

About the Book

Text Type: Nonfiction/Informational Page Count: 24 Word Count: 1,139

Book Summary

Gems fascinate almost everyone. They sparkle, shimmer, and glimmer with mystery and beauty. This book explains how gems are formed, how they are valued, and the processes by which they become jewelry. At the end of the book, students can read about some of the most famous gems. Photographs and diagrams support the text.

Book and lesson also available at Levels V and Y.

About the Lesson

Targeted Reading Strategy

- Make, revise, and confirm predictions

Objectives

- Make, revise, and confirm predictions to understand informational text
- Understand cause-and-effect relationships in nonfiction text
- Identify various sentence types
- Place words in alphabetical order

Materials

Green text indicates resources available on the website

- Book—*Gems: Treasures from the Earth* (copy for each student)
- Chalkboard or dry erase board
- Word journal (optional)
- Make, revise, and confirm predictions; cause and effect; sentence types; alphabetical order worksheets
- Discussion cards



Indicates an opportunity for students to mark in the book. (All activities may be demonstrated by projecting the book on an interactive whiteboard or completed with paper and pencil if the books are reused.)

Vocabulary

*Bold vocabulary words also appear in a pre-made lesson for this title on VocabularyA-Z.com.

- Content words:

Story critical: *atoms* (n.), *crystals* (n.), *facets* (n.), *grain* (n.), *opaque* (adj.), *organic gems* (n.)

Enrichment: *dissolve* (v.), *evaporates* (v.), *minerals* (n.)

Before Reading

Build Background

- Have students tell you what they know about precious stones. Ask whether they can define a gem and give examples.

Preview the Book

Introduce the Book

- Give students their copy of the book. Guide them to the front and back covers and read the title. Have students discuss what they see on the covers. Encourage them to offer ideas as to what type of book it is and what it might be about.

- Show students the title page. Discuss the information on the page (title of book, author's name).

Introduce the Reading Strategy: **Make, revise, and confirm predictions**

- Explain to students that good readers often make predictions about a book based on the series of events or information that is conveyed. As they read the book, readers revise or confirm their predictions based on what they learn from reading. Before reading a book, readers can use the title, photographs, and illustrations, or table of contents as the basis for making predictions.
- Introduce and explain the **make-revise-and-confirm-predictions worksheet**. Explain that some of the statements are true and others are false. Have students turn to the table of contents. Invite them look at the worksheet and suggest which sections might provide information about the statements.
- Model using the make-revise-and-confirm-predictions worksheet to make a prediction.
Think-aloud: *There are several statements on the worksheet about the different types of gems. The first statement reads: Diamonds are formed by minerals being squeezed under layers of rocks. I know that diamonds are very hard gems and that something must become very hard if it is squeezed between rocks. Based on what I already know about diamonds and rocks, I predict that statement to be true. I will write true in the box next to the first statement on my worksheet. I think the section titled "How Are Gems Formed?" will provide me with the information I need to revise or confirm my prediction.*
- Instruct students to read the statements on their make-revise-and-confirm-predictions worksheet and make their predictions by writing *true* or *false* next to each sentence, based on what they already know about gems.
- Discuss with students that the reasons behind their predictions are what make their predictions valuable. Invite them to share their predictions and the prior knowledge they used to make each prediction. Reinforce that there are no right or wrong answers at this point.
- As students read, encourage them to use other reading strategies in addition to the targeted strategy presented in this section.

Introduce the Comprehension Skill: **Cause and effect**

- Review or explain that a *cause* is an event that makes something happen, and the *effect* is what happens because of, or as a result of, the event. Create a two-column chart on the board with the headings *Cause* and *Effect*. Write the following sentence on the board under the *Cause* heading: *I hit a baseball through a window.*
- Model identifying a series of cause-and-effect relationships.
Think-aloud: *If I hit a baseball through a window, the window might break and I might have to pay for the window. If I had to pay for the window, I would have to take money out of my savings. If I had to take money out of my savings, I wouldn't have enough money to buy the item I was saving money for. Sometimes a cause and its effect cause other events to happen.*
- Explain to students that this is an informational book that provides facts about gems. It uses explanatory text, which explains how different types of gems are formed and how gems are turned into jewelry. Point out that an explanation often includes cause-and-effect relationships.
- Discuss how explanations can be told in steps or a process, and within the steps, often, a cause-and-effect relationship can be found. Have students look for words like *first*, *when*, *then*, *second*, *last*, *finally*, and *after*. Point out that the steps continue in a certain order, possibly because one step causes another. Have them also look for action verbs because actions can signal a sequence of events.
- **Check for understanding:** Read page 7 aloud as students follow along. Ask: *What is the purpose of the paragraph?* Point out action verbs that show that something is happening. For example: *form*, *squeezed*, *forces*, *melts*, *cools*, and *evaporates*. Ask students to point out one cause-and-effect relationship in the paragraph (mineral is squeezed, atoms arrange themselves in smallest shape possible; mineral gets hot, melts, cools, sapphires formed; minerals dissolve in water, water evaporates slowly, mineral left behind forms crystal).

Introduce the Vocabulary


- Write the following words from the content vocabulary on large pieces of paper and hang them around the room: *atoms*, *crystals*, and *facets*. Read each word aloud with students.
- Place students in small groups and assign each group to a word poster. Have them discuss what they know about the meaning of their word and write a definition on the paper. Encourage students to look carefully for root or base words to help them figure out the meaning of the word. Rotate the groups until each group has visited every word poster.
- Review each word and the information about the word that students wrote on the paper. Create a definition based on their knowledge and write it on the board.
- Explain to students that sometimes they will not find any context clues that define an unfamiliar word. Point out that a glossary or a dictionary is a good source to utilize in finding the definition of a word. Review how to locate a word and its definition in both the dictionary and the glossary. Point out the similarities and differences between the two sources.
- Have a volunteer read the definition for each word from the glossary. Compare students' definitions with the glossary definition. Use the comparison to modify the definition for each word on the board.

Set the Purpose

- As students read the book have them use their make-revise-and-confirm-predictions worksheet to revise or confirm their predictions as they learn more about gems.

During Reading

Student Reading

- **Guide the reading:** Have students read to the end of page 7. Encourage those who finish before others to reread the text.
 - **Model revising a prediction.**
Think-aloud: *I predicted that the first statement on the worksheet was true: Diamonds are formed by minerals being squeezed under layers of rocks. As I read the second section, I learned that minerals are squeezed under layers of rocks to form diamonds over time. I read that the squeezing forces atoms to arrange themselves in the smallest shape possible. Because the information in the statement was correct, I will write confirm—page 7 in the column next to my original prediction. If the statement was incorrect, I would have changed, or revised, the statement in the column to be a true statement, based on the information I had read so far. I think statement number 8 is true, because I know that emeralds are very valuable. I'll have to read the rest of the book to find out.*
 - Encourage students to use the information they've read and discussed to revise or confirm their predictions. Statements 1 through 3 from the guide have been addressed so far. Model for students how to think through whether or not their predictions were confirmed, and if not, why not. Help them to think about whether or not the reasons for their predictions were valid.
 - **Check for understanding:** Have students read to the end of page 9. When they have finished reading, have them share their predictions and the outcome of their predictions. Remind them to revise or confirm, changing false statements to true statements on their worksheet. Ask students whether statement number 4 was true or false (true). Point out that statement number 3 is false, and ask volunteers to read their revised statements from their worksheet.
 - **Independent practice:** Have students read the remainder of the book. Encourage them to continue to make, revise, and confirm their predictions on the worksheet as they read the rest of the book.
-  Have students make a question mark in their book beside any word they do not understand or cannot pronounce. Encourage them to use the strategies they have learned to read each word and figure out its meaning.

After Reading

- Ask students what words, if any, they marked in their book. Use this opportunity to model how they can read these words using decoding strategies and context clues.

Reflect on the Reading Strategy

- **Think-aloud:** *I predicted that statement number 8 on the anticipation guide was true: Emeralds are the hardest natural things in the world. As I read page 15, I learned that my prediction was incorrect. I learned that diamonds are the hardest substance on Earth and can scratch anything. A diamond can only be scratched by another diamond. I will write this information next to my prediction under the heading Revise or Confirm Your Prediction.*
- **Independent practice:** Have students complete their make-revise-and-confirm-predictions worksheet. Invite them to share their predictions, reasoning, and revisions, and to tell how their predictions related to the facts. Ask students to explain how the strategy of making, revising, and confirming predictions helped them understand and enjoy the story.

Reflect on the Comprehension Skill

- **Discussion:** Have students tell you in their own words what they learned about how crystals are formed. Point out the cause-and-effect relationships in the process. Emphasize that the sequence of events is critical because one event causes the next. Have them check the book to confirm their answers.
- **Independent practice:** Introduce, explain, and have students complete the [cause-and-effect worksheet](#). If time allows, discuss their answers.
- **Enduring understanding:** *In this book, you read about how gems are formed, what makes them valuable, and how jewelry is made. Now that you know this information, how does it make you feel about the jewelry that you see on people every day? Is it important to know the value of gems before shopping to buy jewelry? Why or why not?*

Build Skills

Grammar and Mechanics: Sentence types

- Review the three types of sentences: simple (subject, verb), compound (subject, verb, conjunction, subject, verb), and complex (phrase, subject, verb, phrase). Review that many sentences have objects, or things that the subject and verb act upon. Objects do not affect the sentence type.
- Provide examples on the board of each type of sentence. Simple: *Living things make organic gems* (subject: *Living things*; verb: *make*; object: *organic gems*). Compound: *Some crystals form cubes, but others form columns* (subject: *some crystals*; verb: *form*; object: *cubes*; conjunction: *but*; subject: *others*; verb: *form*; object: *columns*). Complex: *Stones often form in layers that make streaks and lines called the grain* (subject: *stones*; verb: *often form*; phrase: *in layers*; phrase: *that make streaks and lines called the grain*).
- Explain how to determine the difference between the three types of sentences. Simple sentences have just a subject and verb, and sometimes an object. Compound sentences are two complete simple sentences joined by a conjunction. Complex sentences are simple sentences with a phrase attached. Review that a phrase is a part of a sentence that can have a subject, verb, or both, but does not form a complete sentence. Review how to read a phrase standing alone to determine whether it is a phrase or a complete sentence.
- **Independent practice:** Introduce, explain, and have students complete the [sentence types worksheet](#). If time allows, discuss their answers.

Word Work: Alphabetical order

- Review or explain the process of putting a list of words in alphabetical order. Remind students that if the first letter of two words is the same, they must compare the next two letters instead.
- Write the words *gems* and *crystals* on the board. Have a volunteer explain which word would appear first in alphabetical order (*crystals*) and why (because *c* comes before *g* in the alphabet).

Lesson Plan *(continued)*

Gems: Treasures from the Earth

- Write the words *diamonds* and *drill* on the board. Point out that the words begin with the same letter (*d*). Ask a volunteer to tell which word would appear first in alphabetical order and to explain his or her thinking (*diamonds*, because the second letter, *i*, in *diamonds* comes before the second letter, *r*, in *drill*).
- Write the words *geologist* and *gemstone* on the board. Have a volunteer explain which word would appear first in alphabetical order (*gemstone*) and why.
- **Check for understanding:** Write the words *minerals* and *mining* on the board. Have students write the words in alphabetical order and explain their thinking to a partner.
- **Independent practice:** Introduce, explain, and have students complete the [alphabetical order worksheet](#). If time allows, discuss their responses.

Build Fluency

Independent Reading

- Invite students to read their book independently. Additionally, partners can take turns reading parts of the book to each other.

Home Connection

- Give students their book to take home to read with parents, caregivers, siblings, or friends. Have students also take home their make-revise-and-confirm-predictions worksheet and explain to someone at home the process of making, revising, and confirming predictions.

Extend the Reading

Informational Writing Connection

Provide print and Internet resources for students to further research gems. Instruct them to select one of the gems from the book that they would like to learn more about. Have them write a report on that gem with at least three sections, including an introduction and conclusion. Have them create a table of contents and a glossary, and encourage them to add illustrations or photographs to their report. If time allows, invite them to read it aloud to the class.

Visit [Writing A-Z](#) for a lesson and leveled materials on expository writing.

Social Studies Connection

Provide print and Internet resources for students to research the major gem mines and collection locations around the world, and have them identify the locations on a world map. Have students also research the mining techniques that apply to each gem. Have them find answers to questions such as: Which gems are the hardest to take from the earth? What does this do to the value of a gem? Create a roundtable discussion in which these and other interesting points are addressed.

Skill Review

[Discussion cards](#) covering comprehension skills and strategies not explicitly taught with the book are provided as an extension activity. The following is a list of some ways these cards can be used with students:

- Use as discussion starters for literature circles.
- Have students choose one or more cards and write a response, either as an essay or as a journal entry.
- Distribute before reading the book and have students use one of the questions as a purpose for reading.
- Conduct a class discussion, as a review, before the book quiz.

Assessment**Monitor students to determine if they can:**

- consistently make reasonable predictions and demonstrate knowledge of predicting then modify and/or confirm those predictions in discussion and on a worksheet
- accurately identify cause-and-effect relationships in discussion and on a worksheet
- consistently identify different sentence types and their parts during discussion and on a worksheet
- correctly place words in alphabetical order in discussion and on a worksheet

Comprehension Checks

- [Book Quiz](#)
- [Retelling Rubric](#)