

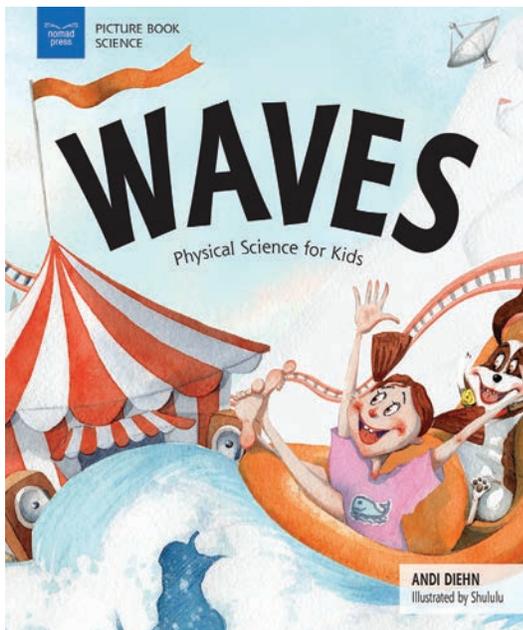
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# CLASSROOM GUIDE

## Including Essential Questions and Common Core Connections

Nomad Press offers concise classroom guides to help educators explore content-related topics with students and encourage them to develop ideas in meaningful ways.

Download free classroom guides for other Nomad Press books at our website, [nomadpress.net](http://nomadpress.net)!



**Age:** 5–8

**Grade:** 1–3

**Softcover:** 9781619306356, \$9.95

**Hardcover:** 9781619306332, \$19.95

**eBook:** all formats available, \$6.99

**Specs:** 8 x 9.75, 32 pages, 4-color interior

**Focus:** Physics

**GRL:** K

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### Waves: Physical Science for Kids

You can find waves just about everywhere you look! Take a tour of the world of waves in this fun, illustrated introduction to the concept of waves and energy and their presence in our world.

This installment in Curious Concepts for Kids, a set of books about physical science for kids ages 5 to 8, encourages readers to observe lots of different kinds of waves, including those found in water, wheat, a baseball stadium, and even invisible waves! By combining children’s natural curiosity with prompts for keen observations and quick experiments, *Waves* provides a useful and fun introduction for kids to the physical science that rules our world!

Learn more about *Waves* at  
[nomadpress.net/books/waves/](http://nomadpress.net/books/waves/)



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## ESSENTIAL QUESTIONS TO ASK

## KEY VOCABULARY

energy, light, wave

### BEFORE READING

#### 1 Establish Background Knowledge

- a The word “wave” can mean lots of different things. Can you think of other words that are the same but have different meanings?
- b Can you think of some examples of waves? Where do you see waves in your own life?

#### 2 Skill Introduction

- a What do you do when you come to a word or phrase you do not know?
- b How do pictures help readers understand what is happening in the stories?

**CCC: CCSS.ELA-Literacy.L.4a** Use sentence-level context as a clue to the meaning of a word or phrase.

**CCC: CCSS.ELA-Literacy.RI.4** Determine the meaning of words and phrases in a text relevant to a grade 2 topic or subject area.

### DURING READING

#### 1 Check for Understanding

- a What makes waves? How do waves move through water and air?
- b What kinds of invisible waves are there in the world? What do they do?
- c How do scientists solve problems and answer questions?
- d How do science activities help you learn about waves?
- e How is hands-on learning through activities different from learning through listening or reading the text?
- f How are waves and energy related?
- g What else do you want to know about waves?

**CCC: CCSS.ELA-Literacy.L.4a** Use sentence-level context as a clue to the meaning of a word or phrase.

**CCC: CCSS.ELA-Literacy.RI.4** Determine the meaning of words and phrases in a text relevant to a grade 2 topic or subject area.



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## ESSENTIAL QUESTIONS TO ASK

### AFTER READING

#### 1 Summary and Expansion

- How can you investigate your ideas and thoughts about nature?
- Why is it important to see the results of science experiments?
- How did the glossary help you understand the book?

#### 2 Critical Thinking

- Why is it important to know about science?
- How do we know something exists if we can't see it?
- What would the world be like if there was no such thing as energy?

**CCC: CCSS.ELA-Literacy.L.5b** Distinguish shades of meaning among closely related verbs (e.g., toss, throw, hurl) and closely related adjectives (e.g., thin, slender, skinny, scrawny).

**CCC: CCSS.ELA-Literacy.RF.4c** Use context to confirm or self-correct word recognition and understanding, rereading as necessary.

**CCC: CCSS.ELA-Literacy.RI.7** Explain how specific images (e.g., a diagram showing how a machine works) contribute to and clarify a text.

### COMMON CORE CONNECTIONS

**Grade: 2 Language** CCSS.ELA-Literacy.L.2.3,4,4a,4c,4e,5,5a,5b,6

**Grade: 2 Reading: Foundation Skills** CCSS.ELA-Literacy.RF.2.3,3f,4,4a,4c

**Grade: 2 Reading: Informational Text** CCSS.ELA-Literacy.RI.2.2,3,4,5,6,7,8,9,10

**Grade: 2 Speaking & Listening** CCSS.ELA-Literacy.SL.2.1,1b,1c,2,3,4,6

**Grade: 2 Writing** CCSS.ELA-Literacy.W.2.2,3,6,7,8



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## COMMON CORE CONNECTIONS

### Grade: 2 Language

CCSS.ELA-Literacy.L.2.3,4,4a,4c,4e,5,5a,5b,6

- 3 Use knowledge of language and its conventions when writing, speaking, reading, or listening.
- 4 Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on grade 2 reading and content, choosing flexibly from an array of strategies.
  - 4a Use sentence-level context as a clue to the meaning of a word or phrase.
  - 4c Use a known root word as a clue to the meaning of an unknown word with the same root (e.g., addition, additional).
  - 4e Use glossaries and beginning dictionaries, both print and digital, to determine or clarify the meaning of words and phrases.
- 5 Demonstrate understanding of word relationships and nuances in word meanings.
  - 5a Identify real-life connections between words and their use (e.g., describe foods that are spicy or juicy).
  - 5b Distinguish shades of meaning among closely related verbs (e.g., toss, throw, hurl) and closely related adjectives (e.g., thin, slender, skinny, scrawny).
- 6 Use words and phrases acquired through conversations, reading and being read to, and responding to texts, including using adjectives and adverbs to describe (e.g., When other kids are happy that makes me happy).

### Grade: 2 Reading: Foundation Skills

CCSS.ELA-Literacy.RF.2.3,3f,4,4a,4c

- 3 Know and apply grade-level phonics and word analysis skills in decoding words.
- 3f Recognize and read grade-appropriate irregularly spelled words.
- 4 Read with sufficient accuracy and fluency to support comprehension.
  - 4a Read grade-level text with purpose and understanding.
  - 4c Use context to confirm or self-correct word recognition and understanding, rereading as necessary.

### Grade: 2 Reading: Informational Text

CCSS.ELA-Literacy.RI.2.2,3,4,5,6,7,8,9,10

- 2 Identify the main topic of a multiparagraph text as well as the focus of specific paragraphs within the text.
- 3 Describe the connection between a series of historical events, scientific ideas or concepts, or steps in technical procedures in a text.
- 4 Determine the meaning of words and phrases in a text relevant to a grade 2 topic or subject area.
- 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.
- 6 Identify the main purpose of a text, including what the author wants to answer, explain, or describe.
- 7 Explain how specific images (e.g., a diagram showing how a machine works) contribute to and clarify a text.
- 8 Describe how reasons support specific points the author makes in a text.
- 9 Compare and contrast the most important points presented by two texts on the same topic.
- 10 By the end of year, read and comprehend informational texts, including history/social studies, science, and technical texts, in the grades 2–3 text complexity band proficiently, with scaffolding as needed at the high end of the range.



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## COMMON CORE CONNECTIONS

### Grade: 2 Speaking & Listening

CCSS.ELA-Literacy.SL.2.1,1b,1c,2,3,4,6

1 Participate in collaborative conversations with diverse partners about grade 2 topics and texts with peers and adults in small and larger groups.

1b Build on others' talk in conversations by linking their comments to the remarks of others.

1c Ask for clarification and further explanation as needed about the topics and texts under discussion.

2 Recount or describe key ideas or details from a text read aloud or information presented orally or through other media.

3 Ask and answer questions about what a speaker says in order to clarify comprehension, gather additional information, or deepen understanding of a topic or issue.

4 Tell a story or recount an experience with appropriate facts and relevant, descriptive details, speaking audibly in coherent sentences.

6 Produce complete sentences when appropriate to task and situation in order to provide requested detail or clarification. (See grade 2 Language standards 1 and 3 here for specific expectations.)

### Grade: 2 Writing

CCSS.ELA-Literacy.W.2.2,3,6,7,8

2 Write informative/explanatory texts in which they introduce a topic, use facts and definitions to develop points, and provide a concluding statement or section.

3 Write narratives in which they recount a well-elaborated event or short sequence of events, include details to describe actions, thoughts, and feelings, use temporal words to signal event order, and provide a sense of closure.

6 With guidance and support from adults, use a variety of digital tools to produce and publish writing, including in collaboration with peers.

7 Participate in shared research and writing projects (e.g., read a number of books on a single topic to produce a report; record science observations).

8 Recall information from experiences or gather information from provided sources to answer a question.



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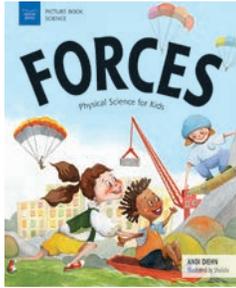


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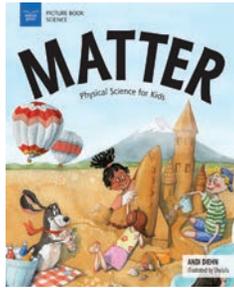


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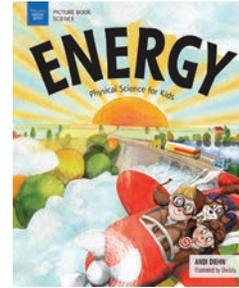
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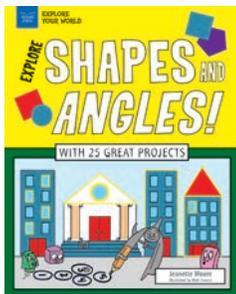
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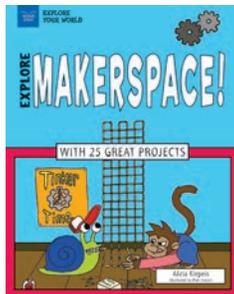
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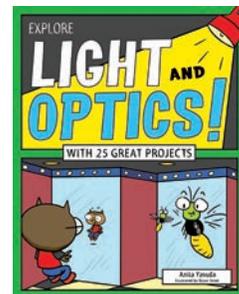
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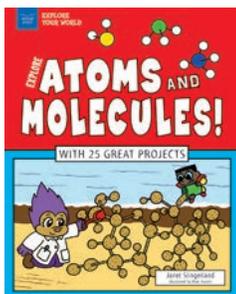
Author: Jeanette Moore



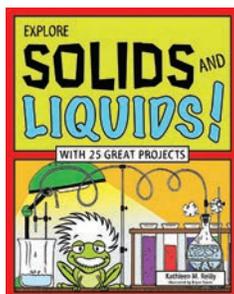
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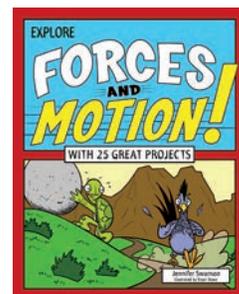
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