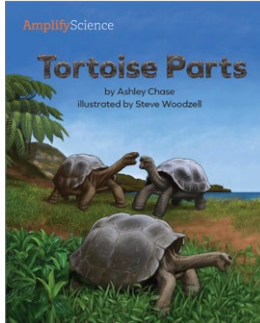


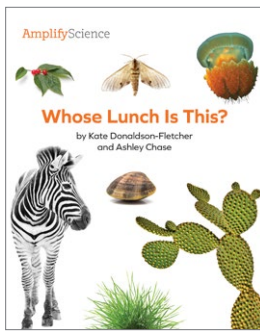
## Animal and Plant Defenses: Spikes, Shells, and Camouflage



ISBN: 978-1-945192-62-3

### Tortoise Parts

*Tortoise Parts* introduces the concept of structure and function with the example of the giant Galápagos tortoise. Each external structure on a tortoise's body has a special shape, and each structure is good for doing specific things. For example, a tortoise has a beaky mouth that is good for biting leaves, and it has long, strong toenails that are good for digging. The repetitive structure of the book, with the same section headings on each spread, helps reinforce students' understanding of the content. Beautifully clear illustrations with labeled parts offer additional help with the concepts and provide a bridge to understanding scientific diagrams. *Tortoise Parts* is used as a Shared Reading and supports students' secondhand investigations as they explore the structure and function of animal parts in the unit.



ISBN: 978-1-945192-59-3

### Whose Lunch Is This?

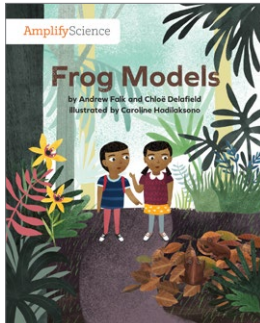
*Whose Lunch Is This?* is filled with engaging photos of animals catching and eating their lunch. The introductory pages explain that all animals need to eat to survive, just like humans do. Seven different food-web relationships are explored with a two-page spread dedicated to each. The first page shows a photo of the animal or plant with the query *Whose lunch is this?* The facing page includes information about the structures of the animal that eats it. *Whose Lunch Is This?* is a rich Read-Aloud that sets the context for the unit. It reinforces vocabulary and essential concepts that will be used throughout the unit, including structure and function, survival needs, and predator-prey relationships.



ISBN: 978-1-945192-65-4

### Parents and Offspring

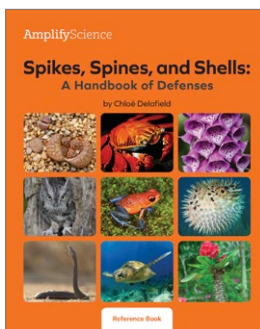
*Parents and Offspring* introduces students to the idea that all animals and plants have offspring. The book explains that some offspring need parental care, while others do not. Some parents feed, carry, defend, shelter, bathe, teach, and play with their offspring. When the offspring grow up, they can do those things on their own. This Partner Read uses simple language and repeated unit vocabulary to convey a few basic but essential ideas: some animal babies need care, while some can survive on their own; offspring look somewhat like, but not identical to, their parents; and baby animals grow up to have the same structures that their parents have, which help them survive in the same ways. Students read this book twice in the unit, first with the teacher in a Shared Reading and then with a partner. *Parents and Offspring* supports students' firsthand investigations by showing them how offspring can survive.



ISBN: 978-1-945192-68-5

## Frog Models

*Frog Models* is a story about a pair of siblings who use models to explain their ideas about frog camouflage. Luz and Juan are walking in a forest when they see a snake hunting. There are some frogs nearby, but the snake does not see them. Each child has an idea about why the snake did not see the frogs, and they make paper models to show their ideas. Using their models, the siblings are able to explain that the frogs' color and shape make them hard to see against the leaves. *Frog Models* is a Shared Reading that uses simple language to support students' firsthand investigations by demonstrating the process that scientists go through when constructing models for reasoning and explanation. The book shows the process that students will engage in as they create their own models in the unit.



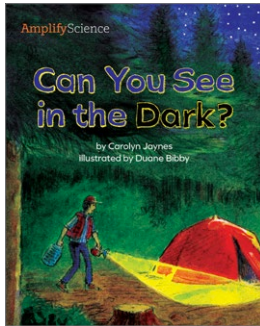
ISBN: 978-1-945192-72-2

Reference Book

## Spikes, Spines, and Shells: A Handbook of Defenses

*Spikes, Spines, and Shells: A Handbook of Defenses* is the reference book for this unit. It's full of striking photos of various animals and plants whose defenses fall into four categories: camouflage, armor, spikes and spines, and poison and venom. The book provides a place for students to find more information about defensive structures and food-web relationships for many different organisms. The entries provide information about the organisms' habitats, defensive structures and their functions, defensive behaviors, and animals that eat them. *Spikes, Spines, and Shells* is used as a Shared Reading throughout the unit, supporting students' investigations by providing secondhand, visual data in the form of photographs. The book also gives students experience with many features of informational texts.

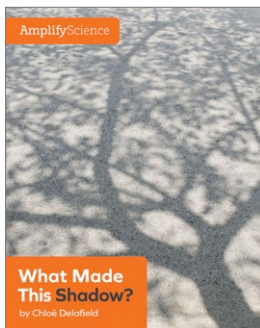
## Light and Sound: Puppet-Theater Engineers



ISBN: 978-1-943228-46-1

### Can You See in the Dark?

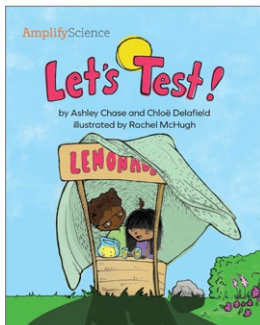
*Can You See in the Dark?* invites students to wonder about whether or not they need light to see. The main character searches for a completely dark place, testing a movie theater, a dark bedroom, a closet, a starlit campsite, and finally a deep cave where there truly is no light at all. In each new place the narrator asks, “Is it completely dark? Can you find any light?” Although each place seems dark at first, a little searching always reveals light sources, until the main character reaches the cave, where there is no light whatsoever—and he cannot see! This finally answers the question posed in the book’s title, reinforcing the idea that you need light to see. *Can You See in the Dark?* is a Read-Aloud book that provides an intriguing invitation to the unit, setting the context for students’ understanding that all light comes from a source and that light sources can be dim or bright.



ISBN: 978-1-943228-49-2

### What Made This Shadow?

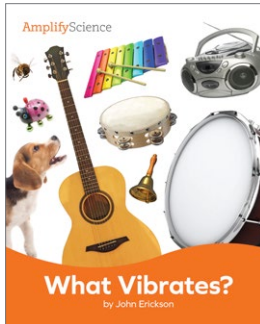
*What Made This Shadow?* presents a series of photos for children to wonder about as they explore the ideas that light can be blocked—certain objects block all light, while others let some light pass through—and this creates different kinds of shadows on surfaces. The right-hand page of each spread shows an isolated shadow; a turn of the page reveals the object casting the shadow as well as the light source. In each instance, the text calls out the surface where the shadow appears, helping students to grasp the concept of surfaces through a variety of examples. This book is set up to be used as a Shared Reading, with repetitive structure and captivating photos providing supports. The mysterious right-hand photos and the questioning refrain urge students to make predictions before the page is turned. A final spread encourages students to go out and collect their own evidence of light blocking. *What Made This Shadow?* supports students’ firsthand investigations as they discover the relationships between light sources, objects, surfaces, and shadows in the world around them.



ISBN: 978-1-943228-42-3

### Let’s Test!

*Let’s Test!* follows two young children who test several different shade devices for their lemonade stand before finding the perfect one. It’s a hot day, and the kids want to sell lemonade, but the sun is too bright and hurts their eyes. They try out three different versions of a light-blocking design: the first one makes it too dark, the second one doesn’t block enough light, and the third one is just right. Within a relatable story and structure, this book provides a very clear model of the design process that students will be using in this unit. The characters experience a problem and design a solution to the problem, revising their design as they go along. *Let’s Test!* is a Partner Read, so the book uses very simple language and supportive illustrations to make the content accessible to early readers.



ISBN: 978-1-943228-47-8

## What Vibrates?

*What Vibrates?* conveys the essential concept that every sound comes from something that vibrates. The book looks at several familiar sources of sound, including a guitar, a radio, and an alarm clock, and shows students what part of the object vibrates to make sound. *What Vibrates?* supports the content of the unit's fourth chapter, using recognizable examples to help students understand the concepts that vibration causes sound, and every sound comes from a source. The book is used first as a Shared Reading, and then students are encouraged to read the book with partners once they have been exposed to the concepts and vocabulary. Clear, labeled photographs help provide support through both readings.



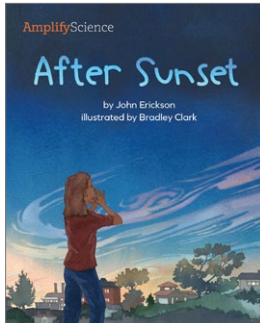
ISBN: 978-1-943228-44-7

## Engineering with Light and Sound

*Engineering with Light and Sound* is this unit's reference book. The introduction explains what an engineer is and describes the process engineers go through to design a solution to a problem. The book is divided into sections about designing light sources, things that block light or let light through, things that reflect light, sound sources, things that block sound, and things that use both light and sound. Each section includes an introductory paragraph, and each entry presents the problem and the solution to repeatedly highlight the basics of the design process. This reference book is intended to be used predominantly as a Shared Reading throughout the unit, offering secondhand investigation opportunities and inspiring students as they design their own light and sound solutions in the unit.

Reference Book

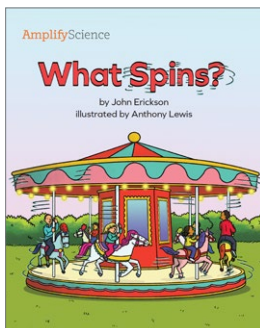
## Spinning Earth: Investigating Patterns in the Sky



ISBN: 978-1-939787-91-0

### After Sunset

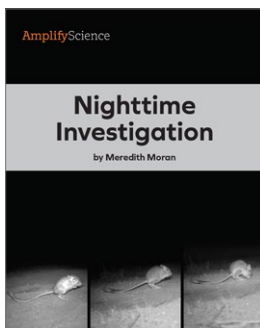
*After Sunset* is a rich Read-Aloud that provides an engaging entry point into the unit's content and vocabulary, encouraging students to recognize familiar and new objects as they make their own sky observations. Two sisters stay outside past sunset watching the sky as the sunlight fades, and the stars slowly appear. They see many interesting things in the sky: birds heading to their nests for the night, an airplane, stars, planets, a meteor, and even a space station. As they wonder about what the people on the space station see, the perspective shifts, and readers are brought into space to look down on Earth as astronauts see it. The new perspective helps students understand that Earth is a planet in space, just like the other planets they may have heard of. *After Sunset* provides secondhand data about what can be seen in the night sky through two sisters' observations of the sky after the sun goes down.



ISBN: 978-1-943228-04-1

### What Spins?

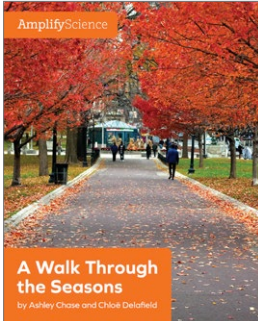
*What Spins?* is an illustrated book that introduces students to the idea that Earth spins, just as merry-go-rounds, fans, and other familiar things do. There are some differences in how Earth spins. For example, the merry-go-round starts and stops, but Earth never stops spinning. The book then explores the idea of seeing a pattern because you are spinning. As he spins, a child on a tire swing sees a bench, a slide, some trees, some friends, and then the bench again. Similarly, a child looking out the window each day sees sunrise, a bright daytime sky, stars, and then sunrise again as she spins on planet Earth. *What Spins?* is a Partner Read that presents a fundamental concept, using simple language, familiar examples, supportive photos, and a repetitive structure that mirrors the patterns caused by Earth's spin.



ISBN: 978-1-939787-99-6

### Nighttime Investigation

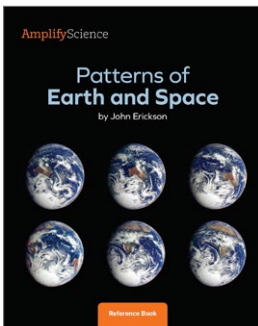
*Nighttime Investigation* introduces Laura Prugh, a scientist who studies animals, through a Shared Reading. Laura investigates nocturnal animals, including kangaroo rats. During one investigation, she discovered something interesting by chance: Contrary to her expectations, more kangaroo rats seemed to come out during brighter Moon phases. By gathering data and organizing it, Laura confirmed the pattern she had observed. *Nighttime Investigation* provides a fascinating model of a real-life scientist who organized data to find a pattern, just as students will be doing in the unit. The book clearly lays out the steps of the scientific investigation process—with a particular emphasis on collecting, recording, and organizing data—in an exciting and comprehensible context.



ISBN: 978-1-939787-40-8

## A Walk Through the Seasons

*A Walk Through the Seasons* is a Partner Read that introduces students to seasonal patterns of sunlight, connecting those patterns to everyday experience through the story of a girl whose family walks their dog twice a day, morning and evening. In spring and fall, these walks happen around sunrise and sunset. However, in summer, both walks are in broad daylight, while in winter both walks happen in the dark. The girl's observations provide students with secondhand data about light conditions in different seasons, supporting them in discovering the pattern for themselves.



ISBN: 978-1-943228-13-3

**Reference Book**

## Patterns of Earth and Space

*Patterns of Earth and Space* is the reference book for this unit, giving students a place to explore many different kinds of patterns that can be observed on Earth and in the sky. The book introduces the concept of a pattern through two very simple examples and then moves on to present patterns over time, patterns of Earth's movement, patterns of the seasons, patterns of the Moon and stars, and much more. Carefully arranged photographs provide students with rich visuals on each page to explore and use as evidence to support their ideas. *Patterns of Earth and Space* is used as a Shared Reading throughout the unit.

# About the books

Each unit of Amplify Science K–5 includes five student books authored by the curriculum experts at the University of California, Berkeley’s Lawrence Hall of Science. These age-appropriate books were built specifically to enhance students’ experiences in the Amplify Science curriculum. The books engage students with science phenomena that are too big, too small, too far, happen too slowly, or are too dangerous for students to engage with firsthand in the classroom, while reinforcing reading and literacy skills. These content-rich, nonfiction and informational texts provide opportunities for students to search for evidence relevant to their firsthand investigations, see science practices and dispositions modeled, extend their science knowledge, and provide real world connections as they master reading-to-learn, and close reading skills, and construct evidence-based arguments. The five books in each unit include one book for approximately every five days of instruction and one reference book that students draw upon throughout the 20-lesson units.



**THE LAWRENCE  
HALL OF SCIENCE**  
UNIVERSITY OF CALIFORNIA, BERKELEY

The program is designed to provide strong support in how to read like a scientist and for the development of vocabulary, language, and reading comprehension particularly relevant to reading informational text. It can serve as a complement to an English Language Arts program that addresses other literacy components (e.g., skill-based or fluency-oriented literacy instruction). Big books come with the program for all titles in grades kindergarten and 1.

## Lexile Levels

The Lexile<sup>1</sup> measure is provided for all non-reference books.<sup>2</sup> At this time, our reference books are not given Lexile measures because these books are not designed to be read from cover to cover; rather, students use these books to find targeted information to support their investigations. All books in the Amplify Science program fall within, or in a few cases, just outside, the range of Lexile measures specified for the grade level.

- 
- 1 Target Lexile measures by grade band are specified by the Common Core in Supplemental Information for Appendix A of the Common Core State Standards for English Language Arts and Literacy: New Research on Text Complexity, available at <http://www.corestandards.org/wp-content/uploads/Appendix-A-New-Research-on-Text-Complexity.pdf>. MetaMetrics further specifies target Lexile measures for each grade, available at <https://lexile.com/about-lexile/grade-equivalent/grade-equivalent-chart/>
  - 2 Lexile measures are available for the Grades 2–5 books; there are no current official Common Core recommendations for Lexile measures for kindergarten and Grade 1.