

K-5 Professional Learning Session



Read Alouds: Learning Science from and with Stories



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~ 90 minute Session

Session Intentions:

- Leverage familiar entry points for K-5 teachers who have expertise in facilitating read-alouds for ELA, math, or science already related to students' lived experiences.
- Expand teachers' critical lenses in selecting and planning for read-alouds in ways that deepen science sensemaking, grow students' science identities and sense of rightful belonging in science and engineering.

Session Goals:

- Experience a science read-aloud from the student perspective that focuses on both science and literacy perspectives.
- Expand a critical lens for analyzing science related picture books
- Explore books and apply session resources to the books
- Develop a plan for how you will conduct a science read-aloud in your classroom in an upcoming week.
- Reflect on how language, literacy and science combined can support students' sensemaking and scientific practices.

Prepare for the Session:

- Read 'mathematizing read alouds' article. Consider ways this maps onto science books used for read-alouds.
- Decide on what book you will use in Step 2 below and make your plan to engage teachers as students. *Bonus: Choose a book that is written in a language other than English with illustrations ("illustration exploring" type of book)*
- Select a stack of picture books for teachers to explore in step 4 from the library that fit the range of "types" (see below for details around text-dependent, story enhancing, and illustration exploring - and/or use our short list)
- Invite/email teachers who are coming to the session to think about and be prepared to share some ways they've used read-alouds in their classrooms (science or not) and to bring one of their favorite read aloud books (doesn't have to be "science" specific)
- Make copies of [article](#), [checklist](#), + [planning tool](#) page for each teacher
- sticky notes, pens, markers

~ 90 min Session Outline

Part 1. Sharing Experiences (~10 mins)

- In groups or pairs, invite teachers to introduce themselves and their role/grade if they don't already know each other and share about a favorite picture book and why they like reading it with their students.
- Introduce facilitators, purpose, goals, and outcomes for today.

Part 2. The Student Experience (~ 15 mins)

- Ask teachers to participate with their student hats on and engage them as you would students with this book. Give them unit or prior lesson context within which you would use this read aloud.
- Engage teachers-as-students in a read aloud that the facilitator has pre-planned. Facilitator has selected one type of book from the 'mathematizing read-aloud' article (ex: text dependent, illustration exploring, story idea enhancing) and prepared 3-4 questions and pause points to engage students.

Language/Literacy Pause Point Possibilities:

- *If this book is written in a language other than English, maybe it's more of a picture walk as the teacher may not speak this language but students in the class might - What does that do for positioning students and shifting the power dynamics of language? How can we learn from a book if we can't read or don't know the language?*
- *What do you notice about images / illustrations? How do they help you understand what is going on in the story?*
- *What do you notice about the characters and setting in the book? How do they represent the lived experiences of the particular community? What similarities and differences do you see between this community and your own?*

Science Pause Point Possibilities:

- *What science ideas are you seeing in this story? In the illustrations?*
 - *How do the science ideas in the story connect to what we are exploring as a classroom community?*
 - *How do the characters work together to address science, math, and/or engineering-related challenges?*
 - *What are you wondering now about the natural world?*
- Debrief and discuss the experience. *What moves did the teacher make to facilitate student engagement with the story? With the science? With identities? Cultures? Languages? What science practices could be elevated through the book (Asking questions, creating a model,*

Part 3. Expanding Our Critical Lenses with Read-Alouds (~ 15 mins)

- Jigsaw: Read an excerpt or skim the Justice-Equity-Inclusion checklist for reviewing science picture books OR 'Mathematizing Read-Alouds' article (PDF).

Annotate noticings/wonderings that resonate with you and parts you want to process and work to understand better.

- Discuss with a jigsaw partner the parts of the checklist and/or article that resonated or confused you and talk through meaning together.

Part 4. Looking at Examples (~ 20 min)

- Choose your own adventure – Pick one task below and dig in:
 - a. Explore example stories of ways teachers have engaged students in read-alouds:
 - Non-fiction: Building Ideas from Read Alouds (Video)
 - Text Dependent: We Are Water Protectors Example plans (written case + a chapter from the video)
 - Illustration Exploring: Kinder Weather Modeling Features
 - b. Use the picture book you brought or choose a book off the table.
 - Read the book. Identify genre and type(s) (text dependent, illustration exploring, story/idea enhancing). Why do you think so?
 - Use tips from the checklist and article to analyze the book.
 - *How is science positioned as a human endeavor?*
 - *How are multiple perspectives about science ideas presented?*
 - *Whose identities are represented in this book? How?*

Part 5. Make a Quick Plan (~ 15 mins)

- Plan a read aloud to use in your classroom. (Optional: use a [planning tool](#) – including science-specific processing points). Can work with your grade-level team or partner on a common book. Ask for feedback and input from others.

Part 6. Quick Rounds of Peer Feedback (~10 mins)

- Pair up by grade level. Each person in the pair gets 4 mins to share their plan or do a quick walk through and get feedback. Switch partners.
 - 1 min book choice and why serves students and goals
 - 1 min plan walk through
 - 2 mins questions + feedback from partner

Closing (~ 5 mins)

- Reflect as a group on how critically thinking about language, literacy and science combined can support:
 - Students’ sensemaking and scientific practices
 - Teachers’ habits of mind when selecting and using science picture books and conducting science read alouds in their classrooms
- Share takeaways and/or lingering questions from today.
- Remind teachers this is ongoing work. Go and try your plan! Offer a [Flip](#) link to report back how it went via video that others can watch and learn from, too.