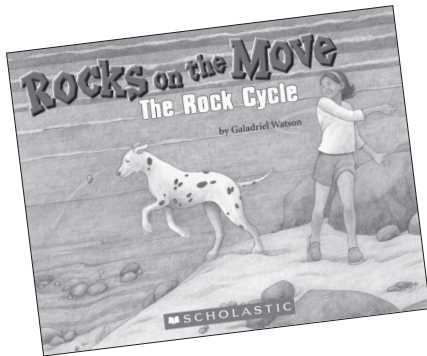


ROCKS ON THE MOVE THE ROCK CYCLE

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TEXT TYPE: Info-fiction: Retell—Explanation
GUIDED READING LEVEL: Q

SUMMARY: There are three types of rocks: igneous, sedimentary, and metamorphic. Learn about each type of rock and how rocks change over time.

Note: You may want to focus only on a spread or a specific feature of the text rather than covering this info-fiction text in its entirety.

TEXT FEATURES

- glossary
- text boxes

VISUAL LITERACY

- table of contents
- diagrams
- labels
- map
- map key
- photographs
- illustrations

TEXT SUPPORTS

- captions
- labels
- photographs
- illustrations

POSSIBLE TEXT CHALLENGES

- scientific vocabulary specific to the topic
- layout of text
- diagrams

FOCUS COMPREHENSION STRATEGY

- analyzing

FURTHER COMPREHENSION STRATEGY

- predicting

ORAL LANGUAGE OPPORTUNITIES

- Value Line strategy
- Radio Show (option 3 in Focused Rereading)
- students discuss examples of their writing (option 3 in Focused Rereading)

WORKING WITH WORDS

- word solving and building: uses a range of strategies to read multi-syllabic words, including chunking words into parts and connecting one word with another (e.g., ‘Volcano’ to ‘Volcanic’)

ASSESSMENT OPPORTUNITIES

Observe each student’s ability to:

- analyze text for facts
- retrieve information from visual features (e.g., diagrams, maps)
- skim a text to find facts
- use syllabication, context cues, reading on, and prior knowledge to solve unfamiliar words
- understand that some texts are a blend of fiction and non-fiction (info-fiction)

ASSESSMENT TOOLS

Select from the following:

- Analyzing Strategy Checklist
- Comprehension Strategies Anecdotal Record

First Session (pages 4–13)

BEFORE READING

Predicting

Activate and build prior knowledge

- Show the front and back covers and read the title and the blurb on the back. Ask students: *What kind of book will this be—a story or something different? What makes you think that?*

TEACHING TIP: Info-fiction is a blend of fiction and non-fiction. In this case, info-fiction refers to the combination of storytelling and curriculum related science. Understanding the info-fiction text type will help students make sense of the text. Ask students: *What on the front or back cover makes you think this will be a story? What makes you think this might be a non-fiction text?* Suggest that there is possibly an element of both fiction and non-fiction in this text and, if so, we should categorize this type of text as info-fiction.

Text Features

Introduce supports and challenges

- Have students turn to the Table of Contents on page 3 of their books. Ask, *How does the Table of Contents help the reader? What can you learn from it?*
- Now have students look at the Glossary on page 24. Ask, *How does the Glossary help the reader?* Read the words and definitions together with students. Look at page 6 and discuss how the Glossary helps readers make sense of the scientific words in bold. Ask, *What other strategies, besides using the Glossary, can you use to figure out the meaning of words?* Identify strategies such as background knowledge and rereading sentences before and after the word. Remind students to use these, and any other strategies suggested, when they come to new scientific words in the text.

Word Solving and Building

- On chart paper, copy out some of the following multi-syllabic words found in the text: ‘underground,’ ‘volcano,’ ‘sedimentary,’ ‘igneous,’ ‘metamorphic,’ ‘sediments,’ ‘Appalachian.’ Mark the words to show students how they are broken into syllables. Point out that when students come across an unfamiliar word, they can break it into syllables by identifying the parts they know. For example: un/der/ground, vol/ca/no, sed/i/ment/ta/ry, ig/ne/ous, met/a/mor/phic, sed/i/ments, App/al/a/chi/an.

Visual Literacy Features

- Have students flip through pages 5–13 and look at the various visual literacy features used by the author: photographs, diagrams with labels, captions, illustrations. Ask, *Why are these features used in this selection?* (additional information, for explanation) Explain to students that the information contained in these features is as important as the information in the main text. Remind students to pay attention to these features as they read.

Analyzing

Set a purpose for reading

- Read the blurb on the back of the book once more to give students a purpose for reading. Ask them to find out the different types of rocks and answer ‘Where do these rocks come from, where do they go, and how do they change?’

ESL NOTE: Have students use a web to make notes on the types of rocks, how rocks are formed, and examples of those rocks. Remind students that drawing pictures in the web can be used as a way to remember information.

Provide for early finishers

- When students finish, they can jot down questions on strips of paper to ask the other students (one question per strip). Students should include the page where the answer can be found on the strip of paper, e.g., *How many active volcanoes are on earth?* (see page 6) Have students put their names on the back of the strips and place the strips in a jar or bag to be pulled out after reading.

TEACHING TIP: If you want students to focus on the visual literacy features, ask that all their questions come from somewhere on the page other than the main text.

DURING READING

Monitor reading

- Have students read the text independently to the end of page 13.
- Have a student read a portion of the text aloud to you. Assist with word solving, vocabulary, and comprehension. Always provide a comprehension prompt that highlights the focus strategy (analyzing): e.g., *How many types of rocks are there? What are the three types of rocks called? Explain that diagram to me. What is the author’s message in this picture?*

Observe

- Make observations on your assessment tools. (See the *Analyzing Strategy Checklist* and the *Comprehension Strategies Anecdotal Record* in the *Grade 4 Literacy Support Guide*.)
- Make observations regarding whether students read all of the information presented (main text and visual literacy features, diagrams, captions, text boxes). Encourage students to follow an approach in reading the main text and other textual components that works for them (e.g., read the main text first and diagrams and captions second—the order in which the text is presented).
- Note any successful reading strategies you observe, e.g., students looking at the pictures, or students re-reading for understanding.

AFTER READING

Analyzing

Revisit the purpose for reading

- Ask students, *What are the three types of rocks? Where do these rocks come from? Where do they go? How do they change? Which type of rock do we still have to find out about?* (metamorphic)
- Use the student-generated questions on the strips of paper. Pull a strip, ask the question, and have the group skim to locate the answer.

TEACHING TIP:

There are many meaningful ways to read a non-fiction (or info-fiction) text. Let students read the text in a manner comfortable for them in order to enhance learning and make the experience enjoyable.

Check on outstanding challenges

- Discuss the diagram on pages 8–9. Ask, *What is the author trying to tell us with this diagram?*
- Review and discuss any challenges students experienced. Ask students if they understand the explanation given regarding the earth’s crust and mantle and the diagram that illustrates this content on page 6.

Note successful strategy use

- Highlight a student who successfully read the text, e.g., *I really liked the way Insha read page 6. She read the main text first. Next, she looked at the diagram and read the labels. Finally, she read the text box.* Allow other students to explain how they read the same page. Commend students for choosing strategies they felt comfortable with and that worked for them.

Second Session (pages 14–23)

BEFORE READING

Synthesizing

Activate and build prior knowledge

- Ask, *What do you think the author was trying to teach us in the first part of the text?*

Predicting

- Ask, *What might we learn from this next part of the text?*

Visual Literacy Features

Introduce supports and challenges

- Preview the following with students:
 - Note the tectonic plate diagram on pages 14–15. Discuss the importance of taking the time to read the labels and subtitles. Ask, *What are the differences among the three images?*

Word Solving and Building

- Note the map and map key on pages 18–19. Ask, *What is the purpose of the map key? What does this map tell us?*
- Note the rock cycle on page 22. Ask, *What is a cycle? How do you know this diagram represents a cycle? Why do you think the arrows go both ways?*

Analyzing

- On chart paper, copy out some of the following words found in the text: ‘Volcano’/‘volcanic,’ ‘sediment’/‘sedimentary,’ ‘metamorphic’/‘metamorphosis’/‘metamorphism,’ ‘weather’/‘weathering,’ ‘erode’/‘erosion.’ Discuss how knowing the meaning of one word can help readers construct meanings of new or larger words (e.g., knowing ‘weather’ can help you word solve and understand the meaning of ‘weathering’).

Set a purpose for reading

- Ask students to figure out what the author means by ‘The Rock Cycle.’

Provide for early finishers

- With a partner, students can revisit the various visual literacy features and discuss the most important idea of the feature, e.g., *What’s the main thing the author is trying to tell us using the map of Canada?*

DURING READING

Monitor reading

- Listen to individual students read aloud to you. *Have students used only one strategy? Have they changed strategies during the reading? Helping students think and talk about their reading will promote better understanding of the content.*
- Have different students read portions of the text to you and provide them with appropriate comprehension prompts, e.g., *Why did the author put this man’s picture on the page (page 20)? How did this diagram or image help you understand the text? What’s the main idea of this diagram?*
- Provide support to students in word solving and vocabulary.

Observe

- Make observations on your assessment tools. (See the *Analyzing Strategy Checklist* and the *Comprehension Strategies Anecdotal Record* in the *Grade 4 Literacy Support Guide*.)
- Give feedback on any successful strategies you observe.
- Encourage students to explain how they used a strategy to help in solving new or difficult words.

AFTER READING

Analyzing

Revisit the purpose for reading

- Discuss with the class a few of the visual literacy features in order to determine the main idea the author is trying to explain, e.g., the diagram on page 22 is meant to explain that the rock cycle can go in either direction—igneous rocks can become sedimentary rocks and sedimentary rocks can become igneous rocks.

Check on outstanding challenges

- Say, *We discussed earlier that this text is called info-fiction. From what you've read so far, do you feel the text is more fiction or non-fiction? Why do you think the author included both fiction and non-fiction?* Create a Value Line (see Oral Language Strategies in the *Grade 4 Literacy Support Guide*) with the words 'Fiction' and 'Non-fiction' at either end, and 'Not sure' in the middle. Ask, *Do you think this text is more fiction or non-fiction?* Have students put their names on the Value Line and explain their answers.
- Say, *The author has used a number of visual literacy features in this text (give some examples).* Create a Value Line with the words 'Helpful' and 'Not Helpful' at either end. Ask, *Have these visual literacy features been helpful to you as a reader or not very helpful?* Have students put their names on the value line and justify their answers.

Note successful strategy use

- Highlight students that used strategies to understand the visual literacy features. Begin by giving an example: *On page 16, Gabor skimmed over the diagram and noticed the numbered steps. Then he went back more carefully to read each step and looked at the picture. Sequencing helped him with this page.*
- Discuss strategies used to solve and make sense of unfamiliar words. *I noticed Helena carefully reading the names of the rocks in the rock collection boxes. On page 23, she took the time to sound out and break the word 'conglomerate' into syllables to help her read the word.*

FOCUSED REREADING

Three options are provided for focused rereading in the next Guided Reading lesson. Choose an activity that meets the needs of your students, or you might select a Reader Response activity from the *Grade 4 Literacy Support Guide*.

Analyzing and Word Solving and Building

Written

- Using the Internet or other reference material, students create index cards describing the rocks mentioned in the text. Each index card should have the name of the rock followed by the name split up into syllables. Interesting facts about the rock should also be included. Organize the index cards in alphabetical order by rock name.

For example:

Obsidian

ob/sid/i/an

- igneous rock
- a type of naturally occurring glass
- from lava was used for surgeon's scalpel blades

Synthesizing

Artistic

- Students create a poster promoting Canada as a wonderful place for 'rock hounds' (have students discover the meaning of this term) to visit. Students should feel free to incorporate facts from the text and other sources (e.g., the Internet) in order to entice as many rock hounds as possible.

Self-monitoring

Oral/dramatic

- In pairs, one student is the interviewer; the other student is a famous geologist. (Remind students that 'geologist' is defined in the text's Glossary in case they are unsure of its meaning.) Together, the pair develops a series of questions for the interviewer to ask his or her geologist guest. The famous geologist answers the interviewer's questions by reading his or her part directly from the text. For example:

Interviewer: *Tell me, Dr. Smith, where do igneous rocks come from?*

Dr. Smith: *(answer directly from page 6) To understand where igneous rocks come from, you have to start with the structure of the earth. The crust is a thin layer...*

After the presentation, take a moment to ask the presenters how their skills in writing, reading, and viewing other presentations (if applicable) helped them deliver and improve their interview. Note to students that all these skills are interconnected.

Self-monitoring

- The following can be used as a second option for an oral activity. Have students select pieces of writing they have composed over Guided Reading lessons that they feel reflect their growth and development in writing. Have them explain the reasons for choosing the pieces of writing they have selected. Although this activity is not necessarily limited to 'Rocks On The Move,' it is relevant as an exercise in self-monitoring. Students must demonstrate self awareness and metacognition when thinking about and analyzing their writing, noting what strategies have been used successfully at various points. As students explain the reasons for their choices, they will demonstrate reflection on their improvement in writing.