

Grade 4

TIME
FOR KIDS

Comprehension and Critical Thinking

- ✓ Test Preparation
- ✓ Comprehension and Critical-Thinking Questions
- ✓ Document-Based Analysis



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Introduction and Research

Comprehension is the primary goal of any reading task. According to the RAND Reading Study Group, comprehension is “the process of simultaneously extracting and constructing meaning through interaction and involvement with written language” (2002, 11). Students who comprehend what they read have more opportunities in life, as well as better test performance. In order for students to become proficient readers, it is necessary that they are taught comprehension strategies such as predicting, monitoring comprehension, summarizing, visualizing, questioning, making connections, and inferring meaning (Miller 2002; Pardo 2002).

Focus on reading comprehension has become more urgent in light of NCLB legislation and emphasis on standardized testing. Because the majority of text found on standardized tests is nonfiction (Grigg, Daane, Jin, & Campbell 2003), teachers are now finding a greater need to teach skills using informational texts. For this reason, *Comprehension and Critical Thinking* provides teachers with informational texts in the form of articles about the contemporary world, as well as the past.

Research suggests that students need preparation in order to be successful on standardized tests. Gulek states: “Adequate and appropriate test preparation plays an important role in helping students demonstrate their knowledge and skills in high-stakes testing situations” (2003, 42). This preparation includes, among other things, teaching content and test-taking skills. Skills practiced when using the articles in *Comprehension and Critical Thinking* provide an excellent foundation for improving students’ test-taking abilities.

Not only is reading nonfiction texts beneficial for testing purposes, but studies also show that students actually prefer informational texts. A 1998 study by Kletzien that focused on children’s preferences for reading material indicated that younger children chose nonfiction text close to half the time when choosing their own reading materials. Similar studies (Ivey & Broaddus 2000; Moss & Hendershot 2002) revealed that older children prefer nonfiction and find greater motivation when reading informational texts.

In this book, each nonfiction passage includes a document-based question similar to trends in standardized testing. The students respond to a critical-thinking question based on the information gleaned from a given document. This document is related to the passage it accompanies. Document-based questions show a student’s ability to apply prior knowledge and his or her capacity to transfer knowledge to a new situation. The activities are time efficient, allowing students to practice these skills every week. To yield the best results, such practice must begin at the start of the school year.

Students will need to use test-taking skills and strategies throughout their lives. The exercises in *Comprehension and Critical Thinking* will guide your students to become better readers and test takers. After practicing the exercises in this book, you will be pleased with your students’ comprehension performance not only on standardized tests, but also with any expository text they encounter within the classroom and beyond its walls.

Introduction and Research *(cont.)*

Objectives

All lessons in this book are designed to support the following objectives.

The students will:

- answer who, what, where, why, when, and how questions about the article
- support answers with information found in the article
- support answers with information inferred from the article
- support answers with information based on prior knowledge
- identify the main ideas in the article
- identify supporting details in the article
- draw conclusions based on information learned in the article
- make predictions based on information learned in the article
- form and defend an opinion based on information learned in the article
- respond to questions in written form

Readability

All of the reading passages included in this book have a 4.0–4.9 reading level based on the Flesch-Kincaid Readability Formula. This formula determines a readability level by calculating the number of words, syllables, and sentences.

Preparing Students to Read Nonfiction Text

One of the best ways to prepare students to read expository text is to read a short selection aloud daily. Reading expository text aloud is critical to developing your students' abilities to read it themselves. Because making predictions is another way to help students tap into their prior knowledge, read the beginning of a passage, then stop and ask the students to predict what might occur next. Do this at several points throughout your reading of the text. By doing this over time, you will find that your students' abilities to make accurate predictions greatly increases.

Of course, talking about nonfiction concepts is also very important. However, remember that discussion can never replace actually reading nonfiction texts because people rarely speak using the vocabulary and complex sentence structures of written language.

Asking questions helps students, especially struggling readers, to focus on what is important in a text. Also, remember the significance of wait time. Research has shown that the amount of time an educator waits for a student to answer after posing a question has a critical effect on learning. So, after you ask a student a question, silently count to five (or ten, if you have a student who struggles to get his or her thoughts into words) before giving any additional prompts or redirecting the question to another student.

Introduction and Research *(cont.)*

Bloom's Taxonomy

The questions that follow each passage in *Comprehension and Critical Thinking* assess all levels of learning by following Bloom's Taxonomy, a six-level classification system for comprehension questions that was devised by Benjamin Bloom in 1956. The questions that follow each passage are always presented in order, progressing from *knowledge* to *evaluation*.

The skills listed for each level are essential to keep in mind when teaching comprehension in order to assure that your students reach the higher levels of thinking. Use this classification to form your own questions whenever your students listen to or read material.

Level 1: Knowledge—Students recall information or find requested information in an article. They show memory of dates, events, places, people, and main ideas.

Level 2: Comprehension—Students understand information. This means that they can find information that is stated in a different way from how the question is presented. It also means that students can rephrase or restate information in their own words.

Level 3: Application—Students apply their knowledge to a specific situation. They may be asked to do something new with the knowledge.

Level 4: Analysis—Students break things into components and examine those parts. They notice patterns in information.

Level 5: Synthesis—Students do something new with the information. They pull knowledge together to create new ideas. They generalize, predict, plan, and draw conclusions.

Level 6: Evaluation—Students make judgments and assess value. They form opinions and defend them. They can also understand another person's viewpoint.

Practice Suggestions: Short-Answer Questions

The short-answer question for each passage is evaluative—the highest level of Bloom's Taxonomy. It is basically an opinion statement with no definitive right answer. The students are asked to take stances and defend them. While there is no correct response, it is critical to show the students how to support their opinions using facts and logic. Show the students a format for response—state their opinion followed by the word *because* and a reason. For example, "I do not think that whales should be kept at sea parks because they are wild animals and don't want to be there. They want to be in the ocean with their friends." Do not award credit unless the child adequately supports his or her conclusion. Before passing back the practice papers, make note of two children who had opposing opinions. Then, during the discussion, call on each of these students to read his or her short-answer response to the class. (If all the children drew the same conclusion, come up with support for the opposing one yourself.)

Introduction and Research *(cont.)*

Practice Suggestions: Document-Based Questions

It is especially important to guide your students in how to understand, interpret, and respond to the document-based questions. For these questions, in order to formulate a response, the students will have to rely on their prior knowledge and common sense in addition to the information provided in the document. Again, the best way to teach this is to demonstrate through thinking aloud how to figure out an answer. Since these questions are usually interpretive, you can allow for some variation in student responses.

The more your students practice, the more competent and confident they will become. Plan to have the class do every exercise in *Comprehension and Critical Thinking*. If you have some students who cannot read the articles independently, allow them to read with partners, and then work through the comprehension questions alone. Eventually, all students must practice reading and answering the questions independently. Move to this stage as soon as possible. For the most effective practice sessions, follow these steps:

1. Have the students read the text silently and answer the questions.
2. Collect all the papers to score the short-answer question and the document-based question portion.
3. Return the papers to their owners, and discuss how the students determined their answers.
4. Refer to the exact wording in the passage.
5. Point out how students had to use their background knowledge to answer certain questions.
6. Discuss how a student should explain his or her stance in each short-answer question.
7. Discuss the document-based question thoroughly.

Introduction and Research *(cont.)*

Scoring the Practice Passages

Identify the number of correct responses when scoring the practice passages. Share the number of correct responses with the students. This is the number they will most easily identify; additionally, the number of correct responses coincides with the Student Achievement Graph. However, for your own records and to share with the parents, you may want to keep track of numeric scores for each student. If you choose to do this, do not write the numeric score on the paper.

To generate a numeric score, follow these guidelines:

Type of Question	Number of Questions	Points Possible Per Question	Total Number of Points
Short-answer question	6	10 points	60 points
Document-based question	2	20 points	40 points
Total			100 points

Standardized Test Success

One of the key objectives of *Comprehension and Critical Thinking* is to prepare your students to get the best possible scores on the reading portion of standardized tests. A student's ability to do well on traditional standardized tests in comprehension requires these factors:

- a large vocabulary
- test-taking skills
- the ability to effectively cope with stress

Every student in your class needs instruction in test-taking skills. Even fluent readers and logical thinkers will perform better on standardized tests if you provide instruction in the following areas:

Understanding the question—Teach the students how to break down the question to figure out what is really being asked. This book will prepare the students for the kinds of questions they will encounter on standardized tests.

Concentrating only on what the text says—Show the students how to restrict their responses to only what is asked. When you review the practice passages, ask your students to show where they found the correct response in the text.

Ruling out distracters in multiple-choice answers—Teach the students to look for the key words in a question and look for those specific words to find the information in the text. They also need to know that they may have to look for synonyms for the key words.

Maintaining concentration—Use classroom time to practice this in advance. Reward the students for maintaining concentration. Explain to them the purpose of this practice and the reason why concentration is so essential.

Teaching Nonfiction Comprehension Skills

Nonfiction comprehension encompasses many skills that develop with a lot of practice. The following information offers a brief overview of the crucial skills of recognizing text structure, visualizing, summarizing, and learning new vocabulary. This information is designed for use with other classroom materials, not the practice passages in *Comprehension and Critical Thinking*.

Many of these skills can be found in scope-and-sequence charts and standards for reading comprehension:

- recognizes the main idea
- identifies details
- determines sequence
- recalls details
- labels parts
- summarizes
- identifies time sequence
- describes character(s)
- retells information in own words
- classifies, sorts into categories
- compares and contrasts
- makes generalizations
- draws conclusions
- recognizes text organization
- predicts outcome and consequences
- experiences an emotional reaction to a text
- recognizes facts
- applies information to a new situation

Typical Comprehension Questions

Teaching the typical kinds of standardized-test questions gives students an anticipation framework and helps them learn how to comprehend what they read. It also boosts their test scores. Questions generally found on standardized reading comprehension tests are as follows:

Facts—questions based on what the text states: who, what, when, where, why, and how

Sequence—questions based on order: what happened first, last, and in-between

Conditions—questions asking the students to compare, contrast, and find the similarities and differences

Summarizing—questions that require the students to restate, paraphrase, choose main ideas, conclude, and select a title

Vocabulary—questions based on word meaning, synonyms and antonyms, proper nouns, words in context, technical words, geographical words, and unusual adjectives

Outcomes—questions that ask readers to draw upon their own experiences or prior knowledge, which means that students must understand cause and effect, consequences, and implications

Opinion—questions that ask the author's intent and require the use of inference skills

Document-based—questions that require students to analyze information from a source document to draw a conclusion or form an opinion

Teaching Nonfiction Comprehension Skills *(cont.)*

Teaching Text Structure

Students lacking in knowledge of text structure are at a distinct disadvantage, yet this skill is sometimes overlooked in instruction. When referring to a text to locate information to answer a question, understanding structure allows students to quickly locate the right area in which to look. The students also need to understand text structure in order to make predictions and improve overall comprehension.

Some students have been so immersed in print that they have a natural understanding of structure. For instance, they realize that the first sentence of a paragraph often contains the main idea, followed by details about that idea. But many students need direct instruction in text structure. The first step in this process is making certain that students know the way that authors typically present ideas in writing. This knowledge is a major asset for students.

Transitional paragraphs join together two paragraphs to make the writing flow. Most transitional paragraphs do not have a main idea. In all other paragraph types, there is a main idea, even if it is not stated. In the following examples, the main idea is italicized. In order of frequency, the four types of expository paragraph structures are as follows:

- 1. The main idea is often the first sentence of a paragraph. The rest of the paragraph provides the supporting details.**

Clara Barton, known as America's first nurse, was a brave and devoted humanitarian. While caring for others, she was shot at, got frostbitten fingers, and burned her hands. She had severe laryngitis twice and almost lost her eyesight. Yet she continued to care for the sick and injured until she died at the age of 91.

- 2. The main idea may fall in the center of the paragraph, surrounded on both sides by details.**

The coral has created a reef where more than 200 kinds of birds and about 1,500 types of fish live. *In fact, Australia's Great Barrier Reef provides a home for many interesting animals.* These include sea turtles, giant clams, crabs, and crown-of-thorns starfish.

- 3. The main idea comes at the end of the paragraph as a summary of the details that came before.**

Each year, Antarctica spends six months in darkness, from mid-March to mid-September. The continent is covered year-round by ice, which causes sunlight to reflect off its surface. It never really warms up. In fact, the coldest temperature ever recorded was in Antarctica. *Antarctica has one of the harshest environments in the world.*

- 4. The main idea is not stated in the paragraph and must be inferred from the details given. This paragraph structure is the most challenging for primary students.**

The biggest sea horse ever found was over a foot long. Large sea horses live along the coasts of New Zealand, Australia, and California. Smaller sea horses live off the coast of Florida, in the Caribbean Sea, and in the Gulf of Mexico. The smallest adult sea horse ever found was only one-half inch long!

In this example, the implied main idea is that sea horses' sizes vary based on where they live.

Teaching Nonfiction Comprehension Skills *(cont.)*

Teaching Text Structure *(cont.)*

Some other activities that will help your students understand text structure include the following:

Color code—While reading a text, have the students use different-colored pencils or highlighters to color-code important elements such as the main idea (red), supporting details (yellow), causes (green) and effects (purple), and facts (blue) and opinions (orange). When they have finished, ask them to describe the paragraph's structure in their own words.

Search the text—Teach the students to identify the key words in a question and look specifically for those words in the passage. Then, when you discuss a comprehension question with the students, ask them, “Which words will you look for in the text to find the answer? If you can’t find the words, can you find synonyms? Where will you look for the words?”

Signal words—There are specific words used in text that indicate, or signal, that the text has a cause-effect, sequence, or comparison structure. Teaching your students these words will greatly improve their abilities to detect text structure and increase their comprehension.

These Signal Words	Indicate
since, because, caused by, as a result, before and after, so, this led to, if/then, reasons, brought about, so that, when/then, that's why	cause and effect The answer to “Why did it happen?” is a cause. The answer to “What happened?” is an effect.
first, second, third, next, then, after, before, last, later, since then, now, while, meanwhile, at the same time, finally, when, at last, in the end, since that time, following, on (date), at (time)	sequence
but, even if, even though, although, however, instead, not only, unless, yet, on the other hand, either/or, as well as, “-er” and “-st” words (such as better, best, shorter, tallest, bigger, smallest, most, worst)	compare/contrast