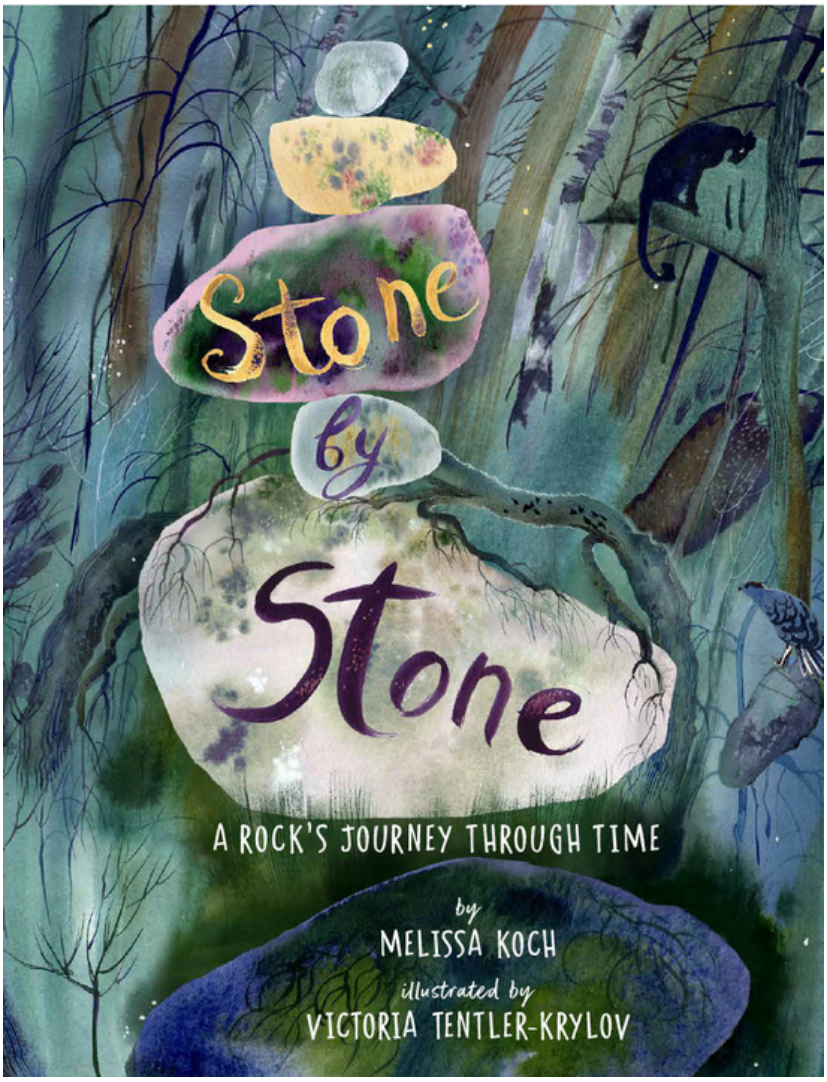
ROCKS & STONES

Outdoor Activities

Noticing rocks and stone structures all around us means slowing down and spending time outdoors. The following activities can be adapted for different ages and group sizes. They work well for out-of-school as well as in-school settings.



ROCKS & STONES

Noticing Rocks

On hikes and walks, look around you. Notice the rock types (See Lesson I) that you see a lot of. Why do you see those types of rocks (i.e. what's the geology of your location?) Do you find any unusual or possibly out of place rocks? Where might the unusual rocks have come from?

Finding Rock Formations

Are you standing on it? Large rock(s) formed by Earth's forces (wind, water, plate tectonics, chemicals) over time may be destinations or curiosities on our hikes and travels. Stop to look closely. What types of rocks are they? What Earth forces made the rock formations? What do you predict will happen next (in a thousand years)?

Exploring Stone Structures

Visit stone structures in your neighborhood and when you travel to new places. Ask the following about the stones structure and the rocks used to build it:

- What
- When
- Why
- Where
- How
- Who

Connect with local historical societies and libraries to talk to experts and/or read about the stone structures you saw. See if your observations and online sources match up with local knowledge.

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Rock Breaker

This activity can be used as an introduction to reading the book, *Stone by Stone*, or used as an icebreaker before a *Stone by Stone* lesson or activity.

Share with students one or two rocks that are special to you and why they are special. Bring the rocks or show pictures of the rocks.

Ask students: Do you all have a favorite rock?

As students raise their hands, say: Please tell me your name, about a special rock, and why it's special to you.

Once everyone has shared (or just a few students have shared if it's a large group and you are using this activity as an opener to another Stone by Stone activity), Ask students: Do you have a favorite stone structure?

Let a few students reply then Ask: What's the difference between a rock and stone structure?

Let students come up with the answer and, either confirm or fill in with: Scientists distinguish rocks from stones. Rocks are naturally occurring hard surfaces made up of minerals from once living plants, animals, fungi. Stones are shaped by humans for tools or for use in building structures.

So many rocks, so many stories. This book contains multiple stories too. See if you can find all the stories in STONE BY STONE.

Note: a rock formation (one or more large rocks) may come up in this discussion. Encourage students to define a rock formation: Large rock(s) formed by Earth's forces (wind, water, plate tectonics, chemicals) over time.

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Uncovering Story Structures

Circular story structures—when the narrative begins and ends in the same place—offer a way to connect to nature and the theme of the book. Stone by Stone: A Rock's Journey Through Time begins with the circular story we know, the rock cycle, then connects to another circular story we often overlook of how humans use those rocks to build stone structures.

Observations of nature's cycles (seasons, water, rock, etc.) and crafting circular story structures start with lists. Scientists use lists to categorize and understand what they are observing. Writers use lists to show patterns and tell stories.

List structures a writer might use include: Descriptive, Sequence, Compare and Contrast, Question and Answer, Cause and Effect, Problem and Solution. Any of these list structures might also be a circular story. For example *If You Give a Mouse a Cookie* by Laura Numeroff is a well-known circular story. This book also has a cause-and-effect structure.

1) Choose a cycle in nature. Ask students make observations and organize their observations using a list structure.

2) Ask students read circular story structures as mentor texts aloud as a group or individually. Potential mentor texts include:

- *Water is Water* by Miranda Paul
- *Stone by Stone* by Melissa Koch
- *No Monkeys, No Chocolate* by Melissa Stewart
- *Hawk Rising* by Maria Gianferrari
- *Because of an Acorn* by Adam Schaefer and Lola M. Schaefer
- *Flower Talk* by Sara Levine
- *Pumpkin Circle: The Story of a Garden* by George Levenson.

See if you and your students can find others!

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Uncovering Story Structures (continued)

3) Lead a discussion for each mentor text, asking students
a.In addition to circular structure, what structures does the author use to organize the book?
b.Why do you think the author chose this structure?
c.How does the circular structure relate to the other structure of the book?
d.How does the circular structure relate to the nature topic in the book?
e.What's the theme of the book?
f.How does circular structure relate to the theme of the book?
g.What else do you notice about the use of circular story structure in this book?

4) Have students turn their lists into a circular story.
a.Ask students to look at their list of observations about a cycle in nature and notice the themes and patterns in the list.
b.Ask students to consider which list structure and circular structure would work for one of the themes or patterns they see.
c.Have students create an outline and/or draft their story using the list and circular structures.

5) Have students share their stories with each other in written or oral presentations.

Enjoy the seasons and all of nature's cycles!

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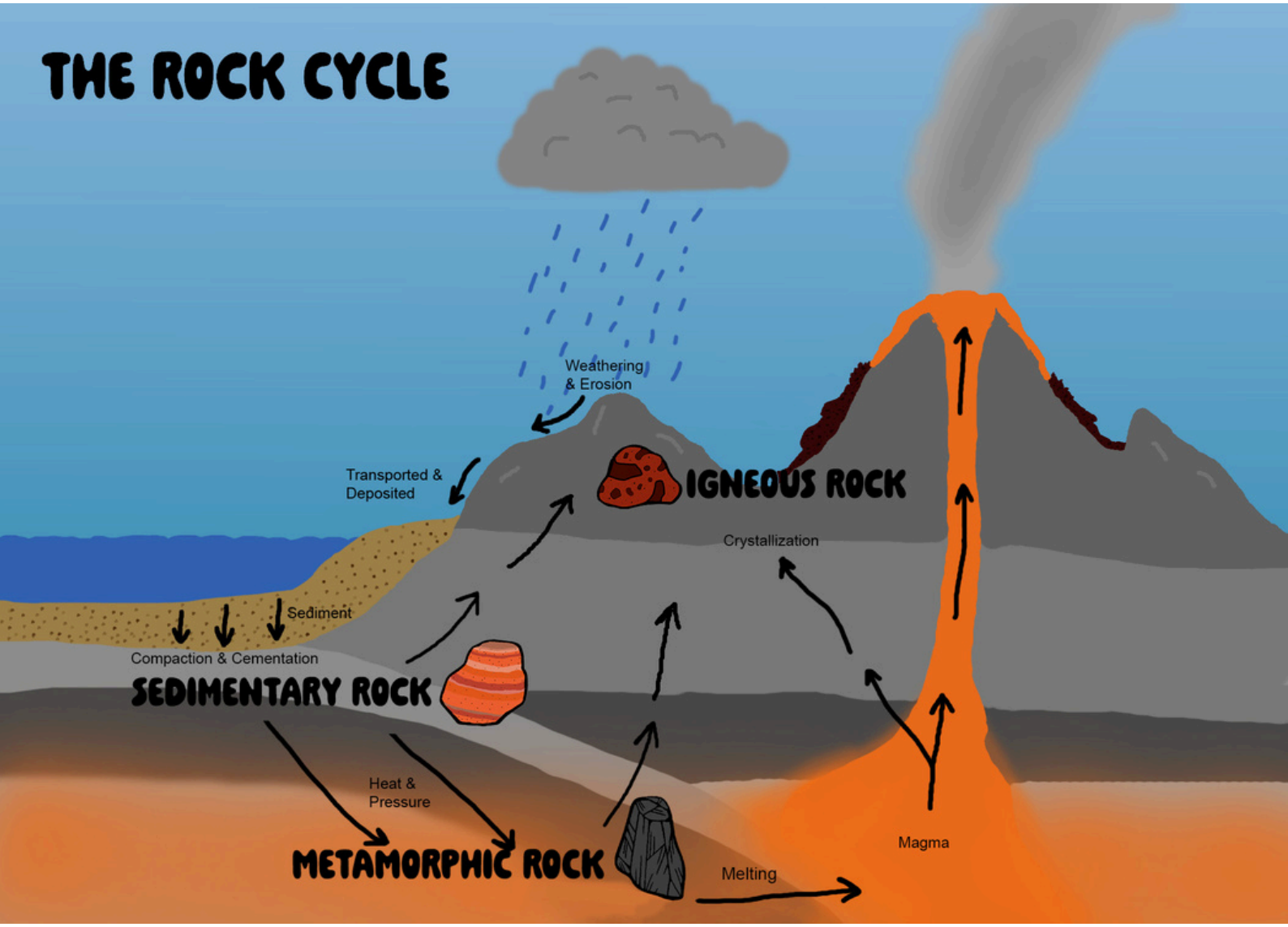
Poetry Rocks

After reading *Stone by Stone* and discussing its poetic techniques have students write their own rock poems. Here are a few techniques found in the book that students might use as starting points:

- Rhythm & meter
- Figurative language (metaphor, simile, personification, sensory imagery)
- Sound devices (onomatopoeia, alliteration, assonance, consonance, repetition, rhyme)
- Line breaks (enjambment, caesura, end-stop)

Have students spend time with stone structures and rocks in nature for inspiration.

Rock Cycle Poster



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