

# **Science-itzing Read Alouds** 🤔💭!

In science classrooms, students often obtain information from non-fiction texts to answer their questions while storybooks are not often used as a resource. This may be because teachers may see them as having less value to deepen science understanding or may not know how to lift out science ideas. We propose that using storybooks alongside informational texts broaden students' lenses on ways they can understand their world and offers integrated opportunities to practice literacy and science sensemaking together.

Drawing upon the work of Hintz and Smith (2013) with mathematizing read-alouds, we borrow and adapt their work below to consider ways to 'science-itize' read-alouds by pulling together read-alouds, science, and discussion to deepen student sensemaking and connection. Hintz and Smith (2013) categorize books into three types which we have adjusted to apply to science topics. These categories help guide the teacher in selecting the types of discussion questions and where, when, and how-often to pause. The important thing about this is not to get the categorization "right" but rather to bring awareness to the kinds of texts and genres we are selecting to help students expand their lenses of seeing science and growing as scientists in more contexts. Another way to think about categories of books are books that shout a concept and books that whisper a concept (Bang-Jensen & Lubkowitz, 2017).

- **Text-dependent** books feature science concepts to the degree that the plot or ideas in the text cannot be understood without having some understanding of or experience the science concepts.
- **Idea-enhancing** books do not depend on scientific understanding the way that text-dependent books do, but they do offer opportunities to deepen students' understanding when scientific ideas are lifted out and highlighted
- **Illustration-exploring** books contain pictures, drawings, or diagrams that lend themselves to exploring science concepts through visuals

## **Example Text Set for Science Sensemaking**

Below is a 5th grade example text set for natural resources focusing on water. It features a variety of genres for reading tasks that support science sensemaking and literacy skill development. We propose using texts that reflect your students' lived experiences and knowledge to position them as experts as you read together. Additionally, you may consider purposefully using texts in languages other than English that are spoken by students in your classroom to position their full linguistic repertoire as important and useful for sensemaking in science and in literacy.

Note: Before using books in class, we recommend you preview the content.

## Grade 5 - Water as Natural Resource

- 5-ESS3-1 Obtain and combine information about ways individual communities use science ideas to protect the Earth's resources and environment.
- 5-ESS2-1 Develop a model using an example to describe ways the geosphere, biosphere, hydrosphere, and/or atmosphere interact.

### Text Dependent



#### **We Are Water Protectors** (available in Spanish)

Written by Carole Lindstrom, Illustrated by Michaela Goade

- See example [lesson plan ideas](#)
- Figurative language (metaphor)

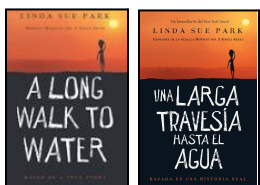


#### **The Great Stink: How Joseph Bazalgette Solved London's Poop Pollution Problem**

Written by Colleen Paeff, Illustrated by Nancy Carpenter

- Engineering solution to early wastewater treatment issues
- Historical Narrative → applying engineering design processes from the past to current place-based challenges facing communities

### Story/Idea Enhancing



#### **A Long Walk to Water** (available in Spanish)

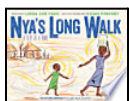
Written by Linda Sue Park

- Chapter book, great for class read aloud or book clubs
- Potential technology connection: Follow the journey using [Google Earth](#)

#### **Nya's Long Walk: One Step at a Time**

Written by Linda Sue Park, Illustrated by Brian Pinkney

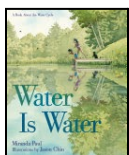
- Shorter picture book of the "Long Walk to Water" book above → if reading both ELA opportunity to compare what the author includes or leaves out while still focusing on the science of water availability/scarcity



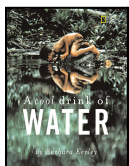
#### **Water is Water: A Story About the Water Cycle**

Written by Miranda Paul, Illustrated by Jason Chin

- Picture walk to lend comprehension to science-specific language
- After reading book, share poem as a [one-pager](#) to read and analyze figurative language (onomatopoeia, rhyming, inferencing)
- Reinforcing Phonemic awareness & spelling opportunity (e.g. swirl, whirl, curl)
- Develop a model to show journey of water across time/space



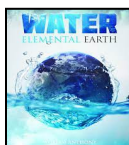
### Illustration Exploring



#### **A Cool Drink of Water** By Barbara Kerley

- Simple text + photos show how people around the world collect and drink water
- Study photographs to ask questions about water quality + water sources
- Vocabulary: well, tap, fountain, jug, bucket, bottle, pot, pump
- Last 4 pages of book contains a map of water around the world, descriptions of each photo, and a 2-page nonfiction reading about water conservation

### Non-Fiction



#### **Water: Elemental Earth**

Written by William Anthony

- Read one 2-pages spread together as a class, modeling with a think-aloud. Provide a copy of a 2-page spread related to a science lesson goal and/or student question clusters on Driving Question Board for students to read and obtain information

For more texts, see "[Literary Science Mentor Texts](#)" from CCBC Univ of Wisconsin-Madison