Reading Framework for the 2013 National Assessment of Educational Progress

National Assessment Governing Board
U.S. Department of Education

WHAT IS NAEP?

The National Assessment of Educational Progress (NAEP) is a continuing and nationally representative measure of trends in academic achievement of U.S. elementary and secondary students in various subjects. For nearly four decades, NAEP assessments have been conducted periodically in reading, mathematics, science, writing, U.S. history, civics, geography, and other subjects. By collecting and reporting information on student performance at the national, state, and local levels, NAEP is an integral part of our nation's evaluation of the condition and progress of education.

THE 2012–2013 NATIONAL ASSESSMENT GOVERNING BOARD

The National Assessment Governing Board was created by Congress to formulate policy for NAEP. Among the Governing Board's responsibilities are developing objectives and test specifications and designing the assessment methodology for NAEP.

Members

Honorable David P. Driscoll, Chair
Former Commissioner of Education
Melrose, Massachusetts

Susan Pimentel, Vice Chair
Educational Consultant
Hanover, New Hampshire

Chief Executive Officer
Baltimore City Public Schools
Baltimore, Maryland

Louis M. Fabrizio
Data, Research and Federal Policy Director
North Carolina Department of Public Instruction
Raleigh, North Carolina

Honorable Anitere Flores
Senator
Florida State Senate
Miami, Florida

Alan J. Friedman
Consultant
Museum Development and Science Communication
New York, New York

Rebecca Gagnon
School Board Member
Minneapolis Public Schools
Minneapolis, Minnesota

Shannon Garrison
Fourth-Grade Teacher
Solano Avenue Elementary School
Los Angeles, California

Doris R. Hicks
Principal and Chief Executive Officer
Dr. Martin Luther King, Jr. Charter School for Science and Technology
New Orleans, Louisiana

Andrew Dean Ho
Assistant Professor
Harvard Graduate School of Education
Harvard University
Cambridge, Massachusetts

Honorable Terry Holliday
Commissioner of Education
Kentucky Department of Education
Lexington, Kentucky

Richard Brent Houston
Principal
Shawnee Middle School
Shawnee, Oklahoma

Hector Ibarra
Eighth-Grade Teacher
Belin-Blank International Center and Talent Development
Iowa City, Iowa

Honorable Tom Luna
Idaho Superintendent of Public Instruction
Boise, Idaho

Terry Mazany
President and CEO
The Chicago Community Trust
Chicago, Illinois

Tonya Miles
General Public Representative
Mitchellville, Maryland

Dale Nowlin
Twelfth-Grade Teacher
Columbus North High School
Columbus, Indiana

Joseph M. O'Keefe, S.J.
Professor
Lynch School of Education
Boston College
Chestnut Hill, Massachusetts

W. James Popham
Professor Emeritus
University of California, Los Angeles
Wilsonville, Oregon

B. Fielding Rolston
Chairman
Tennessee State Board of Education
Kingsport, Tennessee

Cary Sneider
Associate Research Professor
Portland State University
Portland, Oregon

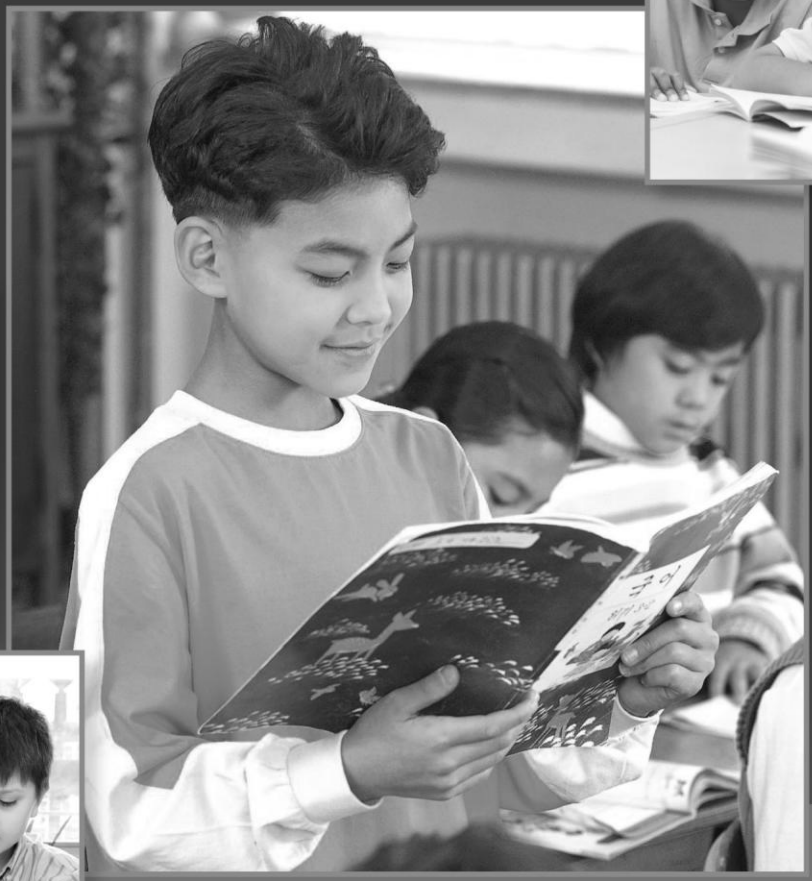
Blair Taylor
Chief Community Officer
Starbucks Coffee Company
Seattle, Washington

Honorable Leticia Van de Putte
Senator
Texas State Senate
San Antonio, Texas

Ex-Officio Member

John Q. Easton
Director
Institute of Education Sciences
U.S. Department of Education
Washington, D.C.

Reading Framework for the 2013 National Assessment of Educational Progress



National Assessment Governing Board
U.S. Department of Education

National Assessment Governing Board

Honorable David P. Driscoll
Chair

Susan Pimentel
Vice Chair

Cornelia S. Orr
Executive Director

Mary Crovo
Deputy Executive Director and
Project Officer

Developed for the National Assessment Governing Board under contract number ED–02–R–0007 by the American Institutes for Research

For further information, contact:

National Assessment Governing Board
800 North Capitol Street, NW
Suite 825
Washington, DC 20002-4233
www.nagb.org

October 2012

For sale by the U.S. Government Printing Office
Superintendent of Documents, Mail Stop: SSOP, Washington, DC 20402-0328

TABLE OF CONTENTS

List of Exhibits ..... **ii**
Executive Summary ..... **iii**
Text Types iv
Meaning Vocabulary Assessment iv
Item Design iv
12th Grade NAEP v
Reporting Results v
Reporting Trend Data v
Sample Items vi
Preface by the National Assessment Governing Board ..... **vii**
NAEP Reading Project Staff and Committees ..... **ix**
Chapter One: Overview **1**
NAEP Overview 1
Overview of NAEP Reading Assessment 6
Chapter Two: Content and Design of NAEP in Reading **15**
Texts on the NAEP Reading Assessment to Be Included 15
Literary Text 16
Informational Text 22
Characteristics of Texts Selected for Inclusion 28
Vocabulary on the NAEP Reading Assessment 32
Cognitive Targets 37
Item Types 42
Chapter Three: Reporting Results **44**
No Child Left Behind Provisions for NAEP Reporting 44
Achievement Levels 44
Reporting NAEP Results 45
Reporting State NAEP Results 46
Reporting Trend Data 46
Bibliography **49**
Definition of Reading 49
Text Types, Matrices, and Cognitive Targets 49
Vocabulary Assessment 52
Appendix A: Glossary of Terms **57**
Appendix B: NAEP Reading Achievement Level Definitions **63**
NAEP Reading Achievement Levels—Grade 4 63
NAEP Reading Achievement Levels—Grade 8 64
NAEP Reading Achievement Levels—Grade 12 66
Appendix C: Special Studies: NAEP Reading Framework **69**

LIST OF EXHIBITS

Exhibit 1. Percentage distribution of literary and informational passages 11
Exhibit 2. Similarities and differences: 1992–2007 and 2009–2013 NAEP reading frameworks 14
Exhibit 3. Literary text matrix: Fiction 17
Exhibit 3 (continued). Literary text matrix: Literary nonfiction 19
Exhibit 3 (continued). Literary text matrix: Poetry 21
Exhibit 4. Informational text matrix: Exposition 23
Exhibit 4 (continued). Informational text matrix: Argumentation and persuasive text 25
Exhibit 4 (continued). Informational text matrix: Procedural texts and documents 27
Exhibit 5. Passage lengths for grades 4, 8, and 12 29
Exhibit 6. Considerations for selecting stimulus material 32
Exhibit 7. Considerations for selecting vocabulary items and distractors 36
Exhibit 8. Cognitive targets 41
Exhibit 9. Percentage distribution of cognitive targets by grade 42
Exhibit 10. Percentage distribution of time to be spent on specific item types 43
Exhibit 11. Generic NAEP achievement levels 45
Exhibit 12. Years of administration of NAEP reading assessments 47

EXECUTIVE SUMMARY

As the ongoing national indicator of what American students know and can do, the National Assessment of Educational Progress (NAEP) in Reading regularly collects achievement information on representative samples of students in grades 4, 8, and 12. Through The Nation's Report Card, the NAEP Reading Assessment reports how well students perform in reading various texts and responding to those texts by answering multiple-choice and constructed-response questions. The information NAEP provides about student achievement helps the public, educators, and policymakers understand strengths and weaknesses in student performance and make informed decisions about education.

The 2013 NAEP Reading Assessment will measure national, regional, state, and subgroup achievement in reading but is not designed to report individual student or school performance. The assessment will measure students' reading comprehension and their ability to apply vocabulary knowledge to assist them in comprehending what they read. The reading assessment will use the same framework used in 2009. The public will have access to performance results and released questions through NAEP reports and websites.

This document, the *Reading Framework for the 2013 National Assessment of Educational Progress,* presents the conceptual base for, and discusses the content of, the assessment. It is intended for a broad audience. A more detailed technical document, the *Reading Assessment and Item Specifications for the National Assessment of Educational Progress*, is available on the Web. The specifications will provide information to guide passage selection, item development, and other aspects of test development. Both the framework and the specifications documents are available to the public at www.nagb.org/publications/frameworks.htm.

The Governing Board, the policymaking body for NAEP, has stated that the NAEP Reading Assessment will measure reading comprehension by asking students to read passages written in English and to answer questions about what they have read. The framework "shall not endorse or advocate a particular pedagogical approach … but shall focus on important, measurable indicators of student achievement" (Governing Board 2002). Although broad implications for instruction may be inferred from the assessment, NAEP does not specify how reading should be taught; nor does it prescribe a particular curricular approach to teaching reading.

The NAEP Reading Framework results from the work of many individuals and organizations involved in reading and reading education, including researchers, policymakers, educators, and other members of the public. Their work was guided by scientifically based literacy research that conceptualizes reading as a dynamic cognitive process as reflected in the following definition of reading.

Reading is an active and complex process that involves:

- Understanding written text.
- Developing and interpreting meaning.
- Using meaning as appropriate to type of text, purpose, and situation.

This definition applies to the assessment of reading achievement on NAEP and is not intended to be an inclusive definition of reading or reading instruction.

TEXT TYPES

This framework recognizes that reading behaviors such as recognizing and using features of text, making sense of sentences and paragraphs, and comprehending vocabulary occur regardless of text type. However, other reading behaviors vary with the type of text encountered by a reader. Thus, the NAEP Reading Framework includes two types of texts on the assessment: literary texts, which include fiction, literary nonfiction, and poetry; and informational texts, which include exposition, argumentation and persuasive text, and procedural text and documents.

MEANING VOCABULARY ASSESSMENT

The NAEP Reading Framework includes a more systematic approach to vocabulary assessment than the NAEP Reading Framework used from 1992 through 2007. Vocabulary assessment will occur in the context of a passage; that is, vocabulary items will function both as a measure of passage comprehension and as a test of readers' specific knowledge of the word's meaning as intended by the passage author. A sufficient number of vocabulary items at each grade will provide reliable and valid information about students' vocabulary knowledge.

ITEM DESIGN

The framework includes the following cognitive targets, or behaviors and skills, for items from both literary and informational texts: locate/recall, integrate/interpret, and critique/evaluate. These cognitive targets illustrate the complex nature of the reading process whereas the corresponding behaviors highlight the different behaviors elicited by different text types. To measure these cognitive skills, students will respond to both multiple-choice and constructed-response items with varying distributions of question type by grade level. Students in grade 4 will spend approximately half of the assessment time responding to multiple-choice items and half responding to constructed-response items. Students in grades 8 and 12 will spend a greater amount of time on constructed-response items.

12TH GRADE NAEP

In May 2005, the Governing Board adopted a policy regarding NAEP and 12th-grade preparedness. The policy states that NAEP will pursue assessment and reporting on 12th-grade student achievement as it relates to preparedness for postsecondary education and training. This policy resulted from recommendations of the Board's National Commission on NAEP 12th Grade Assessment and Reporting in March 2004. Subsequent studies and deliberations by the Board took place during 2004 and 2005.

In reading, the Board adopted minor modifications to the 2009 NAEP Reading Framework at grade 12 based on a comprehensive analysis of the framework conducted by Achieve. The current version of the reading framework incorporates these modifications at grade 12 to enable NAEP to measure and report on preparedness for postsecondary endeavors. The 2013 NAEP Reading Assessment will use the same framework used in 2009.

REPORTING RESULTS

Results are reported in two ways: as average scores for groups of students on the NAEP 0–500 scale and as percentages of students who attain each of the three achievement levels (*Basic*, *Proficient*, and *Advanced*, according to definitions adopted by the Governing Board). NAEP scores are always reported at the aggregate level; scores are not produced for individual schools or students.

REPORTING TREND DATA

The *Reading Framework for the 2009 National Assessment of Educational Progress* replaced the framework used first for the 1992 reading assessment and then for subsequent reading assessments through 2007. Compared with the previous framework, the 2009 reading framework included more emphasis on literary and informational texts, a redefinition of reading cognitive processes, a new systematic assessment of vocabulary knowledge, and the addition of poetry to grade 4.

The 2009 NAEP Reading Report Card included trend data on student reading performance from 1992 to 2009. Results from special analyses determined the 2009 reading assessment results could be compared with those from earlier assessment years. These special analyses started in 2007 and included in-depth comparisons of the frameworks and the test questions, as well as an examination of how the same students performed on the 2009 assessment and the earlier assessment. A summary of these special analyses and an overview of the differences between the previous framework and the 2009 framework are available on the Web at nces.ed.gov/nationsreportcard/reading/trend_study.asp. The 2013 NAEP Reading Report Card will report trends in student reading performance from 1992 to 2013.

SAMPLE ITEMS

Sample passages and items released to the public may be viewed on the NAEP Questions Tool at nces.ed.gov/nationsreportcard/itmrlsx/. The Questions Tool also includes performance results, scoring rubrics, and student responses to NAEP reading items.

PREFACE BY THE NATIONAL ASSESSMENT GOVERNING BOARD

In a modern society, the ability to read well is the cornerstone of a child's education. In a modern economy, literacy is a prerequisite for a successful life.

In their early years of schooling, children learn to draw meaning and pleasure from the words on a page, which gives them a sense of accomplishment. Throughout the remainder of their schooling, reading is the critical skill they use for learning in all parts of the curriculum. For adults, reading is a key means to learn and do our jobs; it is also a source of enjoyment and an essential way we connect with family, friends, and the world around us. The ability to read critically and analytically is crucial for effective participation in America's democratic society.

The *Reading Framework for the 2013 National Assessment of Educational Progress* sets forth the design of a test of reading comprehension. The exam requires students to read passages of written English text—either literary or informational—and to answer questions about what they have read. In some cases, the questions deal with facts in the text or vocabulary. In other cases, a complete answer requires a clear analysis or coherent argument supported by sound evidence from the text.

This is the second reading framework approved by the National Assessment Governing Board. It replaces the framework that was used in the National Assessment of Educational Progress (NAEP) from 1992 to 2007. This new reading framework is the result of extraordinary effort and commitment by hundreds of people across the country, including some of the nation's leading figures in reading research, assessment, and instruction.

The new framework incorporates the following key features:

- Its design is based on current scientific research in reading. In keeping with Governing Board policy, it does not advocate a particular approach to instruction, but rather focuses on important, measurable indicators of student achievement.

- The framework's content and preliminary achievement standards at grade 12 embody reading and analytical skills the project committees believe are needed for rigorous college-level courses and other productive postsecondary endeavors.

- In preparing the framework, extensive use was made of international reading assessments and exemplary state standards.

- Vocabulary is measured explicitly. Word meanings will be tested in context, and enough vocabulary items will be included to report useful information on the extent of vocabulary knowledge.

- Poetry is assessed in grade 4 as well as in grades 8 and 12. Previously, NAEP assessed poetry in grades 8 and 12 only. Poetry is a form of text that is rich in meaning and involves a high level of abstraction in language and ideas.

- Multiple-choice and constructed-response items (both short and extended) are included at all grades. In grades 8 and 12, students will be expected to spend about 60 percent of assessment time on constructed-response questions; at grade 4, about 50 percent.

- Descriptions of reading material to be used in the assessment and target skills to be tested are delineated in a series of charts that provide clear guidance to those developing the assessment and clear information to the public.

- Achievement will be reported on an overall cross-grade scale, allowing NAEP to show the development of reading skills throughout years of schooling as well as the wide variations in particular grades. Clear standards for grade-level expectations will be established.

- Separate subscales will be reported for literary and informational text, as has been done on international reading assessments.

The Governing Board would like to thank the hundreds of individuals and organizations whose time and talents contributed to this reading framework. The framework process was conducted through a contract with American Institutes for Research (AIR). Both AIR and another organization, the Education Leaders Council, prepared literature reviews and issues papers, which provided different perspectives and served as the basis for extensive discussions by the Reading Framework Steering and Planning Committees. These committees, working over a period of 14 months, included teachers, reading researchers, local and state policymakers, testing experts, and business and public representatives. Many of these individuals have played important roles in other major projects, including the National Reading Panel, international reading assessments, the RAND Reading Study Group, and the American Diploma Project.

In addition, the Board convened an independent external review panel comprised of eminent reading scholars, authors, and curriculum specialists. Their charge was to conduct an in-depth analysis of the framework draft, including its research base and design. These individuals played an important role in shaping the framework adopted by the Board. The Board also received wide comments on the draft framework through Internet reviews, a public forum held in Washington, D.C., and numerous meetings with state and local educators and policymakers across the country.

We believe the framework will provide a rich and accurate measure of the reading comprehension and analytical skills that students need both for their schooling and for their lives. Development of these reading skills is the responsibility of all teachers—not only English teachers but also teachers across the curriculum—and also involves the expectations of parents and society. The Board hopes that this reading framework will serve not only as a significant national measure of how well students read, but also as a catalyst to improve reading achievement for the benefit of students themselves and for our nation.

NAEP READING PROJECT STAFF AND COMMITTEES

Note: This list of project staff and committees reflects professional affiliations during the project period for framework development.

STEERING COMMITTEE

Marilyn Adams
Chief Scientist
Soliloquy Learning Corporation
Needham, Massachusetts

Phyllis Aldrich
Gifted and Talented Coordinator
Saratoga-Warren Board of Cooperative Educational Services
Saratoga Springs, New York

Francie Alexander
Vice President and Chief Academic Officer
Scholastic, Inc.
New York, New York

Patricia Alexander
Professor, College of Education
University of Maryland
College Park, Maryland

Lance Balla
Teacher
Snohomish High School
Snohomish, Washington

Wanda Brooks
Assistant Professor, Dept. of Education
University of Maryland, Baltimore County
Baltimore, Maryland

Leila Christenbury
Professor, School of Education
Virginia Commonwealth University
Richmond, Virginia

Mary Beth Curtis
Professor, School of Education
Director, Center for Special Education
Lesley University
Cambridge, Massachusetts

JoAnne Eresh
Senior Associate
Achieve
Washington, D.C.

Alan Farstrup
Executive Director
International Reading Association
Newark, Delaware

Vincent Ferrandino
Executive Director
National Association of Elementary School Principals
Alexandria, Virginia

Mike Frye (Retired)
Section Chief
English Language Arts and Social Studies
N.C. Department of Public Instruction
Raleigh, North Carolina

Margo Gottlieb
Director, Assessment and Evaluation
Illinois Resource Center
Des Plaines, Illinois

Jane Hileman
Founder
100 Book Challenge Company
King of Prussia, Pennsylvania

Billie J. Orr (Retired)
President
Education Leaders Council
Washington, D.C.

Melvina Pritchett-Phillips
Resident Practitioner, Adolescent Literacy and Professional Development
National Association of Secondary School Principals
Reston, Virginia

Sandra Stotsky
Research Scholar
Northeastern University
Boston, Massachusetts

Cynthia Teter Bowlin
Professor
Dallas County Community College
Dallas, Texas

Julie Walker
Executive Director
American Association of School Librarians, a Division of the American Library Assoc.
Chicago, Illinois

PLANNING COMMITTEE

Michael Kamil, Chair
Professor, School of Education
Stanford University
Stanford, California

Peter Afflerbach
Professor, College of Education
University of Maryland
College Park, Maryland

Donna Alvermann
Professor, College of Education
University of Georgia
Athens, Georgia

Amy Benedicty
Teacher
Peninsula High School
San Bruno, California

Robert Calfee
Dean, Graduate School of Education
University of California-Riverside
Riverside, California

Mitchell Chester
Assistant Superintendent
Ohio Department of Education
Columbus, Ohio

Barbara Foorman
Director, Center for Academic and Reading Skills
University of Texas-Houston
Houston, Texas

Irene Gaskins
Director
Benchmark School
Media, Pennsylvania

Carol Jago
Teacher
Santa Monica High School
Santa Monica, California

Jolene Jenkins
Teacher
Mahaffey Middle School
Fort Campbell, Kentucky

Janet Jones
Reading Resource Teacher
Berry Elementary School
Waldorf, Maryland

Marilyn Joyce
Teacher
Brewer High School
Brewer, Maine

Michael Kibby
Professor, Department of Learning and Instruction
State University of New York Buffalo
Amherst, New York

Margaret McKeown
Senior Scientist
Learning Research and Development Center
University of Pittsburgh
Pittsburgh, Pennsylvania

Paula Moseley
Coordinator
Planning, Assessment and Research, Student Testing Unit
Los Angeles Unified School District
Los Angeles, California

Jean Osborn
Education Consultant
Champaign, Illinois

Charles Peters
Professor, School of Education
University of Michigan
Ann Arbor, Michigan

Carol Santa
Director of Education
Montana Academy
Kalispell, Montana

Karen Wixson
Dean, School of Education
University of Michigan
Ann Arbor, Michigan

Junko Yokota
Professor, Reading and Language Arts
National-Louis University
Evanston, Illinois

Olivia Zarraluqui
Teacher
Our Lady of Lourdes Academy
Miami, Florida

Technical Advisory Panel

Patricia Gandara
Professor, School of Education
University of California at Davis
Davis, California

Paul LaMarca
Director, Department of Assessment and Accountability
Nevada Department of Education
Carson City, Nevada

William Schafer
Affiliated Professor (Emeritus)
University of Maryland
College Park, Maryland

External Review Panel

To obtain an independent review of the draft NAEP Reading Framework, the National Assessment Governing Board commissioned a panel of prominent reading researchers and scholars to examine the draft document. After a 3-month review period, the panel reported to the Board on issues such as whether the framework is supported by scientific research; whether the document reflects what students should know and be able to do in grades 4, 8, and 12; the appropriateness of proposed reading materials; and the clarity and organization of the draft. Members of the Reading External Panel follow.

Dennis J. Kear, Panel Chair
Professor of Curriculum and Instruction,
College of Education
Wichita State University
Wichita, Kansas

Ellin O. Keene
Deputy Director
Cornerstone National Literacy Initiative
University of Pennsylvania
Philadelphia, Pennsylvania

Katherine A. Mitchell
Director, Alabama Reading Initiative
Alabama State Department of Education
Montgomery, Alabama

Keith E. Stanovich
Professor, Ontario Institute for Studies in Education
University of Toronto
Toronto, Ontario, Canada

Joanna P. Williams
Professor, Psychology and Education
Teachers College
Columbia University
New York, New York

PROJECT STAFF,
AMERICAN INSTITUTES FOR RESEARCH

Terry Salinger
Chief Scientist
Project Director

Ramsay Selden
Vice President for Assessment
Chair of Steering Committee

Steve Ferrara
Managing Director
Chair, Technical Advisory Panel

George Bohrnstedt
Senior Vice President
Senior Advisor

Amy Bacevich
Research Associate

Julia MacMillan
Research Analyst

Laura Walton
Research Assistant

CHAPTER ONE

OVERVIEW

Since 1969, the National Assessment of Educational Progress (NAEP) has been an ongoing national indicator of what American students know and can do in major academic subjects, including reading in English. NAEP reading assessments have been administered on a regular schedule to students in grades 4, 8, and 12. Under the No Child Left Behind Act of 2001 (NCLB), NAEP will assess reading in grades 4 and 8 every 2 years. NAEP will also measure reading in grade 12 every 4 years.

The *Reading Framework for the 2013 National Assessment of Educational Progress* is one of two documents that describe the assessment; it is intended for a general audience and presents the conceptual base and content of the assessment. The second document is the *Reading Assessment and Item Specifications for the National Assessment of Educational Progress* and is intended for a more technical audience, including the National Center for Education Statistics (NCES) and the contractors that will develop the NAEP Reading Assessment. The specifications provide the "test blueprint"; that is, information about passage selection, item development, and other aspects of test development.

NAEP OVERVIEW

The National Assessment Governing Board—the policymaking body for NAEP—has defined several parameters for the reading assessment. First, the NAEP assessment will measure reading comprehension in English. On the assessment, students will be asked to read passages written in English and to answer questions about what they have read. Second, because this is an assessment of reading comprehension and not listening comprehension, NAEP does not allow passages to be read aloud to students as a test accommodation. Third, under Board policy, the framework "shall not endorse or advocate a particular pedagogical approach … but shall focus on important, measurable indicators of student achievement" (Governing Board 2002). Although broad implications for instruction may be inferred from the assessment, NAEP does not specify how reading should be taught; nor does it prescribe a particular curricular approach to teaching reading.

Reading passages are selected to be interesting to students nationwide, to represent high-quality literary and informational material, and to be free from bias. Students respond to both multiple-choice and constructed-response items. In total, the NAEP assessments at grades 4, 8, and 12 are extensive enough to ensure that results can be reported validly, but no single student participates in the entire assessment. Instead, each student reads approximately two passages and responds to questions about what he or she has read. NAEP assessments are administered to random samples of students designed to be representative of the nation, different regions of the country, states, and large urban

districts. As discussed in chapter three, NAEP results are reported for groups of students; no data are reported for individual students. Since 1992, states have been able to obtain state-level data on students' reading achievement. Since 2003, a number of large urban school districts were able to obtain data about their students' reading achievement. Results are reported in documents such as the *NAEP Reading Report Card* issued following each administration of the reading assessment; through special, focused reports; and through electronic means.

Data are also collected that allow comparison of students' reading achievement over extended periods of time in a separate Long-Term Trend NAEP. These assessments, given at the national level only, have been administered in the same form since 1971 and provide the only available measure of extended long-term trends in reading achievement.

Purpose of NAEP Under NCLB Legislation

The NAEP Reading Framework is consistent with NCLB legislation. The NAEP legislation, as amended under NCLB and the later National Assessment of Educational Progress Reauthorization Act (NAEPRA) of 2002, specifies that NAEP's purpose is "to provide, in a timely manner, a fair and accurate measurement of student academic achievement and reporting of trends in such achievement in reading, mathematics, and other subjects[s] …" (section 303(b)(1), National Assessment of Educational Progress Reauthorization Act, P.L. 107–279). The NAEP reading data will measure national, regional, and subgroup trends in reading achievement but will not target the performance of individual students or schools. In further accordance with NCLB, the NAEP Reading Assessment will be administered every 2 years at grades 4 and 8 and the resulting data will be widely reported in a timely fashion. Finally, NAEPRA specifies that although the public will have full access to NAEP results and released test questions, NAEP will not seek to influence the curriculum or assessments of any state.

Definition of Reading for NAEP

The NAEP Reading Assessment is guided by a definition of reading that reflects scientific research, draws on multiple sources, and conceptualizes reading as a dynamic cognitive process. This definition applies to the assessment of reading achievement on NAEP and states that reading is an active and complex process that involves:

- Understanding written text.
- Developing and interpreting meaning.
- Using meaning as appropriate to type of text, purpose, and situation.

Terms used in the definition can be further explained as follows:

Understanding written text: Readers attend to ideas and content in a text by locating and recalling information and by making inferences needed for literal comprehension of

the text. In doing so, readers draw on their fundamental skills for decoding printed words and accessing their vocabulary knowledge.

Developing and interpreting meaning: Readers integrate the sense they have made of the text with their knowledge of other texts and with their outside experience. They use increasingly complex inferencing skills to comprehend information implied by a text. As appropriate, readers revise their sense of the text as they encounter additional information or ideas.

Using meaning: Readers draw on the ideas and information they have acquired from text to meet a particular purpose or situational need. The use of text may be as straightforward as knowing the time when a train will leave a particular station, or it may involve more complex behaviors such as analyzing how an author developed a character's motivation or evaluating the quality of evidence presented in an argument.

Text: As used in the assessment, the term reflects the breadth of components in typical reading materials. Thus, text on the assessment will include literary and informational passages and may contain noncontinuous print material such as charts. Texts selected for inclusion on the assessment represent practical, academic, and other contexts and are drawn from grade-appropriate sources spanning the content areas.

Purpose: Students' purpose for reading the passages presented on NAEP is determined by the assessment context; thus, the influence of purpose on readers' comprehension is somewhat limited.

Situation: The situation for reading often determines the way that readers prepare for and approach their task. They consider why they are reading (e.g., to study, to relax), how much they know about the topic, and other concerns that shape the time they will spend reading.

FACTORS THAT INFLUENCE READING PERFORMANCE

Factors related to the text being read and to readers' backgrounds and experiences influence reading performance. For example, understanding the vocabulary, concepts, and structural elements of the text contributes to readers' successful comprehension. Comprehension is also affected by readers' background knowledge and by the context of the reading experience. The background knowledge that students bring to the NAEP Reading Assessment differs widely. To accommodate these differences, passages will span diverse areas and topics and will be as engaging as possible to the full range of students in the grades assessed.

The purpose for reading also influences performance. In the case of the NAEP Reading Assessment, purpose is determined by the assessment context; thus, the influence of purpose on readers' comprehension is somewhat limited. For this reason, the definition of

reading presented earlier should be considered as a guide for the NAEP Reading Assessment, not as an inclusive definition of reading. The definition pertains to how NAEP defines reading for the purpose of this assessment. It does not address the issue of how students should be taught to read.

Text comprehension is influenced by readers' ability to apply the essential components of reading: phonemic awareness, phonics knowledge, fluency, and understanding of word meanings or vocabulary. Without these foundational skills, comprehension will not occur. By grade 4, when the NAEP Reading Assessment is first administered, students should have a well-developed understanding of how sounds are represented alphabetically and should have had sufficient practice in reading to achieve fluency with different kinds of texts (National Research Council 1998). Because NAEP tests at grades 4, 8, and 12, the assessment focuses on students' reading comprehension, not their foundational skills related to alphabetic knowledge.[1]

As discussed further in chapter two, the association between vocabulary knowledge and comprehension is strong; students who know the meanings of many words and who also can use the context of what they read to figure out the meanings of unfamiliar words are better comprehenders than those who lack these attributes (National Reading Panel 2000a). In the NAEP Reading Assessment, vocabulary will be assessed systematically through carefully developed items that measure students' ability to derive the meanings of words within the context of the passages they read.

Nature of Reading Behaviors

Reading is an active and complex process that involves multiple different behaviors. Readers often begin by forming an overview of text and then search for information to which they must pay particular attention. Following this initial overview, readers progress with different levels of interaction with text, including interpreting and evaluating what they read. By drawing on previous reading experiences and prior knowledge, they form hypotheses about what the text will communicate and revise their initial ideas and their knowledge base as their reading continues. Readers continuously acquire new understandings and integrate these into their ongoing process of building comprehension. Good readers monitor their understanding of text, recognize when text is not making sense, and employ a range of strategies to enhance their comprehension. Good readers also evaluate the qualities of text, and these evaluations can affect whether a text is remembered or has an impact on readers' knowledge, attitudes, or behaviors (Pressley and Afflerbach 1995; Ruddell and Unrau 1994). Depending on the situation and purpose for reading, good readers can use the ideas and information they acquire from text to, for example, expand their thinking about a topic, perform a specific task, or draw conclusions or make generalizations about what they have read.

[1] NAEP investigated the relationship between oral fluency and reading comprehension in two special studies, in 1992 and 2002.

DEFINITIONS OF READING THAT HAVE INFORMED FRAMEWORK DEVELOPMENT

The definition of reading for the NAEP Reading Assessment is derived from several sources and grounded in scientific research on reading. Among the sources are NCLB, several important research reports on reading, and the definitions of reading that guide the development of international reading tests. Each source has contributed important ideas to the definition of reading used for the NAEP Reading Assessment.

NCLB posits that reading has five essential components: phonemic awareness, knowledge of phonics, reading fluency, vocabulary, and comprehension. The NAEP Reading Assessment measures students' meaning vocabulary and comprehension. To demonstrate comprehension of what they read, students use their phonemic awareness and knowledge of phonics. Their ability to read the passages and test questions with minimal effort reflects their fluency. Students draw on their vocabulary knowledge throughout the assessment, and specific items ask about carefully selected target words in each reading passage.

The National Reading Panel (NRP) (National Institute of Child Health and Human Development 2000), a congressionally mandated commission, conducted an extensive, evidence-based study of research literature on reading acquisition, reading growth, and other relevant topics. The NRP report was an important foundation for NCLB, highlighting the importance of alphabetics (phonemic awareness and phonics), fluency, vocabulary, and comprehension.

Three important definitions of reading influenced the development of the definition of reading for the NAEP Reading Assessment. The first comes from *Reading for Understanding: Toward an R&D Program in Reading Comprehension* (RAND Reading Study Group 2002), frequently referred to as the RAND Report. This report was prepared by the RAND Reading Study Group under the auspices of the Office of Educational Research and Improvement of the U.S. Department of Education. Guiding the work of the study group was the following definition of reading:

> *Reading comprehension* [is] the process of simultaneously extracting and constructing meaning through interaction and involvement with written language. It consists of three elements: the reader, the text, and the activity or purpose for reading (p. 11).

The second important definition was the foundation for item development for the Progress in International Reading Literacy Study (PIRLS) (Campbell et al. 2001). PIRLS was first administered to 9-year-old students in 35 countries in 2001. PIRLS defines reading literacy as:

> The ability to understand and use those written forms required by society and/or valued by the individual. Young readers can construct meaning from a variety of texts. They read to learn, to participate in communities of readers, and for enjoyment (p. 3).

The Programme for International Student Assessment (PISA) (OECD 2000) represents an international collaborative effort to assess what 15-year-old students know and can do in reading, mathematics, and science. PISA defines reading literacy as:

> Understanding, using, and reflecting on written texts, in order to achieve one's goals, to develop one's knowledge and potential, and to participate in society (p. 18).

The RAND Report, PIRLS, and PISA offer support to the definition of reading advocated in the NAEP Reading Framework. All three stress that reading is an active, complex, and multidimensional process undertaken for many different purposes.

OVERVIEW OF NAEP READING ASSESSMENT

This reading assessment will use the same framework used in 2009. The NAEP Reading Assessment will include two distinct types of text at grades 4, 8, and 12. Doing so will allow the development of items that measure students' comprehension of the different kinds of text they encounter in their school and out-of-school reading experiences. The reasons for including literary and informational text are presented next, followed by explanations of the characteristics of each text type included on the assessment. The NAEP Reading Assessment will also include items that measure students' ability to apply their knowledge of vocabulary as an aid in their comprehension process.

Neither computer-based electronic text nor drama will be included on the NAEP Reading Assessment. NAEP is committed to presenting authentic texts as stimulus material on its reading assessments, and it is difficult to include these kinds of text in ways that reflect how students actually read them in and out of school. The paper-and-pencil format most commonly used in NAEP reading assessments precludes students' navigating through different components of text as they do when they read electronic text. Furthermore, dramatic selections are usually too long to fit within the word-length parameters for passages included on the assessment.

NAEP assesses reading skills that students use in all subject areas and in their out-of-school and recreational reading. By design, many NAEP passages require interpretive and critical skills usually taught as part of the English curriculum. However, NAEP is an assessment of varied reading skills, not a comprehensive assessment of literary study. The development of the broad range of skills that the nation's students need to read successfully in both literary and informational texts is the responsibility of teachers across the curriculum, as well as of parents and the community.

COMMONALITIES IN READING BEHAVIORS ACROSS TEXT TYPES

The framework recognizes that even though there are substantial differences in reading behaviors for different text types, there are also great similarities. Regardless of the type of text, the reader must access the words in the text, recognize and use the structure of the

text, make sense of sentences and paragraphs, and comprehend what has been read. Equally, vocabulary is a critical element in comprehending any kind of text.

TEXT CHARACTERISTICS: LITERARY AND INFORMATIONAL TEXTS

Research on the nature of text and on reading processes has suggested that the characteristics of literary and informational text differ dramatically. For the most part, the research literature suggests that readers pay attention to different aspects of text as they seek to comprehend different text types (Pearson and Camperell 1994; Pressley 2000; Purves 1973). Additionally, the PIRLS report shows that students in the United States scored higher on the Literary Subscale (at 550) than on the Informational Subscale (at 533), further substantiating the difference in the strategies needed for the two text types (OECD 2000). An earlier international study reported that patterns of student responses to literature were influenced by the nature of the selections they were given to read. Different literary samples elicited different responses from students with some consistency across cultures and school systems (Purves 1973). Drawing on this extensive research base, the NAEP Reading Framework includes two major types of text: literary and informational. Well-crafted nonfiction work with strong literary characteristics will be classified as literary text and documents such as tables, graphs, or charts will be included in the informational category.

Literary and informational texts for the NAEP Reading Assessment are separated for two primary reasons: the structural differences that mark the text types and the purposes for which students read different texts. Exhibits 3 and 4 in chapter two present details about the kinds of literary and informational texts to be included on the NAEP Reading Assessment and about the features of these texts for which items will be written.

STRUCTURAL DIFFERENCES IN TEXT

Literary and informational texts are marked by distinct structural characteristics that readers rely on as they seek to understand what they read (Goldman and Rakestraw 2000). For example, research on literary text (Graesser, Golding, and Long 1991) has pointed out that stories and novels are characterized by a coherent text structure known as *story grammars*. Research on informational or expository text (Kobayashi 2002) has indicated that such texts possess distinct organizational patterns, such as sequence or comparison and contrast, designed to help readers organize their emerging sense of what the text is communicating. These structures are distinct from story grammars. The nature of texts affects comprehension, and different text types must be read in different ways (Pearson and Camperell 1994). Good readers adjust their reading behaviors to accommodate the kinds of text they are reading.

PURPOSES FOR READING

A second reason for separating text types is that readers often read literary and informational texts for different purposes. The definition of reading that guides the NAEP Reading Assessment specifically states that readers read for different purposes, which are often reflected in their selection of literary or informational texts. The purpose set for reading a text often determines how a student reads that text. Literary texts, such as stories, drama, essays, or poetry, are frequently read for pleasure or for new perspectives on time, place, human nature, or feelings; they are often read from beginning to end. The ultimate utility of informational text is determined by how well it conveys information or ideas. These differences in reading purpose are, of course, permeable. For example, well-crafted informational text is often read for appreciation and enjoyment, in addition to the information that the text can provide.

FEATURES THAT DISTINGUISH TEXT TYPES

Several features distinguish literary and informational texts. Skilled writers understand that different kinds of text need different structural patterns, and good readers are able to use these specific text features as aids in comprehension.

LITERARY TEXTS

The NAEP Reading Assessment will present reading passages (i.e., stimulus material) drawn from three categories of literary text:

- Fiction
- Literary nonfiction, such as essays, speeches, and autobiographies or biographies
- Poetry

The structural patterns of *fiction* (i.e., short stories and novels) have been studied extensively. Although many researchers have suggested different ways to name the elements of a story (Stein and Glenn 1979), there is general agreement that a story consists of the following components: the setting or settings; a simple or complex plot consisting of a series of episodes and delineating a problem to be solved; the problem or conflict, which requires characters to change, revise plans, or face challenges as they move toward resolution; and a reaction that expresses the protagonist's feelings about his or her goal attainment or relates to the broader consequences of the conclusion of the story. This structure is often referred to as a *story grammar*. Characters populate each story, in major or minor roles; themes or major ideas are stated either implicitly or explicitly.

Works of *literary nonfiction* such as biographies, essays, and speeches employ distinct, varied structural patterns and literary features to reflect their purpose and audience. These works may not only present information and ideas but also employ distinctly literary elements and devices to communicate their message and to make their content more

accessible to readers. Biographies and autobiographies, for example, usually follow a structure that in many ways mirrors the story structure of fictional works, and they may employ literary devices, but they also present information. Literary essays and speeches may be structured differently but also draw on literary devices. The Gettysburg Address, for example, might be viewed simply as an argumentative text or as a dedication or a eulogy, but it is more appropriately viewed as a sophisticated literary text. Readers approach texts of this type not only to gain enjoyment and information, but also to learn and to appreciate the specific craft behind authors' choices of words, phrases, and structural elements.

Like fiction and literary nonfiction, *poetry* demonstrates specific text characteristics, but these characteristics are different from those found in continuous prose (Hanauer forthcoming). Some poetry possesses very rhythmic or metrical patterns, and some is written as *free verse* without a regular line pattern. Poetry is a highly imaginative form of communication in that poets try to compress their thoughts in fewer words than would be used in ordinary discourse or in prose (Frye 1964). Because the language is often brief and concise, poems employ picturesque and evocative words as well as similes, metaphors, personification, imagery, and other devices that convey the symbolic nature of the ideas, emotions, and actions being expressed. Poetry often involves a high level of abstraction in language and ideas, and requires specific critical thinking skills not found in other types of literary works. For these reasons, it is important that NAEP include poetry on the assessment at grades 4, 8, and 12.

INFORMATIONAL TEXTS

For the NAEP Reading Assessment, informational texts will be classified into three broad categories:

- Exposition
- Argumentation and persuasive text
- Procedural text and documents

Informational text, specifically exposition, argumentation, and persuasive text, does not have a single, identifiable structure. Rather, different types of informational text exhibit distinct structural features. The most common structural patterns for continuous expository, argumentative, and persuasive text can be summarized as follows (Bovair and Kieras 1991; Meyer 1975; Goldman and Rakestraw 2000; Kobayashi 2002):

Description: A descriptive text structure presents a topic with attributes, specifics, or setting information that describes that topic.

Sequence: Ideas are grouped on the basis of order or time.

Causation: The text presents causal or cause-and-effect relationships among the ideas presented in the text.

Problem/Solution: The main ideas are organized into two parts: a problem and a subsequent solution that responds to the problem, or a question and an answer that responds to the question.

Comparison: Ideas are related to one another on the basis of similarities and differences. The text presents ideas organized to compare, to contrast, or to provide an alternative perspective.

Expository text, argumentation, and persuasive text often contain pictures, charts, tables, and other graphic elements that augment text and contribute to its meaning. Ancillary aids such as headings, bolded text, or bulleted lists emphasize specific components of the text to reinforce authors' messages. Literary texts differ in that illustrations, pictures, or other nonprint elements (when present) may aid readers in understanding the text but are not usually critical for comprehension.

The first kind of informational text on the NAEP Reading Assessment, *exposition*, presents information, provides explanations and definitions, and compares and contrasts. Textbooks, news stories, and informational trade books are examples of expository text. Texts classified as argumentation or persuasive text accomplish many of these same goals but can be distinguished by their particular purpose and by the features that authors select to accomplish their goals for writing.

The second category of informational text includes *argumentation* and *persuasive* text (Driver, Newton, and Osborne 2000; Osborne 2002; Wineburg 1991). Argumentation seeks to influence through appeals that direct readers to specific goals or try to win them to specific beliefs. Authors of persuasive writing must establish their credibility and authority if their writing is to be successful. Examples of persuasive text are political speeches, editorials, and advertisements.

The third type of informational text is often categorized as *procedural texts* or *documents* (Kirsch and Mosenthal 1990; Mosenthal 1996; Mosenthal 1998). Procedural texts convey information in the form of directions for accomplishing a task. A distinguishing characteristic of such text is that it is composed of discrete steps to be performed in a strict sequence with an implicit end product or goal. After reading the text, the reader should be able to reach a goal or complete a product. Examples include (but are not limited to) manuals and product support materials, directions for art activities and hobbies, and so on. Procedural texts may include information arranged in graphs, charts, or maps, in addition to prose.

Document texts in a variety of forms will also be represented on the NAEP Reading Assessment. Documents include graphical representations, often as multimedia elements that require readers to draw on information presented as short continuous prose and also as columns, matrices, or other formats. Document structures can be simple or complex, and can present information in a straightforward way as in a simple list or pie graph with clearly delineated elements or embed or *nest* information within a document's struc-

ture. Documents are used frequently in schools and in society. Textbooks often include graphs, tables, and illustrations to accompany and expand on traditional text. Forms are also common (such as applications), as are procedural texts (such as manuals and directions). Documents have implicit procedures embedded within them. Often, readers must *cycle* through the document or the set of procedures to gain needed information or to answer specific questions. For example, instructions suggest the manner in which an application is to be completed.

Informational text will be included at all levels of the NAEP Reading Assessment. Documents embedded in text will be used at grades 4 and 8; stand-alone documents that provide enough information to support item development may be used at grade 12. Chapter two describes the criteria for evaluating examples and noncontinuous text and documents for inclusion.

Percentage of Passages by Text Type and Grade

Exhibit 1 shows the distribution of literary and informational passages on the assessment. The percentage listed for literary texts encompasses all three categories of text: fiction, literary nonfiction, and poetry. The percentage for informational text likewise includes exposition, argumentation and persuasive texts, and procedural texts and documents. The *Specifications for the NAEP Reading Assessment* will detail how these percentages are to be distributed across grades 4, 8, and 12.

The distribution reflects the kinds of texts that students read across the curriculum as they progress through elementary, middle, and high school (Alexander and Jetton 2000). It further reflects the distribution of text types on many state reading tests designed to reflect what students read across the curriculum.

Exhibit 1. Percentage distribution of literary and informational passages

Grade	Literary	Informational
4	50	50
8	45	55
12	30	70

Mixed Texts

Many of the texts that convey information have been termed *mixed texts* (Alexander and Jetton 2000). This type of text is common in classroom reading as students are introduced to informational texts as a genre distinct from the *stories* common in lower grades (Duke 2000; Leu and Kinzer 2000). Examples include historical or scientific accounts presented in quasi-narrative form but used to communicate information. Their literary qualities (for example, literary elements and devices) will determine their classification as literary or informational.

Multiple Texts

A common task for readers at all grades is integrating information across a set of texts. It is often the case that readers have multiple questions for which they need or want answers. A single text may answer some questions incompletely, or a single text might contain answers for only a portion of the questions a reader has. The solution is to use other texts to find additional information. In consulting multiple texts, readers must engage in all the processes to read individual texts, and they must also engage in other processes to compare those texts on multiple dimensions and decide on their accuracy, bias, and credibility. These skills need to be assessed to see how well students can read and comprehend texts that contain different information, reach different conclusions about the same material, or have different levels of credibility. Continuing the use of intertextual passage sets as part of the NAEP Reading Assessment approximates the authentic task of reading and comparing multiple texts.

Vocabulary Assessment on the NAEP Reading Assessment

The Governing Board has endorsed the idea of measuring students' vocabulary as part of the reading assessment and supports an approach that assesses vocabulary in the context of the reading passages. The goal of vocabulary assessment will be to measure students' *meaning vocabulary,* which can be defined as follows:

> Meaning vocabulary is the application of one's understanding of word meanings to passage comprehension.

The proposed method of assessing meaning vocabulary on the NAEP Reading Assessment assumes that the ability to gain a sense of the meaning of all or most words in a passage, especially those words that convey important information linked to central ideas of the passage, is a necessary condition for comprehension. NAEP meaning vocabulary items will target words already present in the NAEP reading comprehension passages. Candidate words must convey important meaning linked to the central idea(s) of the passage; comprehension is likely to be disrupted if the meaning of the test word was not known. It is anticipated that each passage will have approximately two vocabulary items. The vocabulary assessment is explained in detail in chapter two.

Assessing Students With Special Needs

The NAEP Reading Assessment is designed to measure the academic achievement of all test takers at a given grade level; hence, students with disabilities and English language learners are included in the assessment sample. The assessment is administered to English language learners and students with disabilities who, based on inclusion criteria provided by NAEP, are capable of participating. Special care is taken in designing and developing the assessment to ensure that these students, along with all others, find the passages and items accessible. For example, passages that might require specific background or experiential knowledge for comprehension are not included in the assessment. Items are written in plain language without jargon or complex syntactical structures.

Some students may need accommodations to be able to participate in the NAEP Reading Assessment. NAEP attempts to provide accommodations to students that match the way in which they are tested in school as long as those accommodations do not alter the construct being measured. For example, large-print versions are made available for students with visual impairments; students with disabilities may be given one-on-one or small-group testing situations or extended time to complete the assessment. Some students, for example those who are learning English, may have the test directions (but not the passages or items) read orally to them. Other students may benefit from having a trained aide transcribe dictated responses for them. Accommodations may be provided in combination, for example, extended testing time and individual administration of the assessment.

Comparison of 1992–2007 NAEP Reading Framework and 2009–2013 NAEP Reading Framework

The framework for the 2009–2013 NAEP Reading Assessment replaces a framework developed for the 1992 assessment. The previous framework was refined during its use to reflect more clearly the goal of precisely measuring students' reading skills and strategies and was reissued for the 2003 assessment. The new framework honors many aspects of the previous one, but also introduces some changes that can lead to better measurement and more precise reporting of assessment results. Important changes featured in the new NAEP Reading Framework follow:

- An assessment design based on current scientific reading research.
- Use of international reading assessments to inform the NAEP framework.
- More focused measurement of vocabulary.
- Measurement of reading behaviors (cognitive targets) in a more objective manner.
- Distinction of cognitive targets relevant to literary and informational text.
- Use of expert judgment, augmented by readability formulas, for passage selection.
- Testing of poetry at grade 4 in addition to grades 8 and 12.
- Special study of vocabulary to inform development of the assessment.

Key similarities and differences between the two frameworks are presented in exhibit 2. Chapter two explains the proposed content and design of the assessment. The content and cognitive targets, as operationalized to reflect the definition of reading presented earlier in chapter one, will yield passages and items that reflect the complex interaction of the reader, the text, and the context of the assessment.

Exhibit 2. Similarities and differences: 1992–2007 and 2009–2013 NAEP reading frameworks

	1992–2007 NAEP Reading Framework		2009–2013 NAEP Reading Framework		
Content	Content of assessment: • Literary • Informational • Document	Contexts for reading: • For literary experience • For information • To perform task	• Literary text • Fiction • Literary nonfiction • Poetry	• Informational text • Exposition • Argumentation and persuasive text • Procedural text and documents	
Cognitive Processes	Stances/aspects of reading: • Forming general understanding. • Developing interpretation. • Making reader/text connections. • Examining content and structure.		Cognitive targets distinguished by text type		
			Locate/ recall	Integrate/ interpret	Critique/ evaluate
Vocabulary	Vocabulary as a *target* of item development, with no information reported on students' use of vocabulary knowledge in comprehending what they read.		Systematic approach to vocabulary assessment with potential for a vocabulary subscore.		
Poetry	Poetry included as stimulus material at grades 8 and 12.		Poetry included as stimulus material at all grades.		
Passage Source	Use of intact, authentic stimulus material.		Use of authentic stimulus material plus some flexibility in excerpting stimulus material.		
Passage Length	Grade 4: 250–800 Grade 8: 400–1,000 Grade 12: 500–1,500		Grade 4: 200–800 Grade 8: 400–1,000 Grade 12: 500–1,500		
Passage Selection	Expert judgment as criterion for passage selection.		Expert judgment and use of at least two research-based readability formulas for passage selection.		
Item Type	Multiple-choice and constructed-response items included at all grades.		Multiple-choice and constructed-response items included at all grades.		

CHAPTER TWO

CONTENT AND DESIGN OF NAEP IN READING

This chapter presents the content and design of the NAEP Reading Assessment. Key sections of the chapter are as follow:

- Texts to be included on the NAEP Reading Assessment
- Characteristics of texts selected for inclusion on the NAEP Reading Assessment
  - Literary text
  - Informational text
- Vocabulary on the NAEP Reading Assessment
- Cognitive targets for the NAEP Reading Assessment
- Item types on the NAEP Reading Assessment

TEXTS ON THE NAEP READING ASSESSMENT TO BE INCLUDED

The National Assessment of Educational Progress in Reading will assess students' comprehension of literary and informational passages. Within these passages, vocabulary will also be assessed. Chapter one presented the rationale for including literary and informational text on the NAEP Reading Assessment, and this chapter begins by describing the text structures and features and aspects of author's craft about which items will be developed.

The matrices in exhibits 3 and 4 show the kinds of literary and informational texts that will be sampled at grades 4, 8, and 12, along with the text structures and literary devices or elements of author's craft about which items may be developed.

The matrices are designed to show the following aspects of literary and informational text:

- Genres and types of text to be assessed.
- Text structures and features about which items may be asked.
- Aspects of author's craft about which items may be asked.

Types of text refers to the idealized norms of a genre (Fludernik 2000), not the source of the stimulus material per se.

Text structures and *features* define the organization and elements within the text. The organization and elements refer to the ways ideas are arranged and connected to one

another. Features refer to visual and structural elements that support and enhance the reader's ability to understand the text.

Author's craft pertains to the specific techniques that an author chooses to relay an intended message.

Entries listed within each cell of the matrices should be construed as neither definitive nor inclusive of all text structures and features or techniques of author's craft. However, it is important to delineate the type of text to be used in reading comprehension tests (Kobayashi 2002; Wixson and Peters 1987). Understanding the range of text types for inclusion in the NAEP Reading Assessment illuminates the complex nature of reading comprehension passages and the accompanying questions. Items will assess students' application of knowledge about text types, text features and structures, and author's craft, not their recognition of specific terminology in isolation. The designation of entries in the matrices by grade level reflects the levels at which these components of text are presented in state English language arts standards. They have further been confirmed by experienced teachers and teacher educators.

LITERARY TEXT

The literary text matrix shown in exhibit 3 outlines the common forms of continuous prose and poetry that may be included. The matrix is divided into three sections (fiction, literary nonfiction, and poetry) and provides information on the aspects of text about which items will be developed. Successively more complex text forms are added at each level.[2]

[2] A detailed explanation of the literary and informational text matrices will be provided in the *Specifications for the NAEP Reading Assessment*.

Exhibit 3. Literary text matrix: Fiction

		Genre/Type of Text	Text Structures and Features	Author's Craft

Fiction	Grade 4	• Adventure stories
		• Historical fiction
		• Contemporary realistic fiction
		• Folktales
		• Legends
		• Fables
		• Tall tales
		• Myths
		• Fantasy
			• Themes
			• Morals
			• Lessons
			Organization
			• Plot: sequence of events
			• Conflict
			• Solution
			• Resolution
			Elements
			• Setting
			• Characterization
				Diction and word choice
				• Dialogue
				• Exaggeration
				• Figurative language
				  • Symbolism
				  • Simile and meta-phor

	Grade 8	• Science fiction Plus increasingly complex application of grade 4	Organization • Parallel plots • Circular plots Elements • Point of view • Contradictions • Internal vs. external conflict Plus increasingly complex application of grade 4	• Mood • Imagery • Flashback • Foreshadowing • Personification Plus increasingly complex application of grade 4
	Grade 12	• Satire • Parody • Allegory • Monologue Plus increasingly complex application of grades 4 and 8	Organization • Differentiation of plot structures for different purposes and audienc-es Elements • Interior monologue • Unreliable narrators • Multiple points of view Plus increasingly complex application of grades 4 and 8	• Dramatic irony • Character foils • Comic relief • Unconventional use of language Plus increasingly complex application of grades 4 and 8

Note: Entries listed within each cell should be construed as neither definitive nor inclusive of all text structures and features or techniques of author's craft.

FICTION

As suggested in the matrix, students in elementary and middle schools read many different kinds of stories for enrichment and enjoyment. These texts are representative of the developing conceptual understandings formed by students during this period. At grades 8 and 12, more complex genres of fiction are common including satires, parodies, science fiction, and allegories. For purposes of the NAEP Reading Assessment, these genres may be either intact passages or passages excerpted from longer genres such as

novels. Material excerpted from longer pieces will be carefully analyzed to ensure that it has the structural integrity and cohesion necessary to sustain item development.

The matrix also shows the aspects of text structures and features and author's craft that may be assessed. These components, as well as the purposes for reading, become increasingly complex and sophisticated as students move through the elementary, middle, and high school grades. For example, themes may be more abstract; plots may involve internal or external conflicts; characterization may develop with antagonists, protagonists, and narrators with intertwined motives, beliefs, traits, and attitudes; the theme and setting may be more integral to one another; the plot may consist of a series of rising and falling actions within episodes; and the point of view or vantage point chosen by the author to reveal ideas, characters, or actions becomes more sophisticated, often including a shifting point of view or multiple points of view.

Authors select from a range of stylistic devices to enhance their presentation. In the matrix, these are referred to as author's craft. At grade 4, author's craft includes figurative language such as symbolism, simile, metaphor, diction and word choice, dialogue, and exaggeration. More abstract elements, such as flashback and imagery, are part of author's craft at grade 8 in addition to more complex applications of the types of author's craft listed for grade 4. Fictional passages for grade 12 are complex and may include the following literary devices of dramatic irony, character foils, comic relief, and unconventional use of language in addition to the devices listed at grades 4 and 8.

Exhibit 3 (continued). Literary text matrix: Literary nonfiction

		Genre/Type of Text	Text Structures and Features	Author's Craft

Literary Nonfiction	Grade 4	• Personal essay
		• Autobiographical and biographical sketches
			Organization
			• Description
			• Cause and effect
			• Comparison
			• Chronology
			Elements
			• Point of view
			• Themes or central ideas
			• Supporting ideas
			• Logical connections
			• Transitions
				• Diction and word choice
				• Use of exposition, action, or dialogue to introduce characters
				• Exaggeration
				• Figurative language
				  • Symbolism
				  • Simile and metaphor

	Grade 8	Character sketch • Memoir • Speech Plus increasingly complex application of grade 4	Increasingly complex application of grade 4	• Voice • Tone • Imagery • Metaphoric language • Irony Plus increasingly complex application of grade 4
	Grade 12	• Classical essay Plus increasingly complex application of grades 4 and 8	Increasingly complex application of grade 4	• Denotation • Connotation Plus increasingly complex application of grades 4 and 8

Note: Entries listed within each cell should be construed as neither definitive nor inclusive of all text structures and features or techniques of author's craft.

LITERARY NONFICTION

The second type of literary text is literary nonfiction, which may include elements of narration and exposition and is often referred to as mixed text (Alexander and Jetton 2000). Literary nonfiction is an example of mixed text because it uses literary techniques usually associated with fiction or poetry and also presents information or factual material. Stylistically, it frequently blends literary elements and devices with factual information with the dual purpose of informing and offering reading satisfaction. Text types for literary nonfiction at grade 4 include autobiographical and biographical sketches, and personal essays. At grade 8, additional forms of literary nonfiction used include character sketches, memoirs, and speeches. Classical essays are introduced as literary nonfiction at grade 12. Unlike texts that can be categorized as informational because of their sequential, chronological, or causal structure, literary nonfiction uses a storylike structure. Classical essays may interweave personal examples and ideas with factual information to attain their purpose of explaining, presenting a perspective, or describing a situation or event.

Literary nonfiction selected for inclusion on NAEP will conform to the highest standards of literary quality. Literary nonfiction combines structures from both literary and informational texts. At grade 4, text structures and features in literary nonfiction include description, cause and effect, comparison, chronology, point of view, themes and central ideas, and supporting ideas. At grades 8 and 12, increasingly complex structures listed above are noted in literary nonfiction. Text features such as logical connective devices and transitional devices are listed at grade 4.

A range of literary devices and techniques termed author's craft are present in literary nonfiction. Examples of author's craft at grade 4 include diction and word choice, various ways to introduce characters, exaggeration, and figurative language. At grade 8, increasingly complex techniques are listed for author's craft: voice, tone, imagery, metaphoric language, and irony. Denotation and connotation are listed at grade 12 for author's craft. Grades 8 and 12 will include more complex forms of the text structures and features and author's craft listed at grade 4.

Exhibit 3 (continued). Literary text matrix: Poetry

		Genre/Type of Text	Text Structures and Features	Author's Craft
Poetry	Grade 4	• Narrative poem • Lyrical poem • Humorous poem • Free verse	Organization • Verse • Stanza Text features • Repetition • Omission • Dialogue • Line organization • Patterns Elements • Rhyme scheme • Rhythm • Mood • Themes and intent	• Diction and word choice (including the decision to omit words that may leave the reader with much to infer) • Choice of different forms of poetry to accomplish different purposes • Exaggeration • Use of imagery to provide detail • Figurative language • Simile • Metaphor • Imagery • Alliteration • Onomatopoeia
	Grade 8	• Ode • Song (including ballad) • Epic Plus increasingly complex application of grade 4	Elements • Abstract theme • Rhythm patterns • Point of view Plus increasingly complex application of grade 4	• Figurative language • Symbolism • Personification Plus increasingly complex application of grade 4
	Grade 12	• Sonnet • Elegy Plus increasingly complex application of grades 4 and 8	Elements • Complex themes • Multiple points of • view • Interior monologue • Soliloquy • Iambic pentameter Plus increasingly complex application of grades 4 and 8	• Denotation • Connotation • Irony • Tone • Complex symbolism • Extended metaphor and analogy Plus increasingly complex application of grades 4 and 8

Note: Entries listed within each cell should be construed as neither definitive nor inclusive of all text structures and features or techniques of author's craft.

POETRY

The third type of literary text included in the NAEP Reading Assessment is poetry. Like fiction, poetry has distinctive forms, functions, and structures further guided by literary structures and textual features. The matrix lays out the kinds of poetry that students encounter at different grade levels. Thus, basic poetic forms at grade 4 are narrative, lyrical, and humorous poems and free verse. Additionally at grade 8, odes, songs, and epics are included in the matrix for possible item development. More complex poetic forms are included at grade 12, such as sonnets and elegies. It is possible that two poems may be

used together in intertextual item sets to allow students to perform complex reading tasks, such as comparing thematic treatment in two poems or contrasting two poets' choices of literary devices.

Readers use the structure of poetry to aid in comprehension. Poetic structures range from simple to complex. Students at grade 4 can be expected to be familiar with simple organizational patterns such as verse and stanza along with the basic elements of rhyme scheme, rhythm, mood, and themes and intent. At grades 8 and 12, increasingly complex poetic organizational patterns and elements will be included. Students will also be expected to understand the use of *white space* as a structural feature of poetry.

Understanding a poet's choices also aids in understanding poetry. Language choice is of particular importance because the meaning in poetry is distilled to as few words as possible. Poets choose from among a range of rhetorical structures and figurative language, using, for example, repetition, dialogue, line organization and shape, patterns, and many forms of figurative language. Increasingly complex application of figurative language, rhetorical devices, and complex poetry arrangements are included at grades 8 and 12.

INFORMATIONAL TEXT

As stated in chapter one, informational text on the NAEP Reading Assessment will be of three types: exposition, argumentation or persuasive text, and procedural text or documents. Exhibit 4 presents the ways informational text will be assessed at grades 4, 8, and 12. The matrix consists of three parts, each of which is accompanied by explanatory text.

Exhibit 4. Informational text matrix: Exposition

		Genre/Type of Text	Text Structures and Features	Author's Craft

Exposition	Grade 4	• Informational trade book
		• Textbook
		• News article
		• Feature article
		• Encyclopedia entry
		• Book review
			• Organization
			• Description
			• Sequence (e.g., enumeration, chronology)
			• Cause and effect
			• Problem and solution
			• Comparison and contrast
			Content features
			• Point of view
			• Topics or central ideas
			• Supporting ideas and evidence
			Graphic features
			• Titles
			• Subheadings
			• Italics
			• Captions
			• Sidebars
			• Photos and illustrations
			• Charts and tables
				• Transitional words
				• Signal words
				• Voice
				• Figurative language and rhetorical structures
				  • Parallel structure
				  • Quotations
				  • Examples
				  • Repetition
				  • Logical arguments

	Grade 8	• Historical document • Essay (e.g., informational, persuasive, analytical) • Research report Plus increasingly complex application of grade 4	Increasingly complex application of grade 4	• Irony • Sarcasm Plus increasingly complex application of grade 4
	Grade 12	• Essay (e.g., political, social, historical, scientific, natural history) • Literary analysis Plus increasingly complex application of grades 4 and 8	Increasingly complex application of grade 4	• Denotation • Connotation • Complex symbolism • Extended metaphor and analogy • Paradox • Contradictions/ incongruities • Ambiguity Increasingly complex application of grades 4 and 8

Note: Entries listed within each cell should be construed as neither definitive nor inclusive of all text structures and features or techniques of author's craft.

EXPOSITION

As they progress beyond the early grades, students read expository text with increasing frequency both in and out of school (Broer, Aarnoutse, Kieviet, and Van Leeuwe 2002). The primary goals of expository text for school-age readers are to communicate information and to advance learning. Forms that may be assessed at grade 4 are informational trade books, textbook passages, news stories, feature stories, and encyclopedia entries. At grade 8, expository text genres include historical documents, various grade-appropriate essays, and research reports. More complex essay formats will be included for assessment at grade 12 such as political, social, historical, or scientific essays that primarily communicate information.

Expository texts are characterized by internal sets of *grammars* similar in function to the story grammars discussed in chapter one. These grammars are designed to move the exposition forward and to help the reader comprehend the text. As shown in the matrix, the major organizational structures of exposition are description, sequence, cause and effect, problem and solution, and comparison and contrast (Meyer 1975). As mentioned in chapter one, exposition may also include lists as a structural component with lists of descriptions, causes, problems, solutions, and views presented within other structures. Commonly, exposition does not contain just one structural format, but rather combines several structures embedded in the text.

Specific elements within these organization structures signal meaning to the reader. Sequence, point of view, topics or central ideas, and supporting ideas and evidence are listed at grade 4; at grade 8 and grade 12, the structural organization and elements will be assessed at increasingly complex levels and with increasingly sophisticated texts. Some surface-level or graphic features support the text structures of exposition and guide the reader through the text. Other textual features can be categorized as reflecting author's craft; these features guide the reader through the use of transitional words, signal words, voice, figurative language, and rhetorical structures. At grades 8 and 12, increasingly complex use of these features and of the author's craft will be included for assessment.

Exhibit 4 (continued). Informational text matrix: Argumentation and persuasive text

		Genre/Type of Text	Text Structures and Features	Author's Craft

Argumentation and Persuasive Text	Grade 4	• Informational trade book
		• Journal
		• Speech
		• Simple persuasive essay
			Organization
			• Description
			• Sequence (e.g., enumeration, chronology)
			• Cause and effect
			• Problem and solution
			• Comparison and contrast
			Content features
			• Author's perspective or position
			• Topics or central ideas
			• Supporting ideas and evidence
			• Contrasting viewpoints and perspectives
			• Presentation of the argument (e.g., issue definition, issue choice, stance, relevance)
			Graphic features
			• Titles
			• Subheadings
			• Italics
			• Captions
			• Sidebars
			• Photos and illustrations
			• Charts and tables
				• Transitional words
				• Signal words
				• Voice
				• Figurative language and rhetorical structure
				  • Parallel structure
				  • Quotations
				  • Examples
				  • Repetition
				  • Exaggeration
				  • Emotional appeal
				  • Tone

	Grade 8	• Letter to the editor
		• Argumentative essay
		• More complex persuasive essay
		• Editorial
		
		Plus increasingly complex application of grade 4
			Increasingly complex application of grade 4	• Irony
				• Sarcasm
				• Figurative language and rhetorical structure
				  • Parallel structure
				  • Quotations
				
				Plus increasingly complex application of grade 4

	Grade 12	• Essay (e.g., political, social) • Historical account • Position paper (e.g., persuasive brochure, campaign literature, advertisements) Plus increasingly complex application of grades 4 and 8	Increasingly complex application of grade 4	Increasingly complex application of grades 4 and 8

Note: Entries listed within each cell should be construed as neither definitive nor inclusive of all text structures and features or techniques of author's craft.

ARGUMENTATION AND PERSUASIVE TEXT

Many forms of informational text pose an argument or attempt to persuade readers toward a particular viewpoint. These texts present information to support or prove a point, to express an opinion, and to try to convince readers that a specific viewpoint is correct or justifiable. Various logical fallacies and forms of bias may be found in argumentation and persuasive text. As the matrix shows, there is considerable similarity in structure, literary features, and elements among exposition, argumentation, and persuasive text. The real distinction lies in the purpose for which an author writes these particular kinds of informational text; as stated, exposition seeks to inform and educate, whereas argumentation and persuasive text seek to influence their readers' thinking in other, often subtle but significant ways.

At grade 4, argumentation and persuasive texts listed in the matrix are informational trade books that specifically argue a position or persuade the reader toward a stance, journals, speeches, and simple persuasive essays. However, in 2013 NAEP will not assess argumentation and persuasive texts at grade 4 due to difficulty in locating high-quality texts appropriate for this grade level. At grade 8, there are more complex forms of argumentation and persuasive texts: letters to the editor and editorials and argumentative and grade-appropriate persuasive essays. At grade 12, argumentation and persuasive texts become increasingly complex with a variety of types of essays such as political and social commentary essays, historical accounts, and position papers such as persuasive brochures, campaign literature, and advertisements.

Particular organization techniques and elements are used to create a clear argument or to form a persuasive stand. The differences between exposition and argumentation and persuasive text lie not in the structural organization, but rather in the way the texts are elaborated through the use of contrasting viewpoints, shaping of arguments, appeals to emotions, and other manipulations of the elements of text and language. The organizational structures at all levels are the same as in exposition: description, sequence, cause and effect, problem and solution, and comparison and contrast; they are represented in grades 8 and 12 with increasing complexity.

Elements within these organizational structures include the author's perspective, topics or central ideas, supporting ideas, contrasting viewpoints or perspectives, and the presentation of the argument (e.g., issue definition, issue choice, stance, and relevance). These elements appear at all grade levels, with complexity increasing at higher grade levels. In addition, at grade 12 students may be asked about the structure of a given argument; connections among evidence, inferences, and claims; and the structure of a deductive versus inductive argument. Twelfth-grade students may also be asked questions about the range and quality of evidence, and logical fallacies, false assumptions and premises, loaded terms, caricature, leading questions, and faulty reasoning in argumentation and persuasive texts.

Exhibit 4 (continued). Informational text matrix: Procedural texts and documents

		Genre/Type of Text	Text Structures and Text Features
Procedural Texts and Documents	**Grade 4**	Embedded in text • Directions • Map • Timeline • Graph • Table • Chart	Organization • Description • Procedures • Sequence (e.g., enumeration, chronology) Graphic features • Titles • Labels • Headings • Subheadings • Sidebars • Photos and illustrations • Charts and graphs • Legends
	Grade 8	Embedded in text • Recipe • Schedule Plus increasingly complex application of grade 4	Increasingly complex application of grade 4
	Grade 12	Stand-alone material • Application • Manual • Product support material • Contract Plus increasingly complex application of grades 4 and 8	Increasingly complex application of grades 4 and 8

Note: Entries listed within each cell should be construed as neither definitive nor inclusive of all text structures and features or techniques of author's craft.

PROCEDURAL TEXTS AND DOCUMENTS

Research indicates that adults spend considerably more time reading documents (i.e., information in matrix or graphic form) than they do reading prose materials (Guthrie and Mosenthal 1987; Kirsch and Mosenthal 1990; Mosenthal 1996; Mosenthal 1998). Documents and procedural texts are indeed common in our society; for example, we interpret bus schedules, assemble simple devices, order goods from a catalog, or follow directions to set the VCR clock. Such texts are used frequently in elementary and secondary schools, where students encounter textbooks replete with graphs, tables, and illustrations to accompany and expand traditional continuous text.

Procedural text may be primarily prose arranged to show specific steps toward accomplishing a goal or it may combine both textual and graphic elements to communicate with the user. Documents, in contrast, use text sparingly, in a telescopic way that minimizes the continuous prose that readers must process to gain the information they need.

As the matrix shows, document texts on the NAEP Reading Assessment may include, but are not limited to, tables and charts. Stand-alone procedural text or documents will not be included at grades 4 and 8; such text will be embedded in or ancillary to continuous text. They may appear as stand-alone stimuli at grade 12 but their use will account for only a small amount of the stimuli in the entire assessment. It is likely that many of the documents may be used as part of intertextual item sets. For example, a student might encounter a bar graph and a timeline with items that relate to both texts.

Documents and procedural text features act as necessary clues to the organization of the text. As textual supports, these features guide the reader through the text. For the purposes of the NAEP Reading Assessment, graphic features include titles, labels, headings, subheadings, sidebars, photos and illustrations, charts and graphs, and legends at grades 4, 8, and 12. More complex examples of these will be included at each successive grade.

CHARACTERISTICS OF TEXTS SELECTED FOR INCLUSION

Passages selected as stimulus material for the NAEP Reading Assessment must meet rigorous criteria. They will all be authentic texts of the highest quality, evidencing characteristics of good writing, coherence, and appropriateness for each grade level. Passages will be drawn from a variety of contexts familiar to students nationwide. Stimulus material must be engaging to students at each grade level. Furthermore, material must reflect our literary heritage by including recognized works from varied historical periods (Ravitch 2003).

> It is true that children's experience differs from that of adults, and therefore the application of standards should be consonant with child life. Nevertheless, one must keep in mind the emotional maturity of the children for whom the book or books are intended. This does not mean that the works must be watered down so as to meet the reading ability levels of young children. On the contrary, some books of lasting value outstrip their vocabulary lists and connect with children on emotional-maturity levels so that they can be understood and enjoyed by the young themselves. … [T]he standards basic to good writing in adult literature are also basic to good writing for children (Georgiou 1988).

Most material included on the assessment will be presented in its entirety as students would encounter it in their own reading. However, some material may be excerpted, for example, from a novel or a long essay. Excerpted material will be carefully analyzed to ensure that it is coherent in structure.

PASSAGE LENGTH

Material on the assessment will be of differing lengths as shown in exhibit 5.

Exhibit 5. Passage lengths for grades 4, 8, and 12

Grade	Range of Passage Lengths (Number of Words)
4	200–800
8	400–1,000
12	500–1,500

Passages of these lengths are used for several reasons. To gain the most valid information about students' reading, stimulus material should be as similar as possible to what students actually encounter in their in-school and out-of-school reading. Unlike many common reading tests that use short passages, NAEP will present longer material that challenges students to use their strategic reading skills in ways that reflect the kinds of reading they do in nontest situations (Paris, Wasik, and Turner 1991). Furthermore, short passages usually will not yield approximately 10 distinct items, the required minimum number for each NAEP item set. Longer passages, with clear structural patterns, can support the development of multiple, distinct, nontrivial items that cover the range of content included in the literary and informational text matrices. These items will also allow broad coverage of the cognitive targets discussed later in this chapter.

It is expected that in some cases, two poems will be used together to assess students' ability to compare them in terms of their themes and stylistic features. Prose passages used in intertextual item sets will also be fairly short. Likewise, it is possible that two documents might be included as intertextual stimuli at grade 12.

Selection of Literary and Informational Passages

Several methods of evaluating passages will be used to ensure that the best possible stimulus material is included. Authentic material must be of the highest quality, and it must come from authentic sources such as those students would encounter in their in-school and out-of school reading. Material must be coherent and allow items that assess domain-specific knowledge (Kobayashi 2002). Additionally, systematic efforts will be made to ensure that texts selected for inclusion will of interest to the widest number of students. Readers become more engaged in text and consequently comprehend a selection better when they find the material interesting (Baumann 1986; Wade, Buxton, and Kelly 1993; Wade and Moje 2000; Wade et al. 1993). Texts will reflect literary heritage by representing varied historical periods.

Passages selected for inclusion on the assessment will be well written, interesting to read, and *considerate;* that is, easily comprehensible because they are well organized, have appropriate vocabulary, and, where needed, have useful supplemental explanatory features such as definitions of technical terms or topographical features. Ideas marked by graphic features such as italics, bold print, and signal words and phrases tend to be processed more easily and recalled longer than unmarked information. In selecting passages, attention will be paid to written clues within text that can help readers understand structure, guide the development of main ideas, and influence the recall of information.

For example, readers tend to organize and remember emphasized information better when authors lead them with signal words indicating main ideas (for example, *the most important point here*), with phrases indicating sequencing (such as words like *first, second, third*), and with statements cross-referencing disparate parts of text (Armbruster 1984).

Especially in the selection of informational text, the degree of content elaboration will be an important criterion for passage selection. Sufficient elaboration of new concepts is needed if students are to gain sufficient information to respond to questions. Tersely written informational text tends to be more difficult for students to comprehend compared with text written with more elaborated explanations. Whether text is tersely written or presents fully elaborated content is particularly important with topics that may be beyond the background knowledge of some students.

An inviting writing style can also enhance interest and thereby increase comprehension. Material may be interesting not because of *what* is said but because of *how* it is said. For example, writers can increase interest by using active rather than passive verbs, by including examples that make the writing less abstract, and by using vivid and unusual words. An inviting writing style also influences voice. Voice, the qualities that help a reader view text as communication between an author and a reader, can have a positive effect on recall (Beck, McKeown, and Worthy 1995).

Expert judgment will be the primary method for evaluating and selecting passages for inclusion on the assessment. Additional methods include the use of story and concept mapping and vocabulary mapping. At least two research-based readability formulas will also be used to gather additional information about passage difficulty (Klare 1984; White and Clement 2001). Passages will be thoroughly reviewed for potential bias and sensitivity issues.

Story and concept mapping procedures have been used to identify appropriate passages for previous assessments (Wixson and Peters 1987). These procedures result in a graphic representation of a possible stimulus selection that clearly highlights the hierarchical structure and the interrelatedness of the passage components. Story mapping, for example, will show how the setting of a story is related, and contributes to, the development of plot and theme. Concept mapping shows the structure of informational text along with the concepts presented and the relational links among concepts. Organizing information hierarchically within a passage allows the identification of various levels of information within a text so that items can target the most important aspects of what students read.
As NAEP begins to assess vocabulary in a systematic way, the story and concept mapping procedures will be modified to ensure that appropriate words are selected for item development.

SELECTION OF POETRY

In selecting poetry for the NAEP Reading Assessment, it will be important to determine that potential poems present a theme instead of stressing primarily the melodic or stylistic

aspects of language use. Especially at grades 4 and 8, the theme should be implicitly presented in terms that are not so abstract that they are beyond students' comprehension. Words and phrases should be used with economy to support and amplify the meaning inherent in the text; the style should be distinguished by author's craft and project the poet's feelings about his or her topic or theme. The ideas presented must be accessible to students and it must be clear that poetry, rather than prose, is the better mode for presenting these ideas. A good question to ask in selecting poetry is:

> Does the poetry, through its expression of theme and ideas, carry children beyond their immediate experiential level to extensions where language and imagination meet? (Georgiou 1988)

SELECTION OF NONCONTINUOUS TEXT AND DOCUMENTS

In addition to continuous text prose and poetry, the assessment will include prose augmented by noncontinuous textual elements such as embedded tables or charts. It will also include stand-alone documents at grade 12. An analysis of layout will be essential to ensure that embedded noncontinuous text is used appropriately in a way that is well integrated into the prose text and not gratuitously distracting. Equally, stand-alone documents must be rich with appropriate information about which questions can be asked. The number of categories of information presented graphically and the clarity of the layout of documents will be essential criteria for selecting documents for inclusion. The vocabulary and concept load of multimedia elements and of documents will also be considered.

Exhibit 6 summarizes the considerations for selecting passages and documents. The first two columns present considerations for literary and informational continuous text. The third column presents considerations that must be made in selecting noncontinuous text that is embedded within continuous text or documents that will be used as stand-alone stimulus material at grade 12. Certain considerations are considered *essential* for each kind of stimulus material and represent the fundamental characteristics that make a text or document appropriate for inclusion. All potential stimulus material must also be *grade-appropriate* to ensure that students will be able to understand the concepts presented and are familiar with the material's stylistic features. Finally, balance must be considered so that the assessment as a whole reflects the full range of print and non-continuous text that students encounter in their in-school and out-of-school reading.

Exhibit 6. Considerations for selecting stimulus material

Literary Text	Informational Text	Graphical Displays of Information
Essential characteristics • Ability to engage readers • Well-written, rich text • Recognized literary merit • Theme/topic appropriateness by grade level Grade appropriateness • Complexity of characters • Number of characters • Vocabulary • Sophistication in use of literary devices • Complexity of dialogue • Point of view • Complexity of theme • Multiple themes (major/minor) • Use of time (flashbacks, progressive/digressive) • Illustrations Balance • Reflective of our literary heritage • Style • Variety of sentence and vocabulary complexity • Appropriateness of mode (prose vs. poetry) • Classical as well as contemporary • Representative of varied historical periods, cultures, socioeconomic backgrounds, etc. • Genre	Essential characteristics • Ability to engage readers • Well-written, considerate text • Coherence • Theme/topic appropriateness by grade level Grade appropriateness • Topic • Vocabulary • Concepts (number, familiarity, abstractness) • Curricular appropriateness at grade level • Integrity of structure • Types of adjunct aids • Explicitness of perspective • Style Balance • Varied content areas • Style • Genre • Variety of sentence and vocabulary complexity • Appropriateness of mode	Essential characteristics • Coherence • Clarity • Relevance (when embedded) Grade appropriateness • Structural complexity • Topic • Vocabulary • Concepts (number, familiarity, abstractness) • Number of categories of information presented • Amount of information within categories Balance • Embedded documents balanced with stand-alone documents (at grade 12) • Format

VOCABULARY ON THE NAEP READING ASSESSMENT

The 2013 NAEP Reading Assessment includes an assessment of vocabulary in the context of passages that students read. Vocabulary knowledge is considered to be one of the five essential components of reading as defined by the No Child Left Behind (NCLB) legislation. In this context, vocabulary is construed not as isolated word meanings but as real knowledge of vocabulary that can advance comprehension.

NAEP will not test definitions in isolation from surrounding text; that is, students will not be assessed on their prior knowledge of definitions. The definition of meaning vocabulary will guide the development:

Meaning vocabulary is the application of one's understanding of word meanings to passage comprehension.

IMPORTANCE OF VOCABULARY FOR READING COMPREHENSION

The associations between vocabulary and learning to read and then between vocabulary and reading comprehension are well documented in research (Hart and Risley 1995).[1] Studies have repeatedly shown that students' vocabulary is a fundamental factor in their ability to comprehend what they read. Not knowing the meaning of words as used in a given text may result in decreased comprehension of that text. Comprehending any reading passage requires knowing the meaning of the important content-bearing words of that passage, but often, the meaning of many key words in a passage depends on an interaction of word meaning and passage meaning (Baumann, Kame'enui, and Ash 2002; Landauer, Foltz, and Laham 1998). Because of this interaction, measurement of word meaning by NAEP should be integrated with the measurement of passage comprehension.

Several major factors are known to affect readers' comprehension of what they read and can highlight the connection between word meaning and passage meaning; these include:

- The context for reading (e.g., for study, for skimming, for leisure).
- Fluency in identifying the words of the text.
- Background or domain knowledge of the content of the text.
- Knowledge of "the sense of the meaning" of the words the author uses to convey important content (Miller 1991).
- Comprehension monitoring.

REASONS FOR ASSESSING VOCABULARY ON NAEP READING

The growing body of research documenting the link between vocabulary and reading comprehension provides a strong rationale for the inclusion of a systematic measure of vocabulary. Past assessments have included a few vocabulary test items, all of which measured vocabulary in context; however, the number of items was scant and there were no specific vocabulary-related criteria for selecting the items or distractors. Furthermore, NAEP reports provided no information about performance on those items or how vocabulary performance might be related to reading comprehension. This change for the NAEP Reading Assessment, then, is significant. All vocabulary items will function both as a measure of passage comprehension and as a test of readers' specific knowledge of the word's meaning as intended by the passage author.

[3] For a complete list of references substantiating vocabulary assessment, see the bibliography.

MEASUREMENT OF MEANING VOCABULARY

Vocabulary items will be developed about the meaning of words as they are used in the context of the passages that students read. Students will not be asked to draw on their prior knowledge by providing a written definition of each word on a list or in a set of words. There are two reasons for this approach. First, knowledge as explicit as a written definition of a word is not the specific ability required for passage comprehension. In reality, readers may not be able to provide a complete definition of a word they encounter but do have enough of the sense of the word's meaning as used in text that their comprehension is not impeded.

A second argument against demanding specific definitions is that word meaning often depends on the context in which the word appears. Finding out whether readers know one specific definition of a word will not indicate whether they understand that word as it is used in a given text. Indeed, there is evidence that readers who know one definition of a word but not the meaning in a given text try to alter the sense of the text in keeping with their known definition: leading, of course, to misunderstanding the text (Deegan 1995). In addition, writers often use words in a manner that goes beyond concrete, familiar definitions, but do so in ways that skilled readers can interpret effectively. Jacques Barzun describes this:

> Language is not an algebra; that is, the symbols do not stay put, nor can they be carried from place to place with an assurance that their value will not change. If language were like an algebra there could be no poetry or other fiction, no diplomacy or intimate correspondence, no persuasion or religious literature. If language were like an algebra, uncomfortable would mean not able to be comforted, and a myriad other nuances of human feelings would have to remain unrecorded and unshared (Barzun 1975).

CONSIDERATIONS FOR SELECTING VOCABULARY

In selecting passages, test developers must create a *map* of the story or expository selection to identify a passage's key features. This procedure has included identifying candidates for vocabulary items, but the process will be enhanced to ensure that passages contain enough candidate words or terms for item development.

The intent of the vocabulary assessment is to determine whether readers know and understand the meanings of the words that writers use to convey new information or meaning, not to measure readers' ability to learn new terms or words. Hence, the assessment will focus on words that characterize the vocabulary of mature language users and characterize written rather than oral language. The words selected for item development will convey concepts, ideas, actions, or feelings that the readers most likely know. In general, the words selected as targets for item development characterize the language of mature readers and are used in texts from a variety of content domains (Beck, McKeown, and Kucan

2002).[4] Considerations for selecting words for item development are summarized in exhibit 7.

[4] Referred to as tier 2 words, a term that distinguishes them from tier 1 words, which are common, everyday words basic to the speech and writing of most students, and from tier 3 words, rarely used words or technical terminology.

Exhibit 7. Considerations for selecting vocabulary items and distractors

Vocabulary Words to Be Tested	Vocabulary Words Excluded From Testing	Considerations for Distractors
• Characterize the vocabulary of mature language users and characterize written rather than oral language. • Label generally familiar and broadly understood concepts, even though the words themselves may not be familiar to younger learners. • Necessary for understanding at least a local part of the context and linked to central ideas such that lack of understanding may disrupt comprehension. • Are found in grade-level reading material.	• Narrowly defined and not widely useful, such as those related to specific content domains (e.g., photosynthesis, fiduciary) or words with limited application (e.g., deserter, hamlet). • Label or name the main idea of the passage (e.g., the word "emancipation" would not be tested in an article dealing with the "Emancipation Proclamation"). • Already likely to be part of students' everyday speaking vocabulary at grade level. • Meanings readily derived from language context (e.g., appositives, parenthetic definitions, idiomatic expressions).	• Present a different common meaning of the target vocabulary word, which must be ignored in favor of the meaning in context. • May present correct information or content from the text that is **not** what is meant by the target word. • May be an alternative interpretation of the context in which the target word occurs. • May be the meaning of another word that looks or sounds similar to the target word. • May present a common but inaccurate association with the target word.

Words that are appropriate for inclusion denote concepts or things that readers already know. That is, the word denotes an object, idea, feeling, or action that has been experienced or has been seen by the readers. However, the test item is not designed to determine whether readers know the thing, but rather whether readers are able to link this knowledge (object, idea, feeling, or action) to the word the author uses to convey this meaning. NAEP presumes that most readers are likely to have the background knowledge of the object, idea, feeling, or action in a passage, but because the words are difficult and uncommon, readers may not readily link that knowledge to the specific word the author uses to convey that meaning. If readers do not connect a meaning with the author's word, their comprehension will suffer. NAEP vocabulary items are designed to test readers' ability to connect an appropriate meaning to the candidate words to gain comprehension. Thus, test items will not target technical terms or words identifying the central idea(s) of the passage because those words often represent new knowledge, concepts, or conceptualizations for readers. Passage comprehension items will measure readers' learning from text; vocabulary items will measure readers' knowledge of certain important words the author uses to impart this meaning.

Clearly, some students will know and understand some test words before taking the assessment. This is unavoidable. Furthermore, we anticipate that some readers will not have the background to link to the author's words and thus will either choose an incorrect response for the item because of their background knowledge or identify the meaning of the word from context and mark the correct response. Recognizing this possibility, NAEP will ensure that the vocabulary test items represent a continuum of difficulty across readers at a given grade (as will reading passages and comprehension items). The intent is to identify words that the majority of grade-level students do not generally use in speaking or writing, but have seen or heard at least a few times.

COGNITIVE TARGETS

Items will be developed to assess students' comprehension of literary and informational text. The term *cognitive targets* refers to the mental processes or kinds of thinking that underlie reading comprehension. Test questions will be aligned to cognitive dimensions applicable to literary and informational texts and also to cognitive dimensions specific to each text type. The remainder of the chapter presents those cognitive dimensions targeted by the items (hence the term cognitive targets) and discusses the item types included on the assessment. Inclusion of specific cognitive targets reflects the intent of the definition of reading that guides the assessment. The definition, explained in chapter one, follows.

Reading is an active and complex process that involves:

- Understanding written text.
- Developing and interpreting meaning.
- Using meaning as appropriate to type of text, purpose, and situation.

READING PROCESSES INCLUDED IN COGNITIVE TARGET MATRICES

The reading processes included in the three sections of the cognitive target matrix, exhibit 8, illustrate the complex nature of reading. The research literature contains numerous studies that show how students use different reading processes when reading various types of text (see chapter one). Hence, the sections of the matrix representing literary and informational text emphasize that different texts elicit different kinds of reading behaviors. The reading processes presented in the matrix are also grounded in the research literature on comprehension, most specifically the literature that uses protocol analysis (*think-alouds*) as its research methodology (Garner 1982; Guthrie, Britten, and Barker 1991; Norris and Phillips 1987; Pressley and Afflerbach 1995; Olvshavsky 1976–77). Furthermore, they reflect the cognitive processes assessed on international reading assessments such as the Progress in International Reading Literacy Study (PIRLS) (Campbell et al. 2001) and the Programme for International Student Assessment (PISA) (OECD 2000). The behaviors presented in exhibit 8 are illustrative, not comprehensive. The *Specifications for the NAEP Reading Assessment* will provide a detailed listing of the cognitive targets for item development.

Locate and Recall

The first cognitive behaviors are *locate* and *recall.* As students locate or recall information from what they read, they may identify clearly stated main ideas or supporting details or they may find essential elements of a story, such as characters, time, or setting. Their process in answering assessment items often involves matching information given in the item to either literal or synonymous information in the text before they can then use the textual information to develop a response. As readers engage in these behaviors, they monitor their reading in order to understand when they are comprehending and when they are not. When they realize that the text is not making sense, they employ specific strategies to ensure that they begin to comprehend again.

> A salient activity [in reading] is to find the main ideas in the text and make certain that these ideas are remembered—or at least can be found again if needed. The big ideas, of course, are always relative to the goals of the reading with respect to the text. That is, very different ideas may be considered main ideas if a reader is reading for one purpose versus another (Pressley and Afflerbach 1995, p. 44).

Items assessing this component of reading usually focus on information contained in relatively small amounts of text: a sentence, a paragraph, or two or more adjacent paragraphs. These items provide information about the most basic comprehension skills, those that ultimately form the foundation for a more elaborate understanding of what is read. At the same time, these items address the kinds of reading that occur routinely in school and in out-of-school reading activities.

> Regardless of a reader's goal—whether reading is done in preparation for a test, in anticipation of a writing assignment, with the expectation of sharing it in a conversation, to determine an author's perspective, or as part of staying abreast in an area of interest—it is necessary to identify the important information in a text (Pressley and Afflerbach 1995, p. 31).

Integrate and Interpret

The next set of reading behaviors refers to what readers do as they *integrate* new information into their initial sense of what a passage says, often *interpreting* what they read in the process. When readers engage in behaviors involving integrating and interpreting, they make comparisons and contrasts of information or character actions, examine relations across aspects of text, or consider alternatives to what is presented in text. This aspect of the reading is critical to comprehension and can be considered the stage at which readers really move beyond the discrete information, ideas, details, themes, and so forth presented in text and extend their initial impressions by processing information logically and completely. As readers integrate information and interpret what they read, they frequently form questions, use mental images, and make connections that draw on larger sections of text, often at an abstract level. They also draw on their knowledge of the structure and elements of literary and informational text.

In applying these behaviors, readers invariably think across large portions of text, across the text as a whole, or even across multiple texts; they relate textual information to knowledge from other sources such as their previous content learning or to internalized criteria and logic. Thus, readers might ask themselves whether something they are reading makes sense to them within the realm of their own experiences or when considered against what they have read in other sources. They examine the text in terms of their specific reading goals or the needs they have for the information that the text can provide. In certain reading situations, readers may apply what they know to what they are reading, for example, determining a real-world application of suggestions in a text on bicycle safety. They also apply information gained from reading, for example in following instructions for repairing a bicycle or reading a map to determine where bike routes have been designated in a city.

> Readers are aware of many different aspects of text and the reading task they are performing from the outset of reading. Their perceptions of the text and how it relates to their task/reading goals does much to shape the processing of text, with readers processing some parts of the text superficially and others very carefully. … Good readers not only know what they are doing but also why they are doing it, ever aware of the characteristics of text they are confronting and their own reading goals (Pressley and Afflerbach 1995, p. 68).

Items assessing these behaviors might ask students to form generalizations about a piece of informational text or make statements about how the setting of a story contributes to the creation of theme. Other items might require interpretation, for example, of a character's motivations or of an author's reasons for attempting to persuade readers about an issue. Other questions might ask for alternative actions that a character might have taken or an interpretation of an implied message or moral from a story.

Critique and Evaluate

The final set of reading behaviors, *critiquing* and *evaluating* text, requires readers to stand back from what they read and view the text objectively. The focus remains on the text itself but the reader's purpose is to consider the text critically by assessing it from numerous perspectives and synthesizing what is read with other texts and other experiences. Items may ask students to evaluate the quality of the text as a whole, to determine what is most significant in a passage, or to judge the effectiveness of specific textual features to accomplish the purpose of the text (e.g., the effectiveness of details selected to support a persuasive argument). Items might ask for the likelihood that an event could actually have taken place, the plausibility of an argument, or the adequacy of an explanation for an event. Items can ask students to focus at the level of language choices (for example, nuances expressed in a metaphor) or at the broader level of the entire text (for example, evaluating the effectiveness of an author's craft to accomplish his or her overall goals).

To answer these questions, students draw on what they know about text, language, and the ways authors manipulate language and ideas to achieve their goals.

> Sometimes readers recognize from the very start that they are likely to be evaluative with respect to a text, and likely to react to it affectively. ... Although some readers evidence great consistency in their evaluative stances as they read some texts, evaluations are often much more discriminated. Regardless of whether a reader is globally positive, globally negative, or a mixture of both, evaluations occur with respect to the style and context of text (Pressley and Afflerbach 1995, p. 76).

Assessing Cognitive Targets

Exhibit 8 presents the cognitive target matrix for the development of items to be used on the NAEP Reading Assessment.[5] The term *cognitive targets* is used to refer to the mental processes or kinds of thinking that underlie reading comprehension; the cognitive targets serve to guide the test development process in that item writers *target* these processes or kinds of thinking as they write items. The cognitive targets remain the same across all three grades on the assessment, but the passages and documents about which items are developed will be of increasing sophistication at each grade.

[5] The cognitive targets matrix is for illustrative purposes only and should not be considered an exhaustive list. The cognitive targets will be elaborated further in the *Specifications for the NAEP Reading Assessment*.

Exhibit 8. Cognitive targets

	Locate/Recall	Integrate/Interpret	Critique/Evaluate
Both Literary and Informational Text	Identify textually explicit information and make simple inferences within and across texts, such as: • Definitions • Facts • Supporting details	Make complex inferences within and across texts to: • Describe problem and solution or cause and effect. • Compare or connect ideas, problems, or situations. • Determine unstated assumptions in an argument. • Describe how an author uses literary devices and text features.	Consider text(s) critically to: • Judge author's craft and technique. • Evaluate the author's perspective or point of view within or across texts. • Take different perspectives in relation to a text.
Specific to Literary Text	Identify textually explicit information within and across texts, such as: • Character traits. • Sequence of events or actions • Setting • Identify figurative language	Make complex inferences within and across texts to: • Infer mood or tone. • Integrate ideas to determine theme. • Identify or interpret a character's motivations and decisions. • Examine relations between theme and setting or characters. • Explain how rhythm, rhyme, or form in poetry contribute to meaning.	Consider text(s) critically to: • Evaluate the role of literary devices in conveying meaning. • Determine the degree to which literary devices enhance a literary work. • Evaluate a character's motivations and decisions. • Analyze the point of view used by the author.
Specific to Informational Text	Identify textually explicit information within and across texts, such as: • Topic sentence or main idea • Author's purpose • Causal relations • Locate specific information in text or graphics	Make complex inferences within and across texts to: • Summarize major ideas. • Draw conclusions and provide supporting information. • Find evidence in support of an argument. • Distinguish facts from opinions. • Determine the importance of information within and across texts.	Consider text(s) critically to: • Analyze the presentation of information. • Evaluate the way the author selects language to influence readers. • Evaluate the strength and quality of evidence used by the author to support his or her position. • Determine the quality of counterarguments within and across texts. • Judge the coherence, logic, or credibility of an argument.

Items will be developed to assess all cognitive targets at each grade level, but the distribution of cognitive targets will vary across grades. In determining the distribution across grade levels, careful thought was given to the kinds of texts that students encounter at each level. Reference was also made to the distribution across reading processes in the two international reading assessments, PISA and PIRLS (Campbell et al. 2001; OECD 2000). Exhibit 9 displays the distribution of cognitive targets across grades 4, 8, and 12.

Exhibit 9. Percentage distribution of cognitive targets by grade

Grade	Locate/Recall	Integrate/Interpret	Critique/Evaluate
4	30	50	20
8	20	50	30
12	20	45	35

ITEM TYPES

The NAEP Reading Assessment will include multiple-choice and constructed-response items. Both item types yield valuable information about students' reading and allow a rich, full description of how the nation's students approach different kinds of text. The inclusion of both types of items affirms the complex nature of the reading process because it recognizes that different kinds of information can be gained from each item type. It also acknowledges the real-world skill of being able to write about what one has read.

Multiple-choice items will include four options: the right response and three incorrect responses. It is assumed that a multiple-choice item will take students approximately 1 minute to complete. Short constructed-response items can be answered by one or two phrases or by one or two sentences; they should take students approximately two to three minutes to complete. Extended constructed-response items should elicit longer, more elaborated answers of a paragraph or two. They should take students approximately five minutes to complete. Scoring rubrics for short and extended constructed-response items will focus on the content included in answers, not on spelling or grammatical considerations. However, students must answer constructed-response questions by using information from the text to receive credit. Details regarding the scoring and short and extended constructed-response items appear in the *Specifications for the NAEP Reading Assessment*.[6]

The distribution of multiple-choice and constructed-response items will vary across the grades assessed by the NAEP Reading Assessment. The percentages in exhibit 10 refer to the amount of assessment time that students will spend responding to these particular kinds of items. Hence, grade 4 students will spend approximately 50 percent of the assessment time responding to multiple-choice items and 50 percent of the assessment time

[6] The specifications will guide the development of the assessment. It will provide detailed information about the kinds of reading selections to be included, item types, and scoring criteria for constructed-response items. The specifications will also discuss test administration procedures, any considerations to be given to special populations, and special studies to be conducted in conjunction with the assessment (see appendix C).

preparing written responses. Students at grades 8 and 12 will spend more time preparing written responses.

Approximately two items per passage will assess vocabulary knowledge. These items may be either multiple choice or short constructed response in format. Exhibit 10 shows the distribution of time to be spent on each kind of item.

Exhibit 10. Percentage distribution of time to be spent on specific item types

Grade	Multiple Choice	Short Constructed Response	Extended Constructed Response
4	50	40	10
8	40	45	15
12	40	45	15

Less time is allocated to constructed-response items at grade 4 to reflect developmental differences. Students at grade 4 may not be as familiar with written responses to reading questions as are older students (Kobayashi 2002).

CHAPTER THREE

REPORTING RESULTS

Results of the NAEP Reading Assessment administrations are reported in terms of average scores for groups of students on the NAEP 0–500 scale and as percentages of students who attain each of the three achievement levels (*Basic*, *Proficient*, and *Advanced*) discussed below. This is an assessment of overall achievement, not a tool for diagnosing the needs of individuals or groups of students. Reported scores are always at the aggregate level; by law, scores are not produced for individual schools or students. Results are reported for the nation as a whole, for regions of the nation, for states, and for large districts that volunteer to participate in the NAEP trial urban district assessment (TUDA).

NO CHILD LEFT BEHIND PROVISIONS FOR NAEP REPORTING

Under the provisions of the No Child Left Behind (NCLB) legislation, states receiving Title I grants must include assurance in their state plans that they will participate in the reading and mathematics state NAEP at grades 4 and 8. Local districts that receive Title I funds must agree to participate in biennial NAEP administrations at grades 4 and 8 if they are selected to do so. Their results will be included in state and national reporting. Participation in NAEP will not substitute for the mandated state-level assessments in reading and mathematics at grades 3 to 8.

In 2002, NAEP initiated TUDA in five large urban school districts that are members of the Council of the Great City Schools (the Atlanta City, City of Chicago, Houston Independent, Los Angeles Unified, and New York City Public Schools districts). Ten large districts participated in 2003 and 2005. The number of districts participating in TUDA has grown over time. Districts that participate in TUDA receive their own data, which they can use for assessing the achievement of their own students and for comparative purposes.

ACHIEVEMENT LEVELS

Since 1990, the National Assessment Governing Board has used student achievement levels for reporting results on NAEP assessments. The achievement levels represent an informed judgment of "how good is good enough" in the various subjects assessed. Generic policy definitions for achievement at the *Basic*, *Proficient*, and *Advanced* levels describe in very general terms what students at each grade level should know and be able to do on the assessment. Reading achievement levels specific to the NAEP Reading Framework were developed to elaborate on the generic definitions. New reading-specific achievement level descriptors replaced those aligned to the previous framework (NAGB 2003). Preliminary achievement level descriptors were developed for the assessment as a whole and for the vocabulary component of the assessment. These preliminary achieve-

ment levels were used to guide item development and initial stages of standard-setting. The preliminary achievement level descriptions were refined as a result of the achievement level setting process.

Exhibit 11 presents the generic achievement level descriptors. See appendix B for the final achievement level descriptions.

Exhibit 11. Generic NAEP achievement levels

Achievement Level	Policy Definition
Advanced	This level signifies superior performance.
Proficient	This level represents solid academic performance for each grade assessed. Students reaching this level have demonstrated competency over challenging subject matter, including subject-matter knowledge, application of such knowledge to real-world situations, and analytical skills appropriate to the subject matter.
Basic	This level denotes partial mastery of prerequisite knowledge and skills that are fundamental for proficient work at each grade.

REPORTING NAEP RESULTS

NAEP Reading Assessment results are reported in terms of average scores for groups of students on the NAEP 0–500 scale and as percentages of students who attain each of the three achievement levels (Basic, Proficient, and Advanced). Information is also provided about students who score below Basic. These students are not necessarily nonreaders; many can complete some tasks on the assessment but are not able to attain the minimum score required for Basic.

Data are reported on subgroups of students by gender, race/ethnicity, eligibility for free or reduced-price lunch, region of the country, type of community, public or nonpublic school, and other variables of interest. Data are never provided for individual students or schools. Subscores should be provided for literary and informational texts. Results will also be provided about students' responses to the vocabulary items.

The 2013 results will continue to use a 0–500 cross-grade scale. Use of such a scale affirms that reading is a development process and that students' reading skills mature throughout their school years as they read increasingly diverse and sophisticated texts.

The primary vehicle for reporting NAEP reading results is the *NAEP Reading Report Card* issued after each assessment administration. The report provides detailed information on the assessments, the students who participated, and the assessment results. Results are disaggregated by specific groups and are also presented for states that participate in the NAEP state assessment. Among the focal groups are males and females, students

from various racial/ethnic backgrounds, and students who took the assessment with and without accommodations.

NAEP data and information about the assessments are also available electronically through the National Governing Assessment Board (www.nagb.org) and the National Center for Education Statistics/NAEP (nces.ed.gov) websites. Furthermore, the NAEP Data Explorer can be used by interested education administrators, researchers, and other stakeholders to develop focused reports. The NAEP e-Library (nces.ed.gov) provides access to other information such as access to NAEP reports, sample assessment passages, items, scoring rubrics with student-constructed responses, and data sources for more in-depth analysis of student achievement results or of the assessments themselves.

REPORTING STATE NAEP RESULTS

As discussed above, states receiving Title I funding must participate in the NAEP Reading Assessment at grades 4 and 8. Results are reported in the aggregate for participating students and are also disaggregated for specific reference groups of students. Individual state reports are generated in addition to reports that contrast results from participating states and from the nation as a whole. The NAEP Report Generator allows state and local administrators and others to customize reports and to investigate specific aspects of student reading achievement.

REPORTING TREND DATA

According to NAEP law and Governing Board policy, long-term trend assessments are conducted as part of NAEP in order to continue the national trend reports. In reading, long-term assessments have been administered since 1971. The long-term trend reports provide the only continual measures of student achievement over such extended periods of time. Passages and accompanying test items administered as part of the long-term trend assessments have remained unchanged from their initial administration in 1971.

The 2009–2013 NAEP Reading Framework represents several important changes from the framework that guided the assessment from 1992 to 2007 (see exhibit 2). The 2013 NAEP Reading Assessment will use the same framework used in 2009. The *Reading Framework for the 2009 National Assessment of Educational Progress* replaced the framework first used for the 1992 reading assessment and then for subsequent reading assessments through 2007. Compared with the previous framework, the 2009 reading framework included more emphasis on literary and informational texts, a redefinition of reading cognitive processes, a new systematic assessment of vocabulary knowledge, and the addition of poetry to grade 4.

The 2009 NAEP Reading Report Card included trend data on student reading performance from 1992 to 2009. Results from special analyses determined the 2009 reading assessment results could be compared with those from earlier assessment years. These special analyses started in 2007 and included in-depth comparisons of the frameworks

and the test questions, as well as an examination of how the same students performed on the 2009 assessment and the earlier assessment. A summary of these special analyses and an overview of the differences between the previous framework and the 2009 framework are available on the Web at nces.ed.gov/nationsreportcard/reading/trend_study.asp. The 2013 NAEP Reading Report Card will report trends in student reading performance from 1992 to 2013.

NAEP reports are useful in providing trend results over time to inform decisions and allocations of resources and framing of policy about reading. The questions that NAEP addresses include these:

- Are students improving in reading achievement over time?
- Are percentages of students at the upper achievement levels increasing, decreasing, or remaining the same?
- Are the gaps in achievement among various groups narrowing?

Assessments aligned to the 1992 framework and its subsequent versions have yielded trend data from seven national and six state administrations as shown in exhibit 12.

Exhibit 12. Years of administration of NAEP reading assessments

Year	Grades for National Administration	Grades for State Administration
1992	4, 8, 12	4
1994	4, 8, 12	4
1998	4, 8, 12	4, 8
2000	4	
2003	4, 8, 12	4, 8
2005	4, 8, 12	4, 8
2007	4, 8	4, 8
2009	4, 8, 12	4, 8, 12

BACKGROUND VARIABLES

Students participating in the NAEP assessments respond to background questionnaires that gather information on variables important to understanding reading achievement nationwide. Teachers and school administrators also complete background questionnaires. To the extent possible, information is also gathered from non-NAEP sources such as state, district, or school records to minimize the burden on those asked to complete the questionnaires. Questions are nonintrusive; free from bias; secular, neutral, and nonideological; and do not elicit personal feelings, values, or attitudes.

As stated in Governing Board policy, the collection of background data on students, teachers, and schools is necessary to fulfill the statutory requirement that NAEP include

information whenever feasible that is disaggregated by race or ethnicity, socioeconomic status, gender, disability, and limited English proficiency. Background information serves the additional purpose of enriching the reporting of NAEP results by examining factors related to academic achievement in the specific subjects assessed.

To satisfy the goal of enriching reports on student achievement in reading, background variables are selected to be of topical interest, timely, and directly related to academic achievement. The selection of variables about which questions will be developed may reflect current trends in the field, such as the use of technology in reading instruction or the extent to which students use the Internet as a reference tool. Recommendations on background variables for the NAEP Reading Assessment were presented as a separate document.

BIBLIOGRAPHY

DEFINITION OF READING

Campbell, J.R., D.L. Kelly, I.V.S. Mullis, M.O. Martin, and M. Sainsbury. (March 2001). *Framework and Specifications for PIRLS Assessment 2001*. Chestnut Hill, MA: Boston College, Lynch School of Education, PIRLS International Study Center.

Lyon, G.R. (1998). "Overview of Reading and Literacy Research." In S. Patton and M. Holmes, eds., *The Keys to Literacy.* Washington, DC: Council for Basic Education.

Frye, N. (1964). *The Educated Imagination.* Bloomington, IN: Indiana University Press.

National Institute of Child Health and Human Development (2000). *Report of the National Reading Panel*. Washington, DC: Author.

National Research Council (1998). *Preventing Reading Difficulties in Young Children.* Washington, DC: Author.

No Child Left Behind Act (NCLB) of 2001, P.L. 107-110, signed by President George W. Bush, January 8, 2002.

Organisation for Economic Co-operation and Development (2000). Measuring Student Knowledge and Skill: The PISA 2000 Assessment of Reading, Mathematical and Scientific Literacy. Paris: Author.

RAND Reading Study Group (2002). Reading for Understanding: Toward an R&D Program in Reading Comprehension. Santa Monica, CA: RAND.

Ruddell, R.B., and N.J. Unrau (1994). "Reading as a Meaning-Construction Process: The Reader, the Text, and the Teacher." In R.B. Ruddell, M.R. Ruddell, and H. Singer, eds. *Theoretical Models and Processes of Reading* (4th ed.):996–1056. Newark, DE: International Reading Association.

TEXT TYPES, MATRICES, AND COGNITIVE TARGETS

Achieve (2004). Executive Summary of the American Diploma Project. Washington, DC: Author.

Alexander, P.A., and T.L. Jetton, T.L. (2000). "Learning From Text: A Multidimensional and Developmental Perspective." In M.L. Kamil, P.B. Mosenthal, P.D. Pearson, and R. Barr, eds., *Handbook of Reading Research* (III):285–310. Mahwah, NJ: Erlbaum.

Armbruster, B.B. (1984). "The Problem of 'Inconsiderate Text.'" In G.G. Duffy, I.R. Roehler, and J. Mason, eds., *Comprehension Instruction*: *Perspective and Suggestion:*202–217. New York: Longman.

Barr, R., M.L. Kamil, P.B. Mosenthal, and P.D. Pearson, eds. (1991). *Handbook of Reading Research* (Vol. II). Mahwah, NJ: Erlbaum.

Baumann, J. (1986). "Effect of Rewritten Textbook Passes on Middle Grade Students' Comprehension of Main Ideas: Making the Inconsiderate Considerate." *Journal of Reading Behavior* 18:1–22.

Baumann, J.F., E.J. Kame'enui, and G.E. Ash (2002). "Research on Vocabulary Instruction: Voltaire Redux." In J. Flood, D. Lapp, D.R. Squire, and J. Jensen, eds., *Handbook of Research on the Teaching of the English Language Arts:*752–785. Mahwah, NJ: Erlbaum.

Beck, I., M. McKeown, and J. Worthy (1995). Giving a Text Voice Can Improve Students' Understanding. *Reading Research Quarterly* 30*:*220–238.

Bovair, S., and D.E. Kieras (1991). "Toward a Model of Acquiring Procedures From Text." In R. Barr, M.L. Kamil, P.B. Mosenthal, and P.D. Pearson, eds., *Handbook of Reading Research* vol. II:206–229. White Plains, NY: Longman.

Broer, N.A., C.A.J. Aarnoutse, F.K. Kieviet, and J.F.J. Van Leeuwe (2002). "The Effect of Instructing the Structural Aspect of Texts." *Educational Studies* 28(3):213–238.

Burke, J. (2000). *Reading Reminders: Tools, Tips, and Techniques*. Portsmouth, NH: Heinemann.

Burke, J. (2001). Illuminating Texts: How to Teach students to Read the World. Portsmouth, NH: Heinemann.

Driver, R., P. Newton, and J. Osborne (2000). "Establishing the Norms of Scientific Argumentation in Classrooms." *International Journal of Science Education* 84:287–312.

Duke, N.K. (2000). "3.6 Minutes Per Day: The Scarcity of Information Texts in First Grade." *Reading Research Quarterly* 35*:*202–224.

Fludernik, M. (2000). "Genres, Text Types, or Discourse Modes? Narrative Modalities and Generic Categorization." *Style* 34(2):274–292.

Garner, R. (1982). "Verbal-Report Data on Reading Strategies." *Journal of Reading Behavior* 14:159–167.

Georgiou, C. (1988). *Children and Their Literature*. Englewood Cliffs, NJ: Prentice Hall.

Gioia, D., X.J. Kennedy, and M. Bauerlein (2004). *Handbook of Literary Terms.* White Plains, NY: Longman.

Goldman, S., and J. Rakestraw (2000). "Structural Aspects of Constructing Meaning From Text." In R. Barr, M. Kamil, P. Mosenthal, and P.D. Pearson, eds., *Handbook of Reading Research* vol. III:311–335. White Plains, NY: Longman.

Graesser, A., J.M. Golding, and D.L. Long (1991). "Narrative Representation and Comprehension." In R. Barr, M.L. Kamil, P.B. Mosenthal, and P.D. Pearson, eds., *Handbook of Reading Research* vol. II:171–205. White Plains, NY: Longman.

Guthrie, J., T. Britten, and K. Barker (1991). "Roles of Document Structure, Cognitive Strategy, and Awareness in Searching for Information." *Reading Research Quarterly* 25:300–324.

Guthrie, J.T., and P. Mosenthal (1987). "Literacy as Multidimensional: Learning Information and Reading Comprehension." *Educational Psychologist* 22(3–4):279–297.

Hanauer, D.I. (in press). "What We Know About Reading Poetry: Theoretical Positions and Empirical Research." In G. Steen and D. Schram, eds., *The Psychology and Sociology of Literary Text.* Amsterdam: John Benjamin Publishing.

Kamil, M.L., H.S. Kim, and D. Lane. (in press). "Electronic Text." In J. Hoffman and D. Schallert, eds., *The Texts in the Primary Grade Classrooms*. Ann Arbor, MI: Center for Instruction in Early Literacy Acquisition.

Kamil, M.L., P.B. Mosenthal, P.D. Pearson, and R. Barr, eds. (2000). *Handbook of Reading Research* vol. III. Mahwah, NJ: Erlbaum.

Kim, H.S., and M.L. Kamil (2003). "Reading Electronic and Multimedia Text." In A. Sweet and C. Snow, eds., *Rethinking Reading Comprehension:*166–175. New York: Guilford.

Kirsch, I.S., and P.B. Mosenthal (1990). "Exploring Document Literacy: Variables Underlying the Performance of Young Adults." *Reading Research Quarterly* 25:5–30.

Kobayashi, M. (2002). "Method Effects on Reading Comprehension Test Performance: Text Organization and Response Format." *Language Testing* 19:193–220.

Leu, D.J., Jr., and C.K. Kinzer (2000). "The Convergence of Literacy Instruction With Networked Technologies for Information and Communication." *Reading Research Quarterly* 35:108–127.

Meyer, B.J.F. (1975). The Organization of Prose and Its Effects on Memory. New York: Elsevier.

Meyer, B.J.F. (2003). "Text Coherence and Readability." *Topics in Language Disorders* 23(3):204–224.

Mosenthal, P.B. (1996). "Understanding the Strategies of Document Literacy and Their Conditions of Use." *Journal of Education Psychology* 88:314–332.

Mosenthal, P.B. (1998). "Defining Prose Task Characteristics for Use in Computer-Adaptive Testing and Instruction." *American Education Research Journal* 35:269–307.

National Assessment Governing Board (May 2002). *National Assessment Governing Board Policy on Framework Development.* Washington, DC: Author.

National Assessment Governing Board. (2003). Reading Framework for the 2003 National Assessment of Educational Progress. Washington, DC: Author.

Norris, S., and L.M. Phillips (1987). "Explorations at Reading Comprehension: Schema Theory and Critical Thinking Theory." *Teachers College Record* 38:281–306.

Olvshavsky, J. (1976–77). "Reading as Problem Solving: An Investigation of Strategies." *Reading Research Quarterly* 12:654–674.

Osborne, J. F. (2002). *Science Without Literacy: A Ship Without a Sail?* Cambridge Journal of Education 3(2):203–215.

Paris, S.G., B.A. Wasik, and C.J. Turner (1991). "The Development of Strategic Readers." In R. Barr, M.L. Kamil, P.B. Mosenthal, and P.D. Pearson, eds., *Handbook of Reading Research* vol. II:609–640. Mahwah, NJ: Erlbaum

Pearson, P.D., and K. Camperell. (1994). "Comprehension of Text Structures." In R.B. Ruddell, M.R. Ruddell, and H. Singer, eds., *Theoretical Models and Processes of Reading:* (4th ed.:448–468). Newark, DE: International Reading Association.

Pressley, M. (2000). "What Should Comprehension Instruction Be the Instruction of?" In M.L. Kamil, P.B. Mosenthal, P.D. Pearson, and R. Barr, eds., *Handbook of Reading Research* vol. III:545–586. Mahwah, NJ: Erlbaum.

Pressley, M., and P. Afflerbach (1995). Verbal Protocol Analysis: The Nature of Constructively Responsive Reading. Hillsdale, NJ: Erlbaum.

Purves, A.C. (1973). *Literature Education in Ten Countries.* Stockholm: Almquist & Wiksell and New York: John Wiley & Sons.

Ravitch, D. (2003). The Language Police: How Pressure Groups Restrict What Students Learn. New York: Alfred A. Knopf.

Robb, L., R. Klemp, and W. Schwartz (2002). *Reader's Handbook: A Student Guide for Reading and Learning*. Wilmington, MA: Great Source Education Group.

Stein, N.L., and C.G. Glenn (1979). "An Analysis of Story Comprehension in Elementary School Children." In R.O. Freedle, ed., *New Directions in Discourse Processing:*53–120. Norwood, NJ: Ablex.

Sternberg, R.J. (1991). Are We Reading Too Much Into Reading Tests? *Journal of Reading* 34:540–545.

Vacca, J., and R. Vacca (1999). *Content Area Reading: Literacy and Learning Across the Curriculum* (6th ed.). New York: Longman.

Wade, S., W. Buxton, and M. Kelly (1999). "Using Think-Alouds to Examine Reader-Text Interest." *Reading Research Quarterly:* 34(2):194–213.

Wade, S., G. Schraw, W. Buxton, and M. Hayes (1993). "Seduction of the Strategic Reader: Effects of Interest on Strategy and Recall." *Reading Research Quarterly* 28(2):92–114.

Wade, S.E., and E.B. Moje (2000). "The Role of Text in Classroom Learning." In M.L. Kamil, P.B. Mosenthal, P.D. Pearson, and R. Barr, eds., *Handbook of Reading Research* vol. III:609–627. Mahwah, NJ: Erlbaum.

Weaver, C.A., III, and W. Kintsch (1991). "Expository Text." In R. Barr, M.L. Kamil, P.B. Mosenthal, and P.D. Pearson, eds., *Handbook of Reading Research* vol. II:230–245. White Plains, NY: Longman.

Wineburg, S. (1991). "On the Reading of Historical Texts: Notes on the Breach Between School and Academy." *American Educational Research Journal* 28:495-519.

Wixson, K.K., and C.W. Peters (1987). "Comprehension Assessment: Implementing an Interactive View of Reading." *American Psychologist* 23:333–356.

Zohar, A., and F. Nemet (2003). "Fostering Students' Knowledge and Argumentation Skills Through Dilemmas in Human Genetics." *Journal of Research in Science Teaching,* 39(1):35–62.

VOCABULARY ASSESSMENT

Barzun, J. (1975). *Simple and direct*. New York: Harper & Row.

Baumann, J.F., E.J. Kame'enui, and G.E. Ash (2002). "Research on Vocabulary Instruction: Voltaire Redux." In J. Flood, D. Lapp, J.R. Squire, and J.M. Jensen, eds., *Handbook of Research on Teaching the English Language Arts:* 752–785. Mahwah, NJ: Erlbaum.

Beck, I.L, M.G. McKeown, M.G, and L. Kucan (2002). *Bringing Words to Life: Robust Vocabulary Instruction.* New York: Guilford Press.

Beck, I.J., M.G. McKeown, and R.C. Omanson (1987). "The Effects and Use of Diverse Vocabulary Instructional Techniques." In M.G. McKeown and M. Curtis, eds., *The Nature of Vocabulary Acquisition*:147–163. Hillsdale, NJ: Erlbaum.

Beck, I.L., C.A. Perfetti, and M.G. McKeown (1982). "Effects of Long-Term Vocabulary Instruction on Lexical Access and Reading Comprehension." *Journal of Educational Psychology* 74(4):506–521.

Blachowicz, C.L.Z., and P. Fisher (2000). "Vocabulary Instruction." In M. Kamil, P. Mosenthal, P.D. Pearson, and R. Barr, eds., *Handbook of Reading Research* vol. III:503–523. White Plains, NY: Longman.

Brown, R.W. (1958). *Words and Things*. Glencoe, IL: The Free Press.

Calfee, R.C., and P.A. Drum (1985). "Research in Teaching Reading." In M.C. Wittrock, ed., *Handbook on Teaching* 3rd ed.:804–849. New York: Macmillan.

Carney, J.J., D. Anderson, C. Blackburn, and D. Blessing (1984). "Preteaching Vocabulary and the Comprehension of Social Studies Materials by Elementary School Children." *Social Education* 48(3):195–196.

Carver, R.P. (1994). "Percentage of Unknown Vocabulary Words in Text as a Function of the Relative Difficulty of the Text: Implications for Instruction." *Journal of Reading Behavior* 26:413–437.

Cunningham, A.E., and K.E. Stanovich (1998). "What Reading Does for the Mind." *American Educator* 22(1/2):8–15.

Davis, F.B. (1944). "Fundamental Factors in Reading Comprehension." *Psychometrika* 9:185–197.

Davis, F.B. (1968). "Research on Comprehension in Reading." *Reading Research Quarterly* 3:449–545.

Davis, F.B. (1972). "Psychometric Research on Comprehension in Reading." *Reading Research Quarterly* 7:628–678.

Deegan, D.H. (1995). "Exploring Individual Differences Among Novices Reading in a Specific Domain: The Case of Law." *Reading Research Quarterly* 30(2):154–170.

Halldorson, M., and M. Singer (2002). Inference Processes: Integrating Relevant Knowledge and Text Information. *Discourse Processes* 34(2):145–161.

Hart, B., and T.R. Risley (1995). *Meaningful Differences in the Everyday Experience of Young American Children.* Baltimore: Brookes Publishing Company.

Jenkins, J.R., and D. Pany (1981). "Instructional Variables in Reading Comprehension." In J.T. Guthrie, ed., *Comprehension and Teaching: Research Reviews*:163–202. Newark, DE: International Reading Association.

Johnson-Laird, P.N. (1987). "The Mental Representation of the Meaning of Words." *Cognition* 25:189–211.

Kintsch, W. (1974). *The Representation of Meaning in Memory*. Hillsdale, NJ: Erlbaum.

Kintsch, W. (1986). "Learning From Text." *Cognition and Instruction* 3:87–108.

Klare, G.R. (1984). "Readability." In P.D. Pearson, ed., *Handbook of Reading Research* vol. I:681–744. Mahwah, NJ: Erlbaum.

Koury, K.A. (1996). "The Impact of Preteaching Science Content Vocabulary Using Integrated Media for Knowledge Acquisition in a Collaborative Classroom." *Journal of Computing in Childhood Education* 7:(3–4):179–197.

Landauer, T.K., P.W. Foltz, and D. Laham (1998). "An Introduction to Latent Semantic Analysis." *Discourse Processes* 25:259–284.

McKeown, M.G., I.L. Beck, R.C. Omanson, and C.A. Perfetti (1983). "The Effects of Long-Term Vocabulary Instruction on Reading Comprehension: A Replication." *Journal of Reading Behavior* 15(1): 3–18.

Medo, M.A., and R.J. Ryder (1993). "The Effects of Vocabulary Instruction on Readers' Ability to Make Causal Connections.: *Reading Research and Instruction* 33(2):119–134.

Mezynski, K. (1983). "Issues Concerning the Acquisition of Knowledge: Effects of Vocabulary Training on Reading Comprehension." *Review of Educational Research* 53:253–279.

Miller, G.A. (1991). *The Science of Words*. New York: Scientific American Library.

Nagy, W.E., and P.A. Herman (1987). "Breadth and Depth of Vocabulary Knowledge: Implications for Acquisition and Instruction." In M.G. McKeown and M.E. Curtis, eds., *The Nature of Vocabulary Acquisition*:19–35. Hillsdale, NJ: Erlbaum.

Nagy, W.E., and J.A. Scott (2000). "Vocabulary Processes." In M.L. Kamil, P.B. Mosenthal, P.D. Pearson, and R. Barr, eds., *Handbook of Reading Research* vol. III:269–284. Mahwah, NJ: Erlbaum.

Nation, P., and J. Coady (1988). "Vocabulary and Reading." In R. Carter and M. McCarthy, eds., *Vocabulary and Language Teaching*:97–110. New York: Longman.

National Reading Panel (2000a). Teaching Children to Read: An Evidence-Based Assessment of the Scientific Research Literature on Reading and its Implications for Reading Instruction. Washington, DC: National Institute of Child Health and Human Development.

National Reading Panel (2000b). *Teaching Children to Read: Reports of the Subgroups*. Washington, DC: National Institute of Child Health and Human Development.

Nuthall, G., and A. Alton-Lee (1995). "Assessing Classroom Learning: How Students Use Their Knowledge and Experience to Answer Classroom Achievement Test Questions in Science and Social Studies." *American Educational Research Journal* 32(1):185–223.

Olshavsky, J.I. (1977). "Reading as Problem Solving." *Reading Research Quarterly* 7(4):654–674.

Omanson, R.C., I.L. Beck, M.G. McKeown, and C.A. Perfetti (1984). "Comprehension of Texts With Unfamiliar Versus Recently Taught Words: Assessment of Alternative Models." *Journal of Educational Psychology* 76(6):1253–1268.

Ryder, R.J., and M.F. Graves (1994). "Vocabulary Instruction Presented Prior to Reading in Two Basal Readers." *Elementary School Journal* 95(2): 139–153.

Simon, H.A., and L. Siklóssy (1972). "Use of Context in Determining Meaning." In H.A. Simon and L. Siklóssy, eds., *Representation and Meaning: Experiments With Information Processing Systems:* 207–209. Englewood Cliffs, NJ: Prentice-Hall.

Spearritt, D. (1972). "Identification of Subskills of Reading Comprehension by Maximum Likelihood Factor Analysis." *Reading Research Quarterly* 8:92–111.

Spearritt, D. (1977). "Measuring Reading Comprehension in the Upper Primary School." *Australian Journal of Reading* 3:67–75.

Stahl, S.A. (1983). "Differential Word Knowledge and Reading Comprehension." *Journal of Reading Behavior* 56(1):72–110.

Stahl, S.A. (1991). "Beyond the Instrumentalist Hypothesis: Some Relationships Between Word Meanings and Comprehension." In P.J. Schwanenflugel, ed., *The* P*sychology of Word Meanings:*157–186. Hillsdale, NJ: Erlbaum.

Stahl, S.A. (1999). *Vocabulary Development*. Cambridge, MA: Brookline Books.

Stahl, S.A., and M.M. Fairbanks (1986). "The Effects of Vocabulary Instruction: A Model-Based Meta-Analysis." *Review of Educational Research* 56(1):72–110.

Stahl, S.A., and M.G. Jacobson (1986). "Vocabulary Difficulty, Prior Knowledge, and Test Comprehension." *Journal of Reading Behavior* 18:309–329.

Stahl, S.A., M.G. Jacobson, C.E. Davis, and R.L. Davis (1989). "Prior Knowledge and Difficulty in the Comprehension of Unfamiliar Text." *Reading Research Quarterly* 24(1):27–43.

Sternberg, R.J., and J.S. Powell (1983). “Comprehending Verbal Comprehension.” *American Psychologist* 38:878–893.

Thorndike, E.L. (1917). “Reading as Reasoning: A Study of Mistakes in Paragraph Reading.” *The Journal of Educational Psychology* 8(6):323–332.

Thorndike, R.L. (1973). Reading Comprehension Education in Fifteen Countries: An Empirical Study. New York: John Wiley and Sons.

Thorndike, R.L. (1973–74). “Reading as Reasoning.” *Reading Research Quarterly* 9:135–147.

Thurstone, L.L. (1946). “Note on a Reanalysis of Davis’ Reading Tests.” *Psychometrika* 11(3):185–188.

Trabasso, T., and J. Magliano (1996). “How Do Children Understand What They Read and What Can We Do to Help Them?” In M. Graves, P. van den Broek, and B. Taylor, eds., *The First R: A Right of All Children:*160–188. New York: Teachers College Press.

Vygotsky, L. (1962). *Thought and Language*. Cambridge, MA: MIT Press.

White, S., and J. Clement (August 2001). *Assessing the Lexile Framework: Results of a Panel Meeting,* Working Paper No. 2001-08. Washington, DC: National Center for Education Statistics.

Wixson, K. (1986). Vocabulary Instruction and Children’s Comprehension of Basal Stories. *Reading Research Quarterly* 21(3):317–329.

APPENDIX A

GLOSSARY OF TERMS

This glossary provides brief definitions of terms used throughout the NAEP Reading Framework. The terms are defined according to their use in the framework. The list includes terms that relate to types of reading materials, text structures and features, techniques of author's craft, and other key terms.

Allegory: Story in which the characters, settings, and events stand for abstract moral concepts.

Alliteration: Repetition of initial consonant sounds.

Allusion: Reference to a mythological, literary, or historical person, place, or thing.

Analogy: Comparison of two things to show their likenesses in certain respects.

Argumentation: Writing that seeks to influence through appeals that direct readers to specific goals or try to win them to specific beliefs.

Audience: Writer's targeted reader or readers.

Author's craft: Specific techniques that an author chooses to relay an intended message.

Autobiography: Written account of the author's own life.

Ballad: Song or songlike poem that tells a story.

Biography: Account of a person's life written by another person.

Causation: Text structure that presents causal or cause and effect relationships between the ideas presented in the text.

Cognitive target: Mental process or kind of thinking that underlies reading comprehension; cumulatively, the cognitive targets will guide the development of items for the assessment.

Coherence: Continuity of meaning that enables others to make sense of a text.

Comic relief: Event or character that serves as an antidote to the seriousness of dramatic events.

Comparison: Text structure in which ideas are related to one another on the basis of similarities and differences. The text presents ideas organized to compare, to contrast, or to provide an alternative perspective.

Conflict: Struggle or clash between opposing characters, forces, or emotions.

Connotation: Implicit rather than explicit meaning of a word. It consists of the suggestions, associations, and emotional overtones attached to a word.

Description: Text structure that presents a topic, along with the attributes, specifics, or setting information that describe that topic.

Denotation: Exact, literal definition of a word independent of any emotional association or secondary meaning.

Detail: Fact revealed by the author or speaker that supports the attitude or tone in a piece of poetry or prose. In informational text, details provide information to support the author's main point.

Diction: Word choice intended to convey a certain effect.

Elegy: Poem that mourns the death of a person or laments something lost.

Epic: Long narrative poem that relates the great deeds of a hero who embodies the values of a particular society.

Exaggeration or hyperbole: Deliberate, extravagant, and often outrageous overstatement. It may be used for either serious or comic effect.

Exposition: One of the classifications of discourse whose function is to inform or to instruct or to present ideas and general truths objectively. Exposition presents information, provides explanations and definitions, and compares and contrasts.

Fable: Brief story that teaches a moral or practical lesson about life.

Fantasy: Story employing imaginary characters living in fictional settings where the rules of the real world are altered for effect.

Fiction: Imaginative literary works representing invented rather than actual persons, places, and events.

Figure of speech: Word or phrase that describes one thing in terms of something else, often involving an imaginative comparison between seemingly unlike things.

Flashback: Scene that interrupts the action of a work to show a previous event.

Fluency: Ability to read text quickly and accurately and comprehend what is read.

Foil: Character who sets off another character by strong contrast.

Folktale: Short story from the oral tradition that reflects the mores and beliefs of a particular culture.

Foreshadowing: Use of hints or clues in a narrative to suggest future action.

Free verse: Poetry that has no regular meter or rhyme scheme.

Genre: Category used to classify literary and other works by form, technique, or content.

Grammar: Coherent text structure on which readers rely as they seek to understand what they read; often referred to as *story grammar*.

Graphic: Pictorial representation of data or ideas using columns, matrices, or other formats. Graphics can be simple or complex, present information in a straightforward way as in a list or pie graph, or embed or *nest* information within the document's structure. Graphics may be included in texts or be stand-alone documents (grade 12 only).

Historical fiction: Story that re-creates a period or event in history and often uses historical figures as characters.

Iambic pentameter: Line of poetry made up of five metrical feet or units of measure, consisting of an unstressed syllable followed by a stressed syllable.

Imagery: Multiple words or a continuous phrase that a writer uses to represent persons, objects, actions, feelings, and ideas descriptively by appealing to the senses.

Inference: Act or process of deriving logical conclusions from premises known or assumed to be true; the conclusions drawn from this process.

Irony: Tension that arises from the discrepancy, either between what one says and what one means (verbal irony), between what a character believes and what a reader knows (dramatic irony), or between what occurs and what one expects to occur (situational irony).

Legend: Inscription or title on an object (e.g., a key to symbols used on a map).

Literary device: Literary technique used to achieve a particular effect.

Literary heritage: Works by authors whose writing influenced and continues to influence the public language, thinking, history, literary culture, and politics of this nation. These works comprise the literary and intellectual capital drawn on by later writers.

Literary nonfiction: Text that conveys factual information. The text may or may not employ a narrative structure and characteristics such as dialogue.

Lyrical poetry: Poems that focus on expressing emotions or thoughts.

Meaning vocabulary: Application of one's understanding of word meanings to passage comprehension.

Memoir: Type of autobiography that usually focuses on a single time period or historical event.

Metaphor: Comparison of two unlike things without the use of "like" or "as."

Mixed text: Text that employs literary techniques usually associated with narrative or poetry while also presenting information or factual material, with the dual purpose of informing and offering reading satisfaction; requires readers to discern bias from fact.

Monologue: Long, formal speech made by a character.

Mood: Atmosphere or predominant emotion in a literary work.

Motivation: Circumstance or set of circumstances that prompts a character to act a certain way or that determines the outcome of a situation or work.

Myth: Traditional story accepted as history, which serves to explain the worldview of a people.

Narration: Telling of a story in writing.

Narrative poetry: Poems that tell a story in verse, often focusing on a single incident.

Ode: Long lyric poem on a serious subject often for ceremonial or public occasions.

Onomatopoeia: Use of words that mimic the sounds they describe; imitative harmony.

Parody: Imitation of a work of literature, art, or music for amusement or instruction.

Parallel structure: Repetition of words, phrases, or sentences that have the same grammatical structure or that restate a similar idea.

Personification: Metaphor that gives inanimate objects or abstract ideas human characteristics.

Perspective: Position, stance, or viewpoint from which something is considered or evaluated.

Persuasion: Form of discourse whose function is to convince an audience or to prove or refute a point of view or an issue.

Plot: Sequence of events or actions in a short story, novel, or narrative poem.

Point of view: Perspective or vantage point from which a literary work is told or the way in which the author reveals characters, actions, and ideas.

Problem/solution: Text structure in which the main ideas are organized into two parts: a problem and a subsequent solution that responds to the problem, or a question and an answer that responds to the question.

Procedural text: Text that conveys information in the form of directions for accomplishing a task. A distinguishing characteristic of such text is that it is composed of discrete steps to be performed in a strict sequence with an implicit end product or goal.

Protagonist: Central character of a short story, novel, or narrative poem. The antagonist is the character who stands directly opposed to the protagonist.

Purpose: Specific reason or reasons for the writing. It conveys what the readers have to gain by reading the selection. Purpose is the objective or the goal that the writer wishes to establish.

Repetition: Deliberate use of any element of language more than once: sound, word, phrase, sentence, grammatical pattern, or rhythmical pattern.

Rhetoric: Art of using words to persuade in writing or speaking.

Rhetorical device: Technique used by writers to persuade an audience.

Rhyme: Repetition of sounds in two or more words or phrases that appear close to each other in a poem. *End rhyme* occurs at the end of lines; *internal rhyme*, within a line. *Slant rhyme* is approximate rhyme. A *rhyme scheme* is the pattern of end rhymes.

Rhythm: Regular recurrence and speed of sound and stresses in a poem or work of prose.

Sarcasm: Use of verbal irony in which a person appears to be praising something but is actually insulting it.

Satire: Prose in which witty language is used to convey insults or scorn.

Sequence: Text structure in which ideas are grouped on the basis of order or time.

Setting: Time and place in which events in a short story, novel, or narrative poem take place.

Simile: Comparison of two different things or ideas through the use of the words "like" or "as."

Sonnet: Fourteen-line lyric poem, usually written in iambic pentameter.

Stanza: Division of a poem, composed of two or more lines.

Style: Writer's characteristic manner of employing language.

Symbol: Object, person, place, or action that has both a meaning in itself and that stands for something larger than itself, such as a quality, attitude, belief, or value.

Syntax: Arrangement of words and order of grammatical elements in a sentence.

Tall tale: Improbable, incredible, or fanciful story.

Theme: Central meaning of a literary work. A literary work can have more than one theme. Most themes are not directly stated but rather are implied. A literary theme is not the same as a topic.

Tone: Writer's or speaker's attitude toward a subject, character, or audience conveyed through the author's choice of words and detail. Tone can be serious, humorous, sarcastic, objective, etc.

Trait: Distinguishing feature, as of a person's character.

Understatement: Kind of irony that deliberately represents something as being much less than it really is; the opposite of hyperbole or overstatement.

Voice: Distinctive style or manner of expression of an author or of a character.

APPENDIX B

NAEP READING ACHIEVEMENT LEVEL DEFINITIONS

The National Assessment of Educational Progress (NAEP) reading achievement level descriptions present expectations of student performance in relation to a range of text types and text difficulty and in response to a variety of assessment questions intended to elicit different cognitive processes and reading behaviors. The specific processes and reading behaviors mentioned in the achievement level descriptions are illustrative of those judged as central to students' successful comprehension of texts. These processes and reading behaviors involve different and increasing cognitive demands from one grade and performance level to the next as they are applied within more challenging contexts and with more complex information. Although similar reading behaviors are included at the different performance levels and grades, it should be understood that these skills are being described in relation to texts and assessment questions of varying difficulty. Bold text is a short, general summary to describe performance at each achievement level.

NAEP READING ACHIEVEMENT LEVELS—GRADE 4

Basic (208)

Fourth-grade students performing at the *Basic* level should be able to locate relevant information, make simple inferences, and use their understanding of the text to identify details that support a given interpretation or conclusion. Students should be able to interpret the meaning of a word as it is used in the text.

When reading **literary** texts such as fiction, poetry, and literary nonfiction, fourth-grade students performing at the *Basic* level should be able to make simple inferences about characters, events, plot, and setting. They should be able to identify a problem in a story and relevant information that supports an interpretation of a text.

When reading **informational** texts such as articles and excerpts from books, fourth-grade students performing at the *Basic* level should be able to identify the main purpose and an explicitly stated main idea, as well as gather information from various parts of a text to provide supporting information.

Proficient (238)

Fourth-grade students performing at the *Proficient* level should be able to integrate and interpret texts and apply their understanding of the text to draw conclusions and make evaluations.

When reading **literary** texts such as fiction, poetry, and literary nonfiction, fourth-grade students performing at the *Proficient* level should be able to identify implicit main ideas and recognize relevant information that supports them. Students should be able to judge elements of author's craft and provide some support for their judgment. They should be able to analyze character roles, actions, feelings, and motives.

When reading **informational** texts such as articles and excerpts from books, fourth-grade students performing at the *Proficient* level should be able to locate relevant information, integrate information across texts, and evaluate the way an author presents information. Student performance at this level should demonstrate an understanding of the purpose for text features and an ability to integrate information from headings, text boxes, graphics and their captions. They should be able to explain a simple cause-and-effect relationship and draw conclusions.

Advanced (268)

Fourth-grade students performing at the *Advanced* level should be able to make complex inferences and construct and support their inferential understanding of the text. Students should be able to apply their understanding of a text to make and support a judgment.

When reading **literary** texts such as fiction, poetry, and literary nonfiction, fourth-grade students performing at the *Advanced* level should be able to identify the theme in stories and poems and make complex inferences about characters' traits, feelings, motivations, and actions. They should be able to recognize characters' perspectives and evaluate character motivation. Students should be able to interpret characteristics of poems and evaluate aspects of text organization.

When reading **informational** texts such as articles and excerpts from books, fourth-grade students performing at the *Advanced* level should be able to make complex inferences about main ideas and supporting ideas. They should be able to express a judgment about the text and about text features and support the judgment with evidence. They should be able to identify the most likely cause given an effect, explain an author's point of view, and compare ideas across two texts.

NAEP READING ACHIEVEMENT LEVELS—GRADE 8

Basic (243)

Eighth-grade students performing at the *Basic* level should be able to locate information; identify statements of main idea, theme, or author's purpose; and make simple inferences from texts. They should be able to interpret the meaning of a word as it is used in the text. Students performing at this level should also be able to state judgments and give some support about content and presentation of content.

When reading **literary** texts such as fiction, poetry, and literary nonfiction, eighth-grade students performing at the *Basic* level should recognize major themes and be able to identify, describe, and make simple inferences about setting and about character motivations, traits, and experiences. They should be able to state and provide some support for judgments about the way an author presents content and about character motivation.

When reading **informational** texts such as exposition and argumentation, eighth-grade students performing at the *Basic* level should be able to recognize inferences based on main ideas and supporting details. They should be

able to locate and provide relevant facts to construct general statements about information from the text. Students should be able to provide some support for judgments about the way information is presented.

Proficient (281)

Eighth-grade students performing at the *Proficient* level should be able to provide relevant information and summarize main ideas and themes. They should be able to make and support inferences about a text, connect parts of a text, and analyze text features. Students performing at this level should also be able to fully substantiate judgments about content and presentation of content.

When reading **literary** texts such as fiction, poetry, and literary nonfiction, eighth-grade students performing at the *Proficient* level should be able to make and support a connection between characters from two parts of a text. They should be able to recognize character actions and infer and support character feelings. Students performing at this level should be able to provide and support judgments about character motivation across texts. They should be able to identify how figurative language is used.

When reading **informational** texts such as exposition and argumentation, eighth-grade students performing at the *Proficient* level should be able to locate and provide facts and relevant information that support a main idea or purpose, interpret causal relations, provide and support a judgment about the author's argument or stance, and recognize rhetorical devices.

Advanced (323)

Eighth-grade students performing at the *Advanced* level should be able to make connections within and across texts and to explain causal relations. They should be able to evaluate and justify the strength of supporting evidence and the quality of an author's presentation. Students performing at the advanced level also should be able to manage the processing demands of analysis and evaluation by stating, explaining, and justifying.

When reading **literary** texts such as fiction, literary nonfiction, and poetry, eighth-grade students performing at the *Advanced* level should be able to explain the effects of narrative events. Within or across text, they should be able to make thematic connections and make inferences about character feelings, motivations, and experiences.

When reading **informational** texts such as exposition and argumentation, eighth-grade students performing at the *Advanced* level should be able to infer and explain a variety of connections that are intratextual (such as the relation between specific information and the main idea) or intertextual (such as the relation of ideas across expository and argument text). Within and across texts, students should be able to state and justify judgments about text features, choice of content, and the author's use of evidence and rhetorical devices.

Basic (265)

Twelfth-grade students performing at the *Basic* level should be able to identify elements of meaning and form and relate them to the overall meaning of the text. They should be able to make inferences, develop interpretations, make connections between texts, and draw conclusions; and they should be able to provide some support for each. They should be able to interpret the meaning of a word as it is used in the text.

When reading **literary** texts such as fiction, literary nonfiction, and poetry, 12th-grade students performing at the *Basic* level should be able to describe essential literary elements such as character, narration, setting, and theme; provide examples to illustrate how an author uses a story element for a specific effect; and provide interpretations of figurative language.

When reading **informational** texts such as exposition, argumentation, and documents, 12th-grade students performing at the *Basic* level should be able to identify the organization of a text, make connections between ideas in two different texts, locate relevant information in a document, and provide some explanation for why the information is included.

Proficient (302)

Twelfth-grade students performing at the *Proficienct* level should be able to locate and integrate information using sophisticated analyses of the meaning and form of the text. These students should be able to provide specific text support for inferences, interpretative statements, and comparisons within and across texts.

When reading **literary** texts such as fiction, literary nonfiction, and poetry, 12th-grade students performing at the *Proficient* level should be able to explain a theme and integrate information from across a text to describe or explain character motivations, actions, thoughts, or feelings. They should be able to provide a description of settings, events, or character and connect the description to the larger theme of a text. Students performing at this level should be able to make and compare generalizations about different characters' perspectives within and across texts.

When reading **informational** texts including exposition, argumentation, and documents, 12th-grade students performing at the *Proficient* level should be able to integrate and interpret texts to provide main ideas with general support from the text. They should be able to evaluate texts by forming judgments about an author's perspective, about the relative strength of claims, and about the effectiveness of organizational elements or structures. Students performing at this level should be able to understand an author's intent and evaluate the effectiveness of arguments within and across texts. They should also be able to comprehend detailed documents to locate relevant information needed for specified purposes.

Advanced (346)

Twelth-grade students performing at the *Advanced* level should be able to analyze both the meaning and the form of the text and provide complete, explicit, and precise text support for their analyses with specific examples. They should be able to read across multiple texts for a variety of purposes, analyzing and evaluating them individually and as a set.

When reading **literary** texts such as fiction, poetry, and literary nonfiction, 12th-grade students performing at the *Advanced* level should be able to analyze and evaluate how an author uses literary devices, such as sarcasm or irony, to enhance and convey meaning. They should be able to determine themes and explain thematic connections across texts.

When reading **informational** texts, 12th-grade students performing at the *Advanced* level should be able to recognize, use, and evaluate expository and argument text structures and the organization of documents. They should be able to critique and evaluate arguments and counterarguments within and between texts, and substantiate analyses with full and precise evidence from the text. They should be able to identify and integrate essential information within and across documents.

APPENDIX C

SPECIAL STUDIES: NAEP READING FRAMEWORK

Three special studies were proposed as part of the development of the 2009 NAEP Reading Framework. Although very different in topic, they have the common goals of improving the quality of the NAEP assessment and gaining maximum information about student achievement in reading. One of the special studies (meaning vocabulary) can inform test development by providing information about new item types. Other studies propose using data gained from the assessment to examine English learners' reading achievement as well as factors that have an impact on the gender gap in reading. Further details about the special studies, including methodology, appear in the 2009 specifications document. The special studies are presented here in priority order from highest to lowest.

DEVELOPMENTAL STUDY: MEANING VOCABULARY ASSESSMENT

PURPOSE

Looking toward the addition of meaning vocabulary items to the NAEP Reading Assessment, this developmental study will evaluate the reliability and the construct, content, criterion, and concurrent validity of the proposed method of measuring meaning vocabulary. The study was conducted in advance of the 2009 administration of the NAEP Reading Assessment to inform the development and use of meaning vocabulary items on NAEP.

RATIONALE

Although NAEP has included a few vocabulary test items in the context of passages on past assessments, the number of items was scant and there were no specific vocabulary criteria for selecting the items or distractors. Furthermore, past reports from NAEP provided little information on how students performed on the vocabulary items and whether that performance was associated with comprehension achievement levels; thus, these reports did not provide a foundation for emphasizing the importance of vocabulary to reading comprehension. The importance of vocabulary in reading comprehension, as supported by research, will be much more widely understood and disseminated with NAEP's initiative specifying vocabulary as a major component of reading comprehension; NAEP reports providing quantitative data about the performance of 4th, 8th, and 12th grade students on meaning vocabulary questions and the developmental differences among grades; and NAEP reports describing the differences among *Advanced*, *Proficient*, *Basic*, and below *Basic* readers on vocabulary and the implications of these differences.

Recognizing a growing body of research that supports the argument that vocabulary is crucial to reading comprehension, the NAEP Reading Assessment includes a measure of vocabulary. All vocabulary items are to function both as a measure of comprehension of the passage in which the word is included and as a test of readers' specific knowledge of the word's meaning as intended by the author. NAEP will include a sufficient number of items to provide reliable and valid data for analysis and interpretation. A description of the criteria for word selection and number of items appears in chapter two of the NAEP Reading Framework and will be elaborated in the specifications document.

RESEARCH QUESTIONS

What is the correlation between reading comprehension and meaning vocabulary items, and how does the addition of meaning vocabulary items affect overall scores on the NAEP Reading Assessment?

How does the introduction of meaning vocabulary items affect the scores of ethnically, socioeconomically, and geographically varying groups and low-, average-, and high-performing readers?

What is the correlation between scores on the meaning vocabulary items and a vocabulary test such as the Peabody Picture Vocabulary Test, 3rd Edition (PPVT-III)? Answers to this question will address the concurrent validity of NAEP's vocabulary measure.

SPECIAL STUDY: ENGLISH LANGUAGE LEARNERS

PURPOSE

This special study will examine the patterns of achievement among English language learner (ELL) students and the link between NAEP scores and other indicators of students' ability and achievement, as well as the effects of the accommodations afforded students in these groups.

RATIONALE

In today's schools, the number of ELL students is on the rise. This population trend has implications for reading instruction and assessment as educators seek better ways to teach and evaluate. Clearly, they need more information about language and its relationship to reading comprehension and meaning vocabulary, a link indicated by past studies.

Although past NAEP reports have provided scores by ethnicity, they have not provided information about the link between language minority students and reading ability. This special study seeks to examine this link, informing the discussion of how to develop a

dynamic assessment (adaptive testing) that more accurately maps the achievement of U.S. students.[2]

RESEARCH QUESTIONS

What miscues occur most frequently among different ELL groups, and are these miscues consistent with different groups of English learners' speech?

Are tests of English language proficiency predictive of NAEP comprehension and vocabulary scores?

What are the differential effects of English proficiency level on NAEP reading and vocabulary?

How are reclassified fluent English proficient students (RFEP) achieving in comparison to other groups in reading comprehension and vocabulary, and how do they progress after one, two, or three years of reclassification?

At what minimum level of English proficiency is a student able to take a NAEP Reading Assessment written in English?

Do accommodations given to ELL students give access to or change the construct of the test?

This study was not conducted because of lack of funding.

SPECIAL STUDY: GENDER DIFFERENCES

PURPOSE

This special study examines the differences in reading achievement between boys and girls, focusing on factors associated with the gender gap in reading.

RATIONALE

The gender gap—a significant difference between the performance or achievement of boys versus girls—exists in a number of education-related settings and situations. Girls generally have higher secondary school graduation rates, college admission rates, and enrollment in Advanced Placement courses in the humanities, whereas boys have a higher incidence of diagnosed reading disorders. Although boys generally have higher math-

[7]The ELL special study may be informed by the results of the National Literacy Panel's study on language minority children and youth. The NLP conducted a comprehensive review of research on the development of literacy among language minority children and youth that was completed in 2004.

ematics and science achievement, the gender gap in the language arts favors girls. Results from the 2002 NAEP Reading Assessment indicate the following:

- The score gap between male and female grade 4 students in 2002 was smaller than in 2000, but it was not found to be significantly different from that in 1992.
- The score gap between boys and girls at grade 8 was smaller in 2002 than in all prior assessment years.
- The score gap between grade 12 boys and girls in 2002 was greater than it was in 1992.
- Girls outperformed boys at all three grades in 2002.

As educators continue to grapple with the gender gap's implications for instruction and assessment, this special study will examine variables in NAEP's assessment design and their relationship to the gender gap in reading. This study will look specifically at the NAEP assessment design and at achievement data gathered from the 2009 administration.

RESEARCH QUESTIONS

How are question response modes (e.g., multiple choice, constructed response) related to reading achievement?

How are the types of texts (e.g., narrative, information, poetry) related to reading achievement?

How is the content of the selection (e.g., gender of main character, different themes, presence of moral) related to reading achievement?

This study was not conducted because of lack of funding.