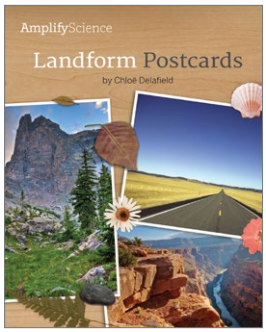
Changing Landforms: The Disappearing Cliff



ISBN: 978-1-945191-59-6
Lexile Measure: 550L

Landform Postcards

Landform Postcards is written from the perspective of a girl who is taking a road trip with her family. Her grandfather is a geologist, and she writes him postcards about the interesting landforms she sees around the United States. The book includes reproductions of the postcards she writes, along with beautiful photos of peninsulas, mountains, canyons, and more. The postcards and photo captions provide some basic information about various kinds of landforms and model the process of asking questions about natural phenomena. The final four pages of the book include more photos for students to explore, providing evidence that landforms are made of rock. This book sets the context for the unit by offering a friendly introduction to landforms and encouraging students to notice and ask questions about landforms in the world around them.

ISBN: 978-1-945191-84-8
Lexile Measure: 610L

Gary's Sand Journal

Gary's Sand Journal is a first-person account of how Gary Griggs, a geologist and oceanographer, investigates sand. In this book, Gary describes how he observes sand and uses his observations as evidence to support his ideas about the sand and its environment. The size, shape, and color of sand give him evidence about how old the sand is, what it's made of, and how it got to where it is. The book includes entries from a "sand journal" in which Gary records his observations of three different sand samples that he collected from various locations. In each entry, he asks: "How did this sand get to be the way it is?" The final pages introduce a mystery sand, encouraging students to observe its color, shape, and size and think about what that tells them about the sand's history. *Gary's Sand Journal* provides an inspiring real-world example of a geologist at work and models how to make observations and use these as evidence to support answers to questions.

ISBN: 978-1-945191-87-9
Lexile Measure: 470L

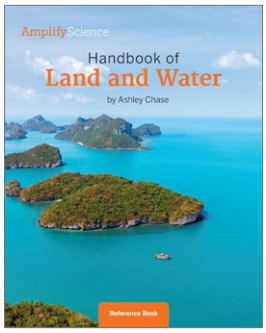
What's Stronger? How Water Causes Erosion

What's Stronger? How Water Causes Erosion explores the ways that water—in both liquid and solid forms—can erode landforms. It may not seem like one small raindrop can cause a mountain to change, but it can! Through a series of engaging questions, students are asked to think about streams and boulders, waves and beaches, glaciers and valleys, and other interesting pairings of water and landforms. Students learn that even seemingly stable landforms change over time—usually very slowly. Stunning full-page photos of water and landforms help students visualize erosion processes. This book delivers key content about erosion and helps students solidify their understanding of this process.

ISBN: 978-1-945191-90-9
Lexile Measure: 650L

Making Models of Streams

In *Making Models of Streams*, students meet a water scientist named Chris Cianfrani. Chris uses a scientific model called a stream table to help answer questions about how streams work. In this book, she and a group of young scientists use a stream table to investigate questions about how floods erode streambeds. The text describes how and why scientists build models, and how models are similar to and different from the real thing in important ways. The book explains how the stream table is similar to and different from a real stream, and how Chris made decisions about how to build it. Chris and the young scientists investigated their question about floods by pouring lots of water into the stream table and observing what happened. Using their model, they discovered that a flood will erode a streambed in some places and cause sand to build up in other places. Their model allowed them to investigate something that is difficult to observe in the real world. *Making Models of Streams* helps students understand how scientists use models to learn about the world.



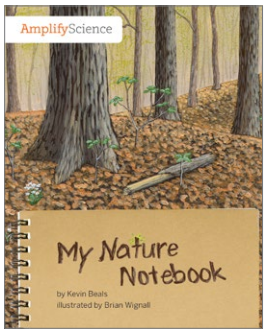
ISBN: 978-1-945191-62-6
Lexile Measure: N/A

Reference Book

Handbook of Land and Water

Handbook of Land and Water is the reference book for this unit, providing students with a place to look for information about all kinds of landforms and bodies of water. It includes entries on beaches, caves, the ocean, rivers, islands, mountains, and more. Each entry includes an introduction to the landform or body of water, several photos showing how it can vary, a photo paired with a map of a real location, a three-part diagram showing how that kind of landform or body of water can change slowly, and a photo or series of photos showing how it can change fast. In addition, the book's introduction gives detailed directions for how to read a map and how to relate it to a real location on Earth. Students read the reference book to find evidence to support concepts about erosion that they learn throughout the unit, including the idea that landforms are made of rock and that lots of small changes add up to big changes in landforms. *Handbook of Land and Water* is used throughout the unit to provide evidence that supports students' firsthand investigations.

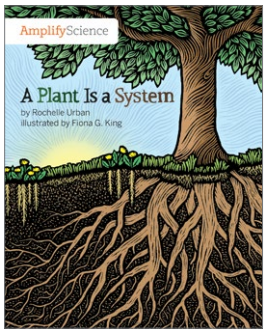
Plant and Animal Relationships: Investigating Systems in a Bengali Forest



ISBN: 978-1-945192-14-2
Lexile Measure: 510L

My Nature Notebook

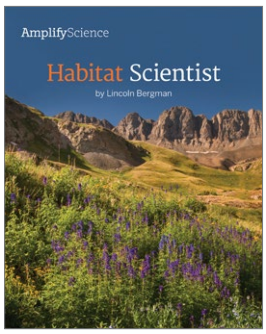
My Nature Notebook is written from the perspective of a young girl who studies the forest behind her home. The girl sets up a sample study site in the forest and returns each month to record observations of the plants and animals in this habitat. Over the course of five months, she observes a young oak tree growing taller and developing new leaves, small grass plants sprouting and producing seeds, a dead bird decomposing to feathers and bones, ants carrying seeds to new places, and much more. By recording her observations as drawings as well as measurements in a data table in her notebook, the narrator notices how the habitat changes through time and wonders about additional changes that might happen in the future. *My Nature Notebook* introduces students to different ways to study a habitat and supports the firsthand observations they make of the habitat around their school.



ISBN: 978-1-945192-17-3
Lexile Measure: 470L

A Plant Is a System

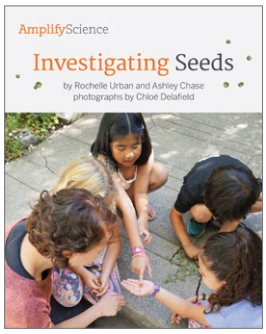
A Plant Is a System presents the concept of a system as a group of parts that work together. Plants function as a particular type of system whose parts work together to help them get what they need to live and grow. Each part of the system plays a role in helping the plant get what it needs. A plant's leaves catch light from the sun. A plant's roots take in water. A plant's stem connects its roots and leaves. A plant's flowers make seeds that grow into new plants. The parts of the system depend on one another to support the plant's growth. This book delivers content about plants and exposes students to the essential science concept of systems. Through reading *A Plant Is a System*, students come to understand a system as a group of networked parts and are then prepared to apply this understanding to other systems in the natural world.



ISBN: 978-1-945192-20-3
Lexile Measure: 530L

Habitat Scientist

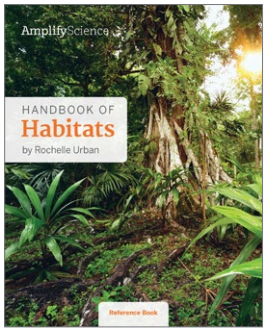
Habitat Scientist introduces students to John Harte, a scientist who investigates plants and animals in the places where they live. John studies how the parts of a habitat work together as a system. In this book, John investigates the interdependent relationships in a mountain habitat in Colorado. Plants in this habitat depend on animals to move their pollen so they can make new plants. Animals in this habitat depend on plants and other animals for food. Each part of the habitat depends on the other parts of the habitat for survival. John works with other scientists to investigate what happens to living things when part of their habitat changes. John and his team discovered that when the Colorado mountain habitat got too hot, the plants and animals there could no longer depend on one another to get what they needed. *Habitat Scientist* models the investigation practices of measuring and counting, while supporting students' understanding of the interdependent relationships among the living things within a habitat.



ISBN: 978-1-945192-23-4
Lexile Measure: 570L

Investigating Seeds

Investigating Seeds follows a group of friends as they investigate how a small burclover plant came to grow in a sidewalk crack. The friends build on their understanding that new plants sprout from seeds, and they launch an investigation of how the burclover seed that made this plant could have been moved to a place away from other plants. They use a pair of models to measure two different forms of seed dispersal: blowing in the wind and getting carried by animal fur. By carefully recording and comparing data from a series of trials, the friends find evidence that burclover seeds get dispersed when they are caught in animal fur and carried to a new place. *Investigating Seeds* models the investigation practice that students use throughout the unit while simultaneously building their understanding of how models can be used to support the investigation process.



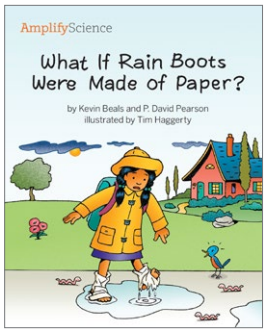
ISBN: 978-1-945192-26-5
Lexile Measure: N/A

Reference Book

Handbook of Habitats

Handbook of Habitats is the reference book for this unit and provides information about a series of diverse habitats on Earth. After an introduction to habitats as places where living things depend on one another and get what they need, the book outlines the fundamentals of plant growth that take place within any habitat. The remainder of the book is devoted to a detailed look at six habitats around the world: the Amazon rain forest, a broadleaf forest, the Everglades wetlands, the Serengeti plains, the Sonoran Desert, and a city park. The plants and animals that live in each habitat are described in detail, and the interdependent relationships between these organisms are highlighted. The reference book supports students' understanding of the unique plants and animals that live in each habitat and how relationships among these living things support the process of dispersing seeds to places where they can grow into new plants. It also gives students a sense of the diversity of habitats on Earth.

Properties of Materials: Designing Glue



ISBN: 978-1-943228-14-0
Lexile Measure: 480L

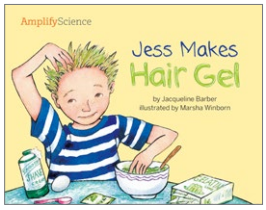
What If Rain Boots Were Made of Paper?

What If Rain Boots Were Made of Paper? is designed as an introduction to the unit and the properties of materials. In the book, students are asked to imagine a series of absurd objects, such as rain boots made of paper and frying pans made of rubber. This inspires them to think about the relationship between objects, the materials used to make them, and the properties of those materials. The book provides students with a real-life context for this physical science unit and prepares them for the design work they will do.

ISBN: 978-1-943228-21-8
Lexile Measure: 570L

Can You Change It Back?

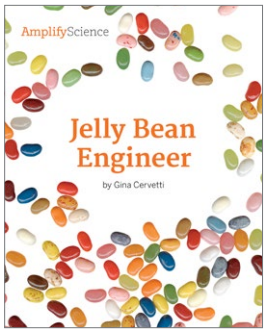
Can You Change It Back? introduces students to the idea that heating and cooling can cause changes to materials. Some of these changes are reversible, meaning the material's properties have not changed, and some are irreversible, meaning the properties have changed. Students are presented with a variety of materials and asked to predict whether a certain change caused by heating or cooling is reversible or irreversible. The book also touches on the changes caused by rearranging pieces. *Can You Change It Back?* helps reinforce students' understanding of properties and gives them a chance to build prediction skills.



ISBN: 978-1-943228-20-1
Lexile Measure: 500L

Jess Makes Hair Gel

Jess Makes Hair Gel tells the story of a boy who sets out to make his own hair gel. He first identifies the properties of good hair gel and then tests various ingredients to see which ones have these properties. While conducting tests on each ingredient, Jess realizes that he needs to expand the list of properties of good hair gel. This allows him to solve his problem and make great hair gel. This book uses an engaging context to model the steps of the design process that students use in the unit.



ISBN: 978-1-943228-12-6
Lexile Measure: 760L

Jelly Bean Engineer

Jelly Bean Engineer shows how food engineers use design practices to create new kinds of food. In the book, readers meet Ambrose Lee, a food engineer who invents new jelly bean flavors. Students see Ambrose and his colleagues using their senses, designing mixtures to have certain properties, and working as a team. They learn about how ingredients create the texture of jelly beans and get a glimpse at the hard work and serendipity that are part of the design process. This book provides a real-world parallel to the work students are doing as they design mixtures in the classroom.

ISBN: 978-1-943228-19-5
Lexile Measure: N/A

Reference Book

The Handbook of Interesting Ingredients

The Handbook of Interesting Ingredients is a reference book that provides information about many common kitchen ingredients, such as cinnamon, egg white, gelatin, flour, and sugar. For each ingredient there is a two-page spread with photos and information, some of which is directly observable and some of which is not. Sections on each spread include "How it looks," "Where it comes from," "Important properties," "What it's used for," and "Cause and effect." The ingredients students will be testing as they design their glue mixtures are sprinkled throughout the book. Students use the information they find to support their firsthand investigations in 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 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[1] measure is provided for all non-reference books.[2] 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.