Bringing geology and early science literacy to preschool classrooms with storytime and show & tell: A collaboration between a librarian and a geologist

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Our History

Our Team

Kristen is a STEM Librarian, previously a public librarian, with an undergrad in geology

Gordon is a freelance geologist and education coordinator, previously a university instructor for physics and geology, with a masters in geology

Past Outreach Events

2013-2019

Annual events at the public library and natural history museum

Attendance between 50 to a few hundred people, mixed age from toddlers to seniors

Drop in events



Fossil slab used during visits



Preschool Visits

New format for the team

20-30 minute visit to the classroom
About 15 children, ages 3-6

Church Preschool
Spring 2024 and 2025

School District Preschool
Fall 2024
(morning and afternoon class)

Why do we do this?

- Fostering lifelong learning and curiosity
  - Introduces rocks and fossils they might see in a museum
    - Not all kids have the opportunity to go to museums
  - Hands-on experiences - much of the show and tell is driven by their questions or observations
- Building good will in the community
  - It's valuable especially to smaller preschools who don't have the opportunity to bring in special guests
  - Sharing our knowledge
- For the outreach team, it's beneficial to stretch communication skills, and to talk about concepts and things to a general audience, and to kids.

Sample Selection and Audience



The mineral magnetite, it's magnetic

In older ages of children, and in adults we assume some previous knowledge

For preschoolers, these will be new concepts, and new vocabulary

This isn't to say preschoolers are unable to grasp the subject - they have an inquisitive nature that allows for quick and excited learning

Avoiding Common Mistakes

Too many samples

Lots of samples = lots of questions

Unexpected questions

Time is limited

For preschoolers, too many things can be overwhelming

Variety

Certain objects are bound to spark certain questions - you need to be prepared to answer those questions (eg. can you explain the entire rock cycle)

For preschoolers, you can't rely on too much previous knowledge

Interest

Different age groups find different things interesting (eg. leaf fossils vs. colors of quartz)

For preschoolers who are learning colors and need hands on learning, this should be the focus

What samples make a good presentation?

- Mix of rocks, minerals, and fossils
- All are safe to touch
- Nothing so small it could vanish
- Main theme: different and the same
- Bright colors and shiny
- Things that tie geology back into the real world
- For the fossils, they must be recognizable, not broken fragments



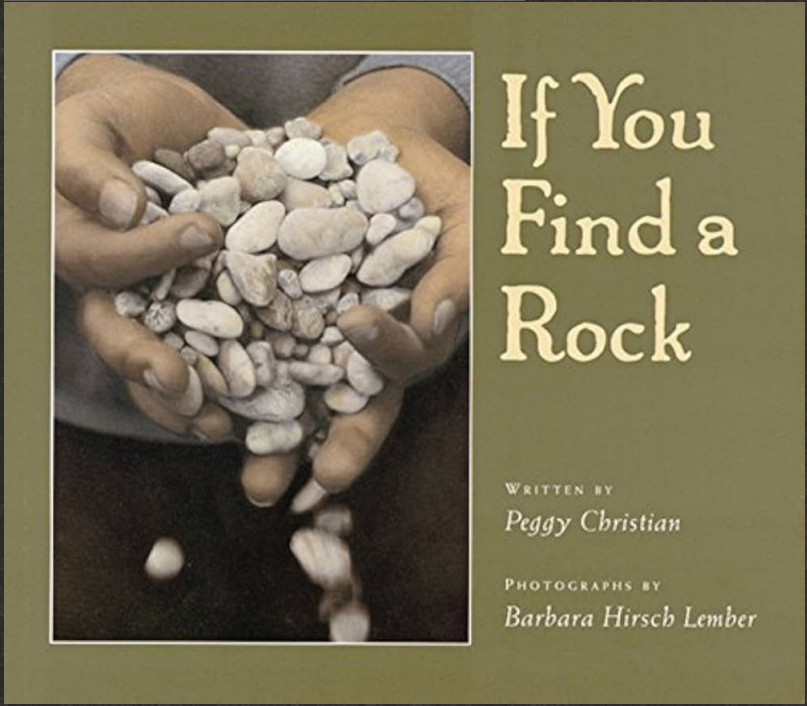






Choosing the Storybook

If you find a rock by Peggy Christian



Picture book with a narrative, not a non-fiction book

Aim to build connections between their experiences and rocks and fossils

For the reader, practice reading the book aloud several times beforehand

How the Session Goes



- Bring in the samples
- Introduction by the teacher
- Read the story
- Look at samples and listen to some explanations
- Touching the samples is fine, but no lifting them off the table
- Ask them what they see
- Talk about what's the same and what's different
- Answer all the questions...
  (great to have two people for this)

Success Indicators

Memorable Stories

Teachers tell us children talk about the session for weeks afterwards

Parent told us a child pointed out a rock in a river bank and told their parent what it was

A child asking his dad to take him to a museum after our event, which they hadn’t done before; we spoke with them the following year and they did

Invitations for future

We have visited the church preschool for two years in a row, with plans to continue

We plan to visit the school district preschool again, including the other schools with a preschool class

Thanks for listening

Kristen Adams
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