

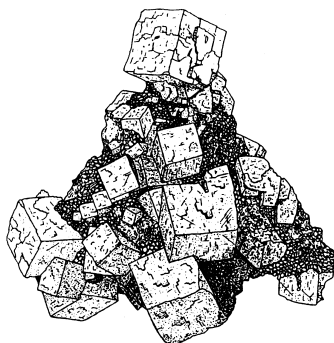
ROCKS AND MINERALS TEACHER'S MANUAL

The *Rocks and Minerals* Teacher's Manual has been developed to assist in the presentation of Common Core State Standards in an engaging and meaningful way to help students use, apply, and master the skills to be successful.

On pages 2–3, the *Rocks and Minerals* Teacher's Manual provides a correlation of the Common Core State Standards skills that are introduced, practiced, and reviewed in the manual activities.

On page 4 of the manual, the lessons present activities that can be used with each and every page of the book. The Learning Activities begin with Reading exercises to introduce the page, practice the skills, and review the concepts presented. Following the Reading exercises are Speaking/Listening skills and Language skills that present ways to help students practice these key items. After each activity, the Common Core State Standards are listed to identify the skill focus for that section.

On page 5 of the manual, Vocabulary and Writing Activities are presented. After each activity, the Common Core State Standards are listed to assist the teacher in the skill focus for each section. The Vocabulary section integrates academic and domain-specific words that are presented in the activities. The Writing sections engage students in the three key styles of writing found in the Common Core State Standards: Narrative, Informative/Explanatory, and Opinion.



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ROCKS AND MINERALS TEACHER'S MANUAL LESSONS

CCSS

Common Core State Standards

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| <p style="text-align: center;">Reading Literature or Informational Text</p> | <p>RI.3.1 Ask and answer questions to demonstrate understanding of a text, referring explicitly to the text as the basis for the answers.</p> <p>RI.3.2 Determine the main idea of a text; recount the key details and explain how they support the main idea.</p> <p>RI.3.5 Use text features and search tools (e.g., key words, sidebars, hyperlinks) to locate information relevant to a given topic efficiently.</p> <p>RI.3.7 Use information gained from illustrations (e.g., maps, photographs) and the words in a text to demonstrate understanding of the text (e.g., where, when, why, and how key events occur).</p> <p>RI.3.10, RI.5.10 By the end of the year, read and comprehend informational texts, including history/social studies, science, and technical texts, at the high end of the grades 2–3 (grades 4–5) text complexity band independently and proficiently.</p> <p>RI.4.1 Refer to details and examples in a text when explaining what the text says explicitly and when drawing inferences from the text.</p> <p>RI.4.2 Determine the main idea of a text and explain how it is supported by key details; summarize the text.</p> <p>RI.4.3 Explain events, procedures, ideas, or concepts in a historical, scientific, or technical text, including what happened and why, based on specific information in the text.</p> <p>RI.4.7 Interpret information presented visually, orally, or quantitatively (e.g., in charts, graphs, diagrams, time lines, animations, or interactive elements on Web pages) and explain how the information contributes to an understanding of the text in which it appears.</p> <p>RI.4.10 By the end of year, read and comprehend informational texts, including history/social studies, science, and technical texts, in the grades 4–5 text complexity band proficiently, with scaffolding as needed at the high end of the range.</p> <p>RI.5.1 Quote accurately from a text when explaining what the text says explicitly and when drawing inferences from the text.</p> <p>RI.5.2 Determine two or more main ideas of a text and explain how they are supported by key details; summarize the text.</p> <p>RI.5.7 Draw on information from multiple print or digital sources, demonstrating the ability to locate an answer to a question quickly or to solve a problem efficiently.</p> |
| <p style="text-align: center;">Foundational Skills</p> | <p>RF.3.3, RF.4.3, RF.5.3 Know and apply grade-level phonics and word analysis skills in decoding words.</p> <p>RF.3.4, RF.4.4, RF.5.4 Read with sufficient accuracy and fluency to support comprehension.</p> |
| <p style="text-align: center;">Writing</p> | <p>W.3.1 Write opinion pieces on topics or texts, supporting a point of view with reasons.</p> <p>W.3.2, W.4.2, W.5.2 Write informative/explanatory texts to examine a topic and convey ideas and information clearly.</p> <p>W.3.3, W.4.3, W.5.3 Write narratives to develop real or imagined experiences or events using effective technique, descriptive details, and clear event sequences.</p> <p>W.4.1, W.5.1 Write opinion pieces on topics or texts, supporting a point of view with reasons and information.</p> |

ROCKS AND MINERALS

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| <p>Speaking and Listening</p> | <p>SL.3.1, SL.4.1, SL.5.1 Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on <i>grade 3 (grades 4 and 5) topics and texts</i>, building on others’ ideas and expressing their own clearly.</p> <p>SL.3.2 Determine the main ideas and supporting details of a text read aloud or information presented in diverse media and formats, including visually, quantitatively, and orally.</p> <p>SL.3.4 Report on a topic or text, tell a story, or recount an experience with appropriate facts and relevant, descriptive details, speaking clearly at an understandable pace.</p> <p>SL.3.6 Speak in complete sentences when appropriate to task and situation in order to provide requested detail or clarification.</p> <p>SL.4.2 Paraphrase portions of a text read aloud or information presented in diverse media and formats, including visually, quantitatively, and orally.</p> <p>SL.4.4 Report on a topic or text, tell a story, or recount an experience in an organized manner, using appropriate facts and relevant, descriptive details to support main ideas or themes; speak clearly at an understandable pace.</p> <p>SL.5.2 Summarize a written text read aloud or information presented in diverse media and formats, including visually, quantitatively, and orally.</p> <p>SL.5.4 Report on a topic or text or present an opinion, sequencing ideas logically and using appropriate facts and relevant, descriptive details to support main ideas or themes; speak clearly at an understandable pace.</p> |
| <p>Language</p> | <p>L.3.1, L.4.1, L.5.1 Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.</p> <p>L.3.2, L.4.2, L.5.2 Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing.</p> <p>L.3.3, L.4.3, L.5.3 Use knowledge of language and its conventions when writing, speaking, reading, or listening.</p> <p>L.3.4, L.4.4, L.5.4 Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on <i>grade 3 (grades 4 and 5) reading and content</i>, choosing flexibly from a range of strategies.</p> <p>L.3.6 Acquire and use accurately grade-appropriate conversational, general academic, and domain-specific words and phrases, including those that signal spatial and temporal relationships (e.g., <i>After dinner that night we went looking for them</i>).</p> <p>L.4.6 Acquire and use accurately grade-appropriate general academic and domain-specific words and phrases, including those that signal precise actions, emotions, or states of being (e.g., <i>quizzed, whined, stammered</i>) and that are basic to a particular topic (e.g., <i>wildlife, conservation, and endangered</i> when discussing animal preservation).</p> <p>L.5.6 Acquire and use accurately grade-appropriate general academic and domain-specific words and phrases, including those that signal contrast, addition, and other logical relationships (e.g., <i>however, although, nevertheless, similarly, moreover, in addition</i>).</p> |

ROCKS AND MINERALS

Summary

The book uses pictures and text to introduce rocks and minerals to students.

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| Learning Activities | Introduce the Book <ul style="list-style-type: none">• Read the title on the front cover together. Have students think about what they know about rocks and minerals. Ask them to tell what they think they might learn about in this book. (RI.3.5, SL.3.1, SL.4.1, SL.5.1)• Read the first section of the Introduction at the beginning of the book as students follow along. After you read each paragraph, have students restate the main ideas in their own words. (RI.3.2, SL.3.2, RI.4.2, SL.4.2, RI.5.2, SL.5.2) |
| | Present a Reading Routine <ul style="list-style-type: none">• Read page 1 aloud with students. Then reread each sentence and have students identify the key facts presented. Continue the sentence-by-sentence routine using other pages. (RF.3.4.b, RF.4.4.b, RF.5.4.b)• After students read page 2, ask several questions to monitor comprehension. Questions should require students to refer to specific details in the text and/or pictures, such as <i>Why is the mineral called the “watermelon tourmaline”?</i> Tell students that before they answer, they should look back at the text and take care to repeat the exact ideas presented there. (RI.3.1, RI.3.7, SL.3.1.b, RI.4.1, RI.4.7, SL.4.1.b, RI.5.1, SL.5.1.b) |
| | Provide Activities for Reading <ul style="list-style-type: none">• Read the information in the Introduction on page v about crystal shapes. Have students study the six basic systems shown at the top of the page. Suggest that they look up the words to help them understand the terms. Then have students turn to page 1 and identify the crystal shape (tetragonal) and find the matching shape on page v. (RI.3.1, RI.3.7, RF.3.4, RI.4.1, RI.4.7, RF.4.4, RI.5.1, RI.5.7, RF.5.4)• After reading about each rock or mineral, have students use information from the text and pictures to give a detailed description of how it looks. Point out that the rocks are shown in color on the cover sections of the book. Then discuss with the group how the pictures help them understand what they read. (RI.3.1, RI.3.7, SL.3.1, RI.4.3, RI.4.7, SL.4.1, SL.5.1) |
| | Focus on Language Arts <ul style="list-style-type: none">• Speaking/Listening: Pair students. Tell them that they will take turns speaking for one minute about a rock or a mineral. After students speak, their partners should verify the information in the speech. Then have students reverse roles. (SL.3.1, SL.3.4, SL.3.6, SL.4.1, SL.4.4, SL.5.1, SL.5.4)• Language Skills: Direct students to the last sentence on page 1 and read it aloud. Remind them that adjectives are words that describe. Help the class understand that more than one adjective is used to tell about the value of the crystal. Adjectives that describe quality or an opinion (significant) come before adjectives that describe origin (commercial) or color (orange). Have students use an adjective for opinion and an adjective for origin or color to describe rocks and minerals in the book. If necessary, supply examples of opinion adjectives such as <i>cute</i>, <i>lovely</i>, and <i>delightful</i>. (L.3.1, L.3.3, L.4.1.d, L.4.3, L.5.1, L.5.3) |

ROCKS AND MINERALS

| Vocabulary | |
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| Summary Have students use the following strategy to identify the meanings of unknown words in a reading selection. | |
| Vocabulary Activities | <p>Context Clues</p> <p>Explain to students that informational text often provides context clues to help readers identify the meanings of words. These clues may be descriptions, explanations, pictures, words with the same meaning, or words with opposite meanings. Have students look for context clues for unknown words in the text. For example, read aloud page 19 with students and write the word <i>geode</i> on the board. Ask students how they can use context clues to figure out the meaning of the word. Point out that the author includes the picture clues and shows it in color at the top of the inside back cover. (L.3.4.b, L.3.6, L.4.4, L.4.6, L.5.4, L.5.6)</p> |
| Writing | |
| Summary Have students develop their writing skills by completing the following activities. | |
| Writing Activities | <p>Narrative Writing</p> <p>Ask a volunteer to read the text on page 7 aloud as the class follows along. Have students imagine going to Arkansas and looking for quartz. Have them write a story about an imaginary trip to Arkansas. Ask them to tell about where they went in Arkansas, how they found some quartz, and what they did with it. Have students share their stories. (RF.3.4.a, W.3.3, W.3.3.b, L.3.2.c, RF.4.4.a, W.4.3, W.4.3.b, L.4.2.b, RF.5.4.a, W.5.3, W.5.3.b, L.5.2)</p> <p>Informative/Explanatory Writing</p> <p>Group students and have them read page 6. As a class, discuss key ideas and details in the text and picture. Then ask individuals to write a brief report that gives information about Pyrite. Suggest that students use reference books or approved online sources to gather more information. Explain to students that they should group related ideas in their writing in a way that makes sense. Remind students that their writing should include a concluding statement that sums up the main ideas of the report. Have students share their reports. (RI.3.10, W.3.2, W.3.2.a, W.3.2.d, SL.3.1, RI.4.10, W.4.2, W.4.2.a, W.4.2.e, SL.4.1, RI.5.10, W.5.2, W.5.2.a, W.5.2.e, SL.5.1)</p> <p>Opinion Writing</p> <p>Ask students to think about the rocks and minerals described in the book. Have them write to explain which rock or mineral they think would be most interesting. Tell students to use words and phrases such as <i>because</i> and <i>for instance</i> to connect their opinion and reasons. Finally, encourage the class to choose words to express their ideas, such as the words <i>beautiful</i> and <i>brilliant</i> instead of the word <i>pretty</i>. Ask volunteers to share their opinion pieces. (W.3.1, W.3.1.c, L.3.3.a, W.4.1, W.4.1.c, L.4.3.a, W.5.1, W.5.1.c, L.5.3)</p> |

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