



Minnesota Graduation-Required Assessments for Diploma (GRAD)

Test Specifications for Reading

August 16, 2010

MINNESOTA DEPARTMENT OF EDUCATION

GRAD Test Specifications for Reading

For a copy in an alternate format, contact

Division of Research and Assessment 1500 Highway 36 West Roseville, MN 55113-4266 651-582-8200 mde.testing@state.mn.us

© Minnesota Department of Education 1500 Highway 36 West Roseville, MN 55113-4266 Phone 651-582-8200 • Fax 651-582-8874

> Last Revised August 16, 2010

Table of Contents

THE GRADUATION-REQUIRED ASSESSMENTS FOR DIPLOMA	1
Introduction	1
PURPOSE OF THE GRADUATION-REQUIRED ASSESSMENTS FOR DIPLOMA	
PURPOSE OF THE TEST SPECIFICATIONS	
ADMINISTRATION OF THE GRADUATION-REQUIRED ASSESSMENTS FOR DIPLOMA	
READING GRAD	5
OVERALL CONSIDERATIONS IN READING	5
Degree of Reading Power	7
DRP Ranges for Passages	7
Passages on GRAD	7
READING TEST DESIGN	8
Reading Item Percentages by Strand and Substrand	8
Reading Item Distribution	9
A GUIDE TO THE READING TABLES FOR THE GRAD	10
ITEM SPECIFICATIONS	

This page is intentionally blank.

THE GRADUATION-REQUIRED ASSESSMENTS FOR DIPLOMA

Introduction

The 1997 legislature enacted Minnesota Statute § 121.113 (1997), Statewide Testing and Reporting System, which established annual testing of all students in grades eight (reading and mathematics) and ten (written composition). This legislation established the Basic Skills Tests, which all students were required to pass in order to graduate from a Minnesota public high school.

The Minnesota legislature later enacted the Omnibus K–12 and Early Childhood Act of 2005 that replaced the Basic Skills Tests given in high school. This statute requires students enrolled in grade 8 before the 2005–2006 school year to pass the Basic Skills Tests. The statute requires that students enrolled in grade 8 in the 2005–2006 school year or later must obtain an achievement level equivalent to or greater than proficient on the Minnesota Comprehensive Assessments-Series II (MCA-II) in reading and math or pass the Graduation-Required Assessments for Diploma (GRAD) in reading and math. Students enrolled in grade 8 in the 2005–2006 school year or later must pass the GRAD in writing.

In the 2007 legislative session, the statute was revised to include options for retest opportunities as well as students taking other assessments to meet the graduation-testing requirement.

In the 2009 legislative session, the statute changed the mathematics requirements for students in the classes of 2010–2014. Students in these five classes are not required to obtain a proficient score on the Mathematics MCA-II or required to pass the Mathematics GRAD in order to be eligible to graduate from high school. Students must complete all coursework and credits required for graduation, participate in district-prescribed academic remediation in mathematics and participate in at least two retests of the Mathematics GRAD or pass the Mathematics GRAD, whichever comes first.¹

1

¹ Information contained within this document is reflective of the current GRAD legislation as of the date of this document's publication.

Purpose of the Graduation-Required Assessments for Diploma

The GRAD measure the writing, reading and mathematics proficiency of high school students. By requiring high school graduates to reach a specified level on each of these assessments, Minnesota is making sure its students are on track to have the essential skills and knowledge necessary for graduation in the 21st century.

Purpose of the Test Specifications

All tests, from off-the-shelf, norm-referenced tests (NRT) to customized, standards-based tests like those given in Minnesota, have test specifications. The primary purpose of a set of test specifications is to help test developers build a test that stays consistent over time. Test specifications indicate which strands, substrands, standards and benchmarks will be assessed on the test and in what proportions. In addition, test specifications provide the number of items and the type of items to be included. Test specifications also clarify, define and/or limit how test items will be written to any given strand, substrand, standard or benchmark.

Test specifications do not indicate **what** should be taught: the Academic Standards do. Test specifications do not indicate **how** children should be taught: the classroom teacher does.

The test specifications presented in this document were developed over the course of many days by Minnesota teachers, many of whom were recommended by various education organizations, school districts, and other stakeholder groups. The substantive parts of this document are true to their hard work. The Department thanks these people for their effort and continued involvement.

The <u>Minnesota Academic Standards</u> can be obtained from the Department of Education Website (http://education.state.mn.us. > Academic Excellence > Academic Standards).

Administration of the Graduation-Required Assessments for Diploma

The first administration of the Reading GRAD is embedded within the MCA-II Grade 10 Reading assessment. If a student does not obtain an achievement level equivalent to or greater than proficient on the MCA-II in Reading or a passing score on the GRAD, then the student is eligible to retake the GRAD.

The benchmarks included on the Reading GRAD originate from the 2003 Minnesota K–12 Academic Standards in Language Arts. A committee of Minnesota teachers identified the essential skills and knowledge, based on the Minnesota K–12 Academic Standards, necessary for

graduation in the 21st century. Some of the benchmarks the teachers identified appear on both the GRAD and the MCA-II Grade 10 Reading assessment and are labeled "Common." Additional benchmarks were identified from the Minnesota K–12 Academic Standards in Language Arts and are administered only on the GRAD and are labeled "GRAD."

GRAD Administrations

COMMON COMPONENT 25 ITEMS	GRAD-ONLY COMPONENT 15 ITEMS	TOTAL TEST = 40 ITEMS
I.B.2 Vocabulary I.C.3 Comprehension I.C.5 Comprehension I.C.7 Comprehension I.C.8 Comprehension I.D.4 Literature I.D.14 Literature	I.B.G6 Vocabulary I.C.G11 Comprehension I.C.G12 Comprehension	

This page is intentionally blank.

READING GRAD

Overall Considerations in Reading

As stated in the **Purpose of the Test Specifications**, the test specifications indicate which strands, substrands, standards and/or benchmarks will be assessed. The following points specifically address the reading test specifications of the GRAD.

Overall considerations are issues that should be addressed during the development of test items. Each of these issues should be considered for all of the items developed for the GRAD in reading.

Passage Selection:

- The reading levels of the passages should range from those appropriate for the beginning
 of the grade to those appropriate for the end of the grade. See the chart on page 7 that
 delineates the Degree of Reading Power (DRP) levels and the number of passages per
 level.
- 2. Passage length should vary, but the number of words per test should not exceed the guidelines specified on the table on page 7.
- 3. After reading passages are initially selected, they are reviewed for content characteristics, potential bias and any other issues of concern. Concerns expressed during the reviews must be resolved satisfactorily before item development begins.
 - a. Review for Content: Minnesota educators with experience and expertise in language arts and reading instruction at the proper grade levels review the appropriateness of the proposed reading passages for use on the GRAD. Each content criterion is considered during the review.
 - b. Review for Potential Bias: Minnesota educators and citizens who are representative of Minnesota's regions and cultures also review reading passages. Passages are reviewed for the following kinds of bias: gender, racial/ethnic, linguistic, religious, geographic, socioeconomic and issues related to individuals with disabilities.

Item Writing and Selection:

- Each item should be written to measure primarily one benchmark; however, other
 benchmarks may also be reflected in the item content. When an item measures more than
 one benchmark, the individual item specification indicates which benchmarks are
 combined.
- 2. Items should range in difficulty from easy to challenging.
- 3. Items should not disadvantage or disrespect the age, gender, race, ethnicity, language, religion, socioeconomic status, disability or geographic region of any segment of the student population.
- 4. Each item should be written clearly and unambiguously to elicit the desired response.
- 5. Items will not ask students to define specific terms related to reading and literature. For example, students will not be asked to identify a *synonym* in an item; however, items may ask students to identify a word that *means the same* as another word in the passage provided. Items may use a specific literary term without defining it as long as that literary term is identified in the benchmark.
- 6. Items must use the context of the passage when assessing high school level vocabulary words. Items should not require students to define the meaning of a word solely on the basis of prefix, suffix or root word.
- 7. It is at times desirable to include graphics such as maps, charts and graphs with passages. Text included within the graphic must have the same font as the passage. All graphics must be basic black on white, not use shading and help the students understand the passage text related to the items. No item will be based solely on a graphic or visual image within a text.
- 8. Items reviewed for content characteristics, potential bias and other issues that may be of concern. Minnesota educators with experience and expertise in language arts and reading instruction at the appropriate grade levels review the items for each passage in terms of content (item difficulty) and bias (gender, racial/ethnic, linguistic, religious, geographic, socioeconomic and issues related to individuals with disabilities).
- 9. After field-testing, Minnesota educators with appropriate experience and expertise review the test data for each item that has been field-tested. Each item will be reviewed in terms of its bias and psychometric data.

Degree of Reading Power

The Minnesota Department of Education uses the Degree of Reading Power (DRP) readability formula developed by John R. Bormuth to establish the readability levels of the texts used in the GRAD². Using correlation and regression methods, Bormuth explored over 100 structural variables related to comprehension difficulty before settling on his formula³.

The Bormuth formula has a relatively low standard error of measurement. The validity of the Bormuth formula is higher than that of other readability formulas. In theory, the DRP scale ranges from zero to 100. In practice, commonly encountered English text composed of lengthy passages runs from about 30 DRP units (primer level) to about 85 DRP units (advanced professional level).

DRP Ranges for Passages

This table provides the readability range (DRP), the number of passages for each range in the GRAD.

Number of Passages	DRP Ranges
1–5	52–69
0–2	62–69

Passages on GRAD

The table below lists the target word count and genre of passages that will be used on the GRAD test. The majority of passages on any given GRAD test will be expository.

	Target Word	Passages on the GRAD		
	Count	Total	Narrative	Expository
Common	2600–4200	3–7	0–2	3–5
GRAD Only	0-1600	0–2		0–2
TOTAL TEST	2800–4200	3–7	0–2	3–7

² Bormuth, J. 1966. Readability: A new approach. *Reading Research Quarterly* 1, no. 3: 79–132.

 $^{^{3}}$ Readability (R) = .886593 -.083640 (LET/W) +.161911 (DLL/W)3 - .021401 (W/SEN)+.00577 (W/SEN) 2 -.000005 (W/SEN) 3 where LET= letter, W= words, DLL = Dale Long List, and SEN = sentences in the passage.

Reading Test Design

Reading Item Percentages by Strand and Substrand

This table provides an overview of percentage by item of the strand (Roman numeral) and substrands (letters) assessed in reading.

40 Items

	Strand I: Reading and Literature		
	Substrand B: Vocabulary Expansion	Substrand C: Comprehension	Substrand D: Literature
Common Items	24–32%	36–64%	12–40%
GRAD Only	13–27%	73–87%	
Total Test	20–25%	50–70%	7–25%

Below are examples of types of passages that may be used on the GRAD.

Advertisements

Biographies and autobiographies

Consumer materials

Diaries

Editorials

Excerpts

Expository articles

Fables and folktales

Historical fiction

How-to articles

Informational essays

Literary essays (e.g., critiques, personal narratives)

Magazine and newspaper articles

Plays

Primary sources (e.g., Bill of Rights)

Short stories

Subject/Content area text

Tables and graphical presentations of text

(e.g., illustrations, photographs, and captions)

Reading Item Distribution

This table provides the total number of items and points for each substrand. All items on the GRAD are multiple-choice questions.

GRAD

		Items			
	Vocabulary	Comprehension	Literature		
	MC	MC	MC	TOTAL ITEMS	TOTAL POINTS
Common	6–8	9–16	3–10	25 MC	25 PTS
GRAD Only	2–4	11–13		15 MC	15 PTS
TOTAL TEST	8–10	20–28	3–10	40 MC	40 PTS

MC: multiple-choice questions

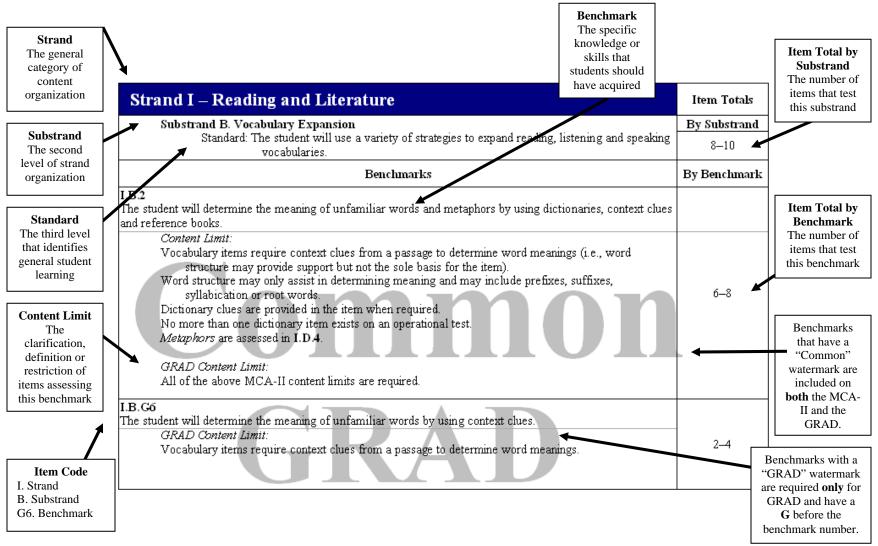
PTS: points assigned

Vocabulary items may come from either narrative or expository passages.

Reading GRAD

A Guide to the Reading Tables for the GRAD

The Test Specifications of the GRAD provide information about the benchmarks assessed on the GRAD and the skills and knowledge that students must demonstrate on that assessment. The diagram below explains the format of the Reading Test Specifications in the GRAD.



Reading GRAD

An Explanation of Terms on the Reading GRAD Tables

Strand: This is the most general categorization of content in the Minnesota Academic Standards. Only one language arts strand is assessed on the GRAD: Reading and Literature.

Substrand: This is a subcategory of a strand in the Minnesota Academic Standards. Reading has three substrands in the Reading and Literature strand (Vocabulary Expansion, Comprehension and Literature).

Standard: This statement explains the general goal of student learning within each substrand. One standard exists in each substrand.

Benchmark: Each standard is divided into several benchmarks. The benchmark identifies the specific knowledge or skills that students should have acquired.

Item Code: Test developers use this code to identify the strand, substrand and benchmark to which a test item is aligned. Benchmarks that are GRAD only have a **G** before the benchmark number.

Content Limit: These statements provide more specific clarifications, definitions or restrictions for the benchmark as it is assessed on the GRAD. Benchmarks that are included on the MCA-II as well have *GRAD Content Limit* listed below the MCA-II *Content Limit*.

Item Totals

By Substrand: This number is the total number of items measuring the substrand for the indicated standard that could be on the GRAD.

By Benchmark: The number of items on the operational GRAD is listed next to each benchmark.

Item Specifications

Strand I—Reading and Literature	Item Totals
Substrand B. Vocabulary Expansion	By Substrand
Standard: The student will use a variety of strategies to expand reading, listening and speaking vocabularies.	8–10
Benchmarks	By Benchmark
The student will determine the meaning of unfamiliar words and metaphors by using dictionaries, context clues and reference books. **Content Limit:** Vocabulary items require context clues from a passage to determine word meanings (i.e., word structure may provide support but not the sole basis for the item). Word structure may only assist in determining meaning and may include prefixes, suffixes, syllabication or root words. Dictionary clues are provided in the item when required. No more than one dictionary item exists on an operational test. **Metaphors** are assessed in I.D.4.** **GRAD Content Limit:** All of the above MCA-II content limits are required.**	6–8
I.B.G6 The student will determine the meaning of unfamiliar words by using context clues. GRAD Content Limit: Vocabulary items require context clues from a passage to determine word meanings.	2–4

Strand I—Reading and Literature	Item Totals
Substrand C. Comprehension	By Substrand
Standard: The student will understand the meaning of informational, expository or persuasive texts, using a variety of strategies and will demonstrate literal, interpretive, inferential and evaluative comprehension.	20–28
Benchmarks	By Benchmark
Analyze and draw accurate conclusions about information contained in warranties, contracts, job descriptions, technical descriptions and other information sources, selected from labels, warning manuals, directions, applications and forms in order to complete specific tasks. **Content Limit:** Items will require analysis and/or subsequent conclusions solely from the text given. Items refer only to technical sources provided. **GRAD Content Limit:** Items will require analysis and/or subsequent conclusions solely from the text given. Items refer only to technical sources provided.	0–3
I.C.5 Students will summarize and paraphrase main idea and supporting details. Content Limit: Items will require a summary or paraphrase solely from the text given. Items will require the identification of the explicit or inferred main idea and/or its relevant details solely from the text given. Items that require the student to produce a summary or paraphrase are CR. GRAD Content Limit: Items will require a summary or paraphrase solely from the text given. Items will require the identification of the explicit or inferred main idea and/or its relevant details solely from the text given.	2–8

I.C.7 Students will make inferences and draw conclusions based on explicit and implied information from texts. **Content Limit:** Items will require inferences and/or subsequent conclusions solely from the text given. Comparison/contrast items may also be assessed under this benchmark. Comparison and contrast may assess these skills within a single passage as well as between paired passages. Items require comparison and/or contrast from no more than two sources on the same theme or topic. **GRAD Content Limit:** Items will require inferences and/or subsequent conclusions solely from the text given. Comparison/contrast items may also be assessed under this benchmark. Comparison and contrast may assess these skills within a single passage as well as between paired passages. Items require comparison and/or contrast from no more than two sources on the same theme or topic.	4–12
I.C.8 Students will evaluate clarity and accuracy of information, as well as the credibility of sources. Content Limit: Items do not require verification of accuracy outside the text given. Clarity of information is defined as the text's consistency (i.e., information provided in the text is not contradicted elsewhere in the text). Credibility of sources may require the evaluation of the relative trustworthiness of publications (e.g., national newspaper vs. tabloid) or people (e.g., expert vs. novice). GRAD Content Limit: Items do not require verification of accuracy outside the text given. Clarity of information is defined as the text's consistency (i.e., information provided in the text is not contradicted elsewhere in the text). Credibility of sources may require the evaluation of the relative trustworthiness of publications (e.g., national newspaper vs. tabloid) or people (e.g., expert vs. novice).	1–6

I.C.G11 The student will summarize and paraphrase expository or informational text by identifying main ideas, themes, details or procedures of the text. GRAD Content Limit: Items will require a summary or paraphrase solely from the text given. Items will require the identification of the explicit or inferred main idea and/or its relevant details solely from the text given.	4–7
I.C.G12 The student will make reasonable inferences and conclusions about the text, supporting them with accurate and implied information from texts. GRAD Content Limit: Items will require inferences and/or subsequent conclusions solely from the text given. Comparison/contrast items may also be assessed under this benchmark. Comparison and contrast may assess these skills within a single passage as well as between paired passages. Items require comparison and/or contrast from no more than two sources on the same theme or topic.	4–7

Strand I—Reading and Literature	Item Totals
	By Substrand
Substrand D. Literature Standard: The student will actively engage in the reading process and read, understand, respond to, analyze, interpret, evaluate and appreciate a wide variety of fiction, poetic and nonfiction texts.	3–10
Benchmarks	By Benchmark
I.D.4	
Students will evaluate the impact of an author's decisions regarding word choice, point of view, style and literary elements. The student will identify and analyze analogies. (I.B.3)	
Content Limit: Items will assess understanding of figurative language or literary devices.	
An item may require the identification and/or the analysis of word choice, point of view, style and literary elements. Success on the item cannot be dependent on knowing the definition of literary devices. Items do not require the use of definitions for specific literary elements in the response. Point of view is limited to third-person (limited and/or omniscient) and first-person. Items will not require knowledge of the terms limited and omniscient. Items assessing analogies will use the concept of comparison. Formal analogy structures will not be assessed (e.g., "Happy: Smile:: Sad: Frown).	1–3
GRAD Content Limit:	
Items will evaluate the impact of an author's decisions regarding word choice.	
I.D.14 Students will respond to literature using ideas and details from the text to support reactions and make literary connections.	
Content Limit: Items that require a response to support reactions are restricted to ideas and details obtained solely from the text given. Items requiring literary connections are limited to the passage(s) provided. GRAD Content Limit:	2–7
All of the above MCA-II content limits are required	