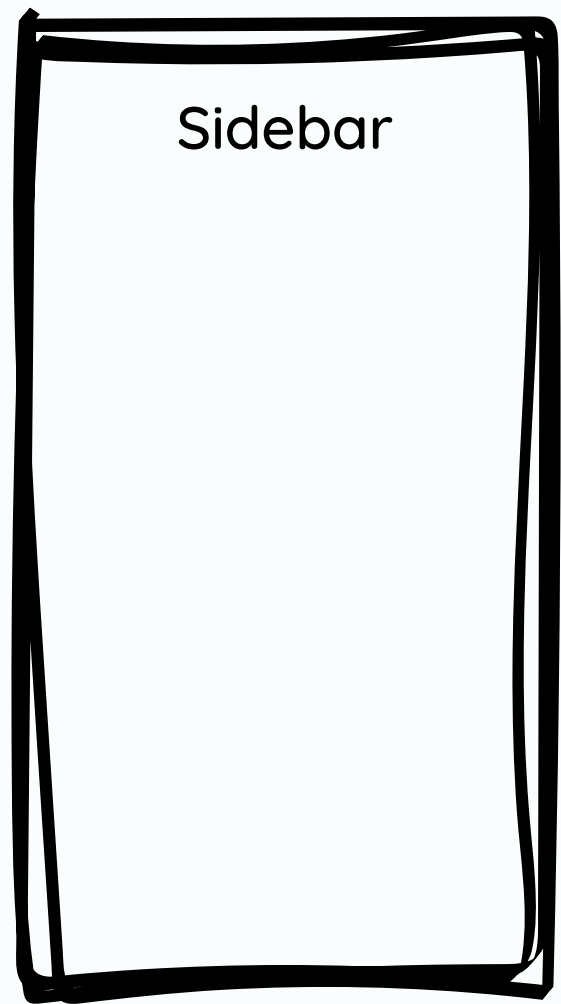
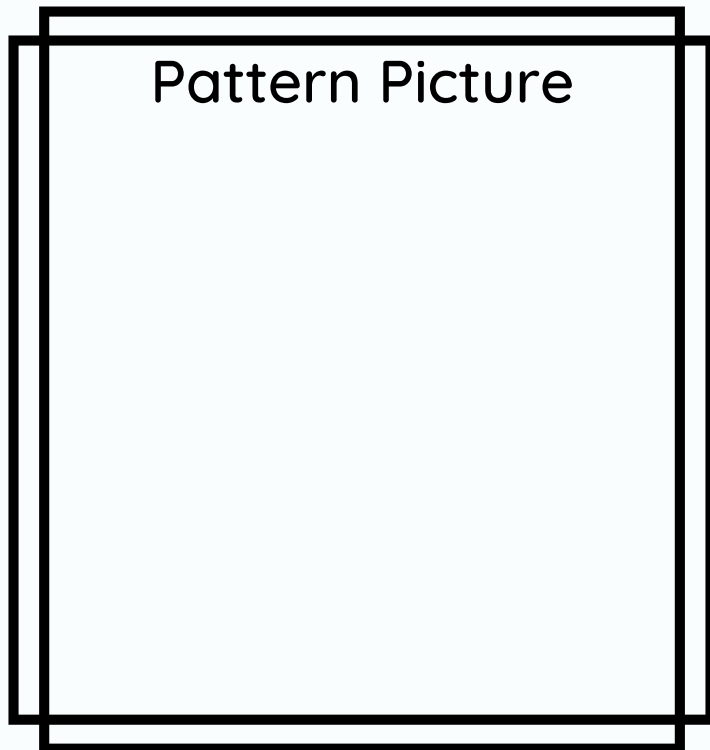
Go on a walk. What patterns can you find?
Document the patterns you find with
pictures or words.



PATTERN WALK



Patterns, patterns



Name: _____ Date: _____

Look at the 100 chart. What patterns do you see?
Circle, mark or write about the patterns you found.

My pattern is

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

PATTERN WORDS

branching

lines

every-other-one

repeating shape

repeating color

snakelike

ripples

PATTERN WORDS

bubbles

stripes or layers

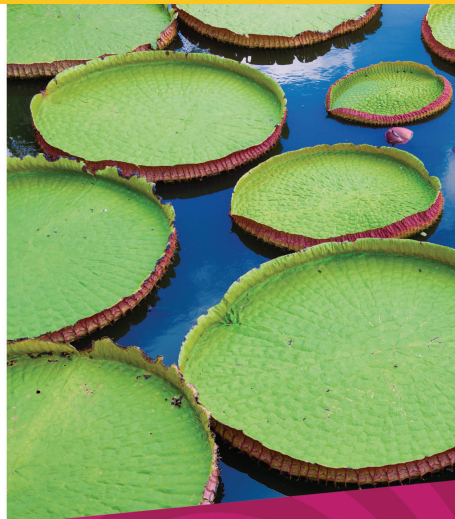
cracking

tightly packed

spirals

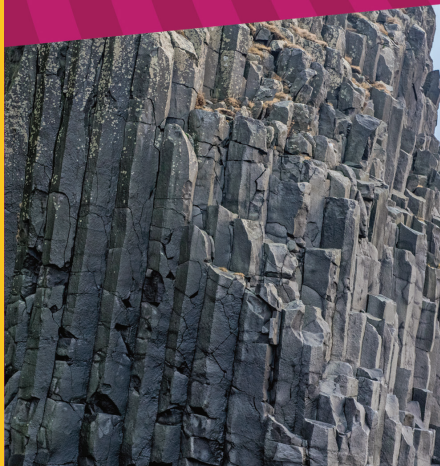
Blank box for writing a pattern word.

Blank box for writing a pattern word.



PATTERNS EVERYWHERE

LISA VARCHOL PERRON



Patterns Everywhere Ages 5-9

LB: 978-1-7284-6042-0 • \$29.32 (list) • \$21.99 (S&L) EB: 978-1-7284-8582-9 • \$43.99 (list) • \$32.99 (S&L)



LISA VARCHOL PERRON is an author and poet with dozens of published poems and a growing number of books for children. She especially enjoys writing about the many ways that we can connect with our natural world and with each other. Lisa lives just outside of Boston, Massachusetts with her geologist husband and two book-loving kids. Visit her online at LisaPerronBooks.com.

lernerbooks.com

Lerner 