





Connecticut LAS Links® Second Edition, Forms C and D Technical Manual





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Connecticut LAS Links Technical Manual

English Version, Forms C/D

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INTRODUCTION

Data Recognition Corporation provides high quality language proficiency assessments for K–12 students in order to meet the needs of educators and students as well as to address local, state and federal requirements. The current LAS Links Second Edition (hereafter LAS Links 2^{nd} Edition) is designed to measure students' language proficiency with an enhanced emphasis on situated language use in school settings. The 2^{nd} Edition offers test forms in both English (Forms C and D) and Spanish (Español Form B). The LAS Links summative tests have a reasonable administration time of approximately two hours for all four modalities—Speaking, Listening, Reading, and Writing. The tests offer a common scale across five grade-span levels (K–1, 2–3, 4–5, 6–8, and 9–12).

Forms C and D are intended to measure students' English language proficiency in Grades K–12 school settings. LAS Links Forms C and D assess knowledge and use of the English language in four domains: Listening, Speaking, Reading, and Writing, with attention to correspondence with the content achievement goals of the Common Core State Standards (CCSS; National Governors Association Center for Best Practices [NGA Center] & Council of Chief State School Officers [CCSSO], 2010). The tests also provide composite scores including Overall, Oral, Comprehension, Literacy, and Productive. More information about the domain-level and composite scores can be found in Chapter 6.2 of this technical manual.

As with LAS Links 1st Edition, LAS Links 2nd Edition provides many benefits to states, school districts, and local educational agencies (LEAs). Score results from LAS Links Forms C and D may serve as a diagnostic instrument to help determine eligibility for instructional programs in English and to identify difficulties students may have in the language. The results of the LAS Links Forms C and D assessments may also be used to track and monitor progress in attaining English language proficiency. The following is a list of possible uses of the assessment results for LAS Links Forms C and D. These uses are described further in Chapter 1 of this technical manual.

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- Eligibility for instructional programs
- Planning instructional programs
- Tracking student growth
- Determining language of assessment

The purpose of this technical manual is to provide information to districts, schools, and educators about the test development procedures and to describe the technical qualities of the LAS Links Forms C and D assessments. Chapter 1 of this manual describes intended uses of LAS Links Forms C and D for instructional decisions. Chapter 2 describes the design and development of the tests, including information about the test standards, test blueprint, item writing, item review process, form assembly, and relevant quality control evidence. Chapter 3 lays out the field testing and data collection procedures. Chapter 4 provides information about the test scale development. Chapter 5 informs readers with recommendations for test operations to support standardized test administration and scoring. Chapter 6 covers the types of scores and reports offered by the assessments as well as the proficiency levels and related standard-setting process for Forms C and D. Descriptive statistics, reliability, validity, and test fairness in support of the intended score interpretations and test uses are discussed in Chapter 7.

CHAPTER I INTENDED TEST USES

Chapter 1 provides an overview of the intended uses of LAS Links Forms C and D, including relevant background for the test development, intended score interpretations and uses, and the target test population.

1.1 Context of the Test Development

In the last several decades, researchers and policy makers have studied and come to understand the pivotal role of academic language in effective curriculum and instruction (Andstrom et al., 2010). Conceptions of academic language have varied depending on the perspectives and goals of the researchers (e.g., curriculum, assessment, or linguistic research); however, many researchers (Bailey & Huang, 2011; Gee, 2008; Gibbons, 1998, 2003; Scarcella, 2003; Schleppegrell, 2004; van Lier & Walqui, 2012) agree that academic language is defined as being:

- situated language used within and across specific academic disciplines or content areas
- embedded in sociocultural contexts that involve activities, practices, and language users
- characterized by specific discourse and textual features such as genre, register, functions, syntax, and vocabulary
- integrated across different mediums and modes of communication
- used at different levels of complexity across grade spans

Academic language for the K–12 student population has received growing attention with the releases of the Common Core State Standards (CCSS; National Governors Association Center for Best Practices [NGA Center] & Council of Chief State School Officers [CCSSO], 2010) and the CCSSO's framework for English language proficiency development standards (2012) that describes perceived correspondence between language demand and the CCSS content standards.

LAS Links 2nd Edition was developed to assess school language that is critical for student intellectual growth in K–12 instructional settings. LAS Links 2nd Edition emphasizes rigor in the measurement of academic language particularly with a focus on the following aspects:

- targeting content areas or strands of academic language use: Foundational Skills; Language Arts, Social Studies, and History; and Mathematics, Science, and Technical Subjects
- the linguistic complexity of receptive and expressive language (e.g., word/sound recognition, vocabulary, grammar, discourse features, etc.)

• the types of language function and tasks for communicative purposes in a school context (e.g., identifying, comprehending, describing, analyzing, etc.)

1.2 Intended Score Interpretations and Test Uses

LAS Links Forms C and D provide information regarding students' English language proficiency in school settings. The test scores can be used to identify difficulties students may have in the English language, and to monitor and track their progress in attaining English language proficiency. Such information can be useful in making relevant instructional and assessment decisions.

1.2.1 Eligibility for Instructional Programs

Federal and state policies require identification and annual assessment of the English proficiency of English language learners (ELLs). English language proficiency standards must be based upon the four modalities of Listening, Speaking, Reading and Writing. Additionally, the assessment must measure English language proficiency in the five domains of Listening, Speaking, Reading, Writing, and Comprehension.

LAS Links Forms C and D can be used to identify K–12 students who are (or remain) eligible for Title III instructional programs. The test scores are also valuable for identifying students who may benefit from instructional support to improve their academic English for succeeding in classrooms with rigorous English-medium content learning activities.

1.2.2 Planning Instructional Programs

Federal and state policies also requires LEAs to assess the English language proficiency of ELLs with the purpose to support their content learning in school. LAS Links Forms C and D provide reliable English language proficiency results needed to make relevant crucial instructional decisions.

The scores on LAS Links Forms C and D can be used as an indicator of proficiency in Listening, Speaking, Reading, and Writing in school English. This information can be used to determine the placement of students in a specific type of instructional program. When determining instructional placement, users are encouraged to consider the decision in conjunction with other available evidence and assessment instruments, including information provided in home language surveys, communication with parents, informal interviews with students, and also possibly test scores on content knowledge, depending on the specific purpose of the instructional program. LAS Links Forms C and D test scores can also assist in diagnosing students' strengths and weaknesses in English, especially their ability to use English in school settings. The test scores in Listening, Speaking, Reading, and Writing provide useful information about what skills students have or do not have, as well as determine their particular language needs in each of the four communicative skills. Using these results, teachers are able to plan appropriate instruction or remediation for the students.

1.2.3 Tracking Student Growth

Students' progress from a beginning level to an advanced level of English language proficiency can be reflected by the scores on LAS Links Forms C and D. Because there are five grade spans of the tests (K–1, 2–3, 4–5, 6–8, and 9–12) and two test forms (C and D) per grade span that cover kindergarten through Grade 12, the different grade spans as well as the two parallel forms within each grade span can be used to track changes in English proficiency as the student continues in school across the grades and from year to year. This feature may be especially useful in schools with bilingual education programs that have as a goal increasing students' English language proficiency over time.

1.2.4 Determining Language of Assessment

A growing number of states provide a written translation of the state academic assessment to ELLs in their native language. The decision to administer a native language version of a state assessment can rest on a variety of criteria. In a survey of state policies concerning translation, Stansfield and Bowles (2006) found that the two most frequently used criteria are English language proficiency and native language proficiency, including literacy in the native language.

LAS Links Forms C and D results can help schools and districts decide whether to administer statewide content-area assessments in English to ELLs if a written translation in their native language is available or if an oral translation is permissible. According to the Standards for Educational and Psychological Testing (American Educational Research Association [AERA], American Psychological Association [APA], & National Council on Measurement in Education [NCME], 1999), "When testing an examinee proficient in two or more languages for which the test is available, the examinee's relative language proficiencies should be determined" (p. 189). The Standards also recommend that tests "generally should be administered in the test taker's more proficient language, unless proficiency in the less proficient language is part of the assessment" (p. 189). The scores on LAS Links Forms C and D can determine for each student if using the regular English version of the state's standards-based achievement test is appropriate.

1.3 Target Test Population

LAS Links Forms C and D are mainly developed to serve K–12 students, specifically ELLs who are still in the process of developing English language proficiency. Because of its increased rigor in academic language, LAS Links Forms C and D may be particularly useful in understanding and diagnosing students' language needs for actively participating not only in general instructional settings but in discipline-specific learning as well.

CHAPTER II TEST DESIGN AND DEVELOPMENT

Chapter 2 focuses on the test design and development where information about the LAS Links Standards Framework, test blueprint, item development and review process, and test form assembly is provided. Relevant procedural evidence on quality control is also presented.

2.1 LAS Links Standards Framework

The LAS Links 2012 Standards Framework reflects a modification of several language development models currently used in guiding the education of English Language Learners. The framework evaluates the receptive and productive control of language by English Language Learners (ELLs) in social, school, and academic contexts. The standards in the framework are organized into a) language context strands, b) language domains and subtests, c) subskills/objectives, and d) proficiency levels.

The LAS Links 2012 Standards Framework meets the requirements for challenging expectations reflected in standards such as the TESOL standards (2006), Common European Framework of Reference for Languages (CEFR; 2001), and the CCSS (2010). Ensuring correspondence of the LAS Links standards to these international and national standards is a key step to ensure that the LAS Links standards are equitable and comprehensive enough to assess English Language learners' ability to use English in various school contexts.

2.1.1 Language Context Strands

Although LAS Links tests include diverse culturally-relevant content coverage, the focus of the assessments is on language and not on content knowledge. The *social* and *school* content covers intercultural and instructional communication (e.g., school-related tasks), while the *academic* content coverage includes communications related to English language arts, mathematics, science, social studies, history, and technical subjects. As previously mentioned, there are four language context strands applicable across all grade levels and language domains in the LAS Links 2012 Standards Framework:

Strand 1.	Students are able to listen, speak, read, and write for Social, Intercultural, and		
	Instructional Communication.		
Strand 2.	Students are able to listen, speak, read, and write for Language Arts, Social		
	Studies, and History.		
Strand 3.	Students are able to listen, speak, read, and write for Mathematics, Science, and		
	Technical Subjects.		
Strand 4.	Students are beginning to develop Foundational Skills for reading and writing		
	(Grades K–3 only).		
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2.1.2 Language Domains and Subtests

The LAS Links 2012 Standards Framework includes four language domains. Listening and Reading domains assess students' **receptive** control of language while the Speaking and Writing domains evaluate students' **productive** control of language.

Listening

The Listening test consists of two subtests: *Listen for Information* and *Listen for Academic Instruction*. All Listening items are in multiple-choice (MC) format. All instructions, audio passages, questions, and answer choices are played on the accompanying audio CD. Each question has three answer choices. In Grades K–1, all answer choices are pictures. In Grades 2–3, there is a mix of both picture- and text–based answer choices. In Grades 4–12, all answer choices are text-based.

Listen for Information

In *Listen for Information*, students listen to directions, brief school announcements, content-based discussions, and conversations. Then students answer questions about what they heard. Students are tested on skills such as following common, explicit oral directions, identifying main ideas, and making inferences. In upper grade spans, students are also asked to comprehend idiomatic expressions and make predictions.

Listen for Academic Instruction

In *Listen for Academic Instruction*, students listen to longer content-based discussions led by a teacher, with comments and contributions provided by class members. In this way, the listening texts approximate authentic classroom discourse patterns that are co-constructed by the teacher and the class members. Discussions are drawn from two broad academic categories: (a) Language Arts, Social Studies, and History; and (b) Mathematics, Science, and Technical Subjects. Students identify main ideas and supporting details and make inferences. At the upper grade spans, students also make predictions.

Reading

The Reading test consists of three subtests in Grades K–3: *Read Words, Read School Texts,* and *Read Academic Texts*; and two subtests in Grades 4–12: *Read School Texts* and *Read Academic Texts*.

Reading questions are multiple-choice in format with three answer choices (some picture-based and some text-based) in Grades K–3 and four text-based answer choices in Grades 4–12.

Read Words (Grades K-1 and 2-3)

In *Read Words*, Grade K–1 students respond to items addressing word-analysis tasks: identifying rhyming words, applying letter-sound relationships to read English words, and applying letter-sound relationships to read English phonemes/graphemes. In Grades 2–3, students have the additional task of applying knowledge of morphemes and grammar to word meaning.

Read School Texts

In *Read School Texts*, students read a variety of short texts, such as classroom signs, school notices, letters, website postings, emails and text messages between students. In addition, students in Grades 1–12 read texts they will likely encounter in the content areas of English Language Arts, History, and Social Studies or Mathematics, Science, and Technical Subjects. These texts emulate grade-span appropriate workbook or classroom tasks and measure students' ability to understand the text, not their ability to complete the task being described. All questions are multiple-choice in format and measure students' ability to identify main ideas and supporting detail, interpret words and phrases as they are used in text, and identify view, tone, and attitude.

Read Academic Texts

In *Read Academic Texts*, students read extended grade-span appropriate passages drawn from two broad academic categories: (a) Language Arts, Social Studies, and History; and (b) Mathematics, Science, and Technical Subjects. Although both fiction and non-fiction texts are included, there is an emphasis on more complex non-fiction texts.

In Grades K–1, each passage has two related questions that measure the student's ability to identify main ideas and important details, or identify view, tone, and attitude. In Grades 2–3, each passage has five related questions that measure the student's ability to identify main ideas and important details, identify view, tone, and attitude, and interpret words and phrases as they are used in text. In Grades 4–12, each passage has six related questions that measure the student's ability to identify main ideas and important details, identify view, tone, and attitude, and interpret words that measure the student's ability to identify main ideas and important details, identify view, tone, and attitude, and interpret words and phrases as they are used in text. Two of the six items related to each passage in Grades 4–12 require students to complete a table, time line, or illustration with text taken directly from the passage. These items are scored as either being incorrect (0 points) or correct (1 point).

Speaking

The Speaking test consists of five subtests: *Make Conversation, Use Academic Words, Describe and Request Information, Present and Explain Information,* and *Tell a Story*. Note that Kindergarten students take only the first set of questions in *Present and Explain Information*. All Speaking items are performance-based in format. They measure vocabulary and grammatically correct verbal expressions in social and academic language. Tasks in the Speaking subtest elicit

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the production of single-word responses as well as multiple sentences related to schoolappropriate topics.

Make Conversation

In *Make Conversation*, students are shown a picture of people engaging in a conversation in a school or social setting and then the students are asked to imagine that they are a participant in the scenario. Students answer basic conversational questions that are appropriate for their participant role by either providing information or expressing opinions and preferences. Student responses are scored as incorrect (0 points), correct (1 point), or no response (NR).

Use Academic Words

In *Use Academic Words*, students are shown pictures of common objects or concepts they encounter in the classroom. The students are asked to identify the object or concept. Students respond with a single word or short phrases. Student responses are scored as incorrect (0 points), correct (1 point), or no response (NR).

Describe and Request Information

In *Describe and Request Information*, students are shown a picture depicting an academic or social situation and asked to describe it using sentences. Next, students are required to complete a speech act or function by, for example, saying what they would do if they were a participant in the scenario. Grades K–1 students demonstrate their ability to ask questions, request clarification, and negotiate for meaning. Additionally, in Grades 2–12, students demonstrate their ability to make various requests. Student responses are scored on a 0-3 rubric.

Present and Explain Information

In *Present and Explain Information*, student responses are scored on a 0–3 rubric. In Grades K–1, students are shown an illustration of an academic or social situation and asked to describe what is happening in the illustration or explain the purpose, use, or feature of a particular object in the illustration using words, phrases, or sentences. Grade 1 students take an extended section of the same task with four more questions in which they describe or elaborate on an additional set of illustrations.

In Grades 2–3, students are shown an illustration of people, a location, or scenery and asked to describe the illustration. Students are then shown a different but related illustration and asked to describe that one as well. Next, students are asked to compare the information in the two graphics and explain how the information is the same or different. Finally, students are asked to express their own opinion or state a preference based on the two graphics.

In Grades 4–12, students are shown a slide, map, or other graphic depicting information, such as a chart, and asked to talk about the information in the graphic as if they were giving a presentation to a class. Students are then shown a different but related graphic and asked to present that information as well. Next, students are asked to compare the information in the two graphics and explain how the information is the same or different. Finally, students are asked to express their own opinion or state a preference based on the information provided in the two graphics.

Tell a Story

In *Tell a Story*, students are shown four related pictures that illustrate a story with a beginning, middle, and end. Pointing to the series of four pictures, the Examiner begins the story by reading a story starter to contextualize the pictures without giving away vocabulary or key content. Students are then asked to complete the detailed story depicted in the series of illustrations using multiple sentences to interpret, narrate, and paraphrase events. Student responses are scored on a 0-4 rubric.

Writing

The Writing test consists of four sections for Grades K–1: *Start Writing, Use Grammar and Conventions, Write to Express Ideas,* and *Write Academic Texts.* (Kindergarten students do not take the *Write Academic Texts* section). For Grades 2–12, there are three sections: *Use Grammar and Conventions, Write Academic Texts,* and *Write to Express Ideas.*

The Writing subtest includes both multiple-choice and constructed-response (CR) items that assess the student's knowledge of grammar, word order, and word choice and the student's ability to apply that knowledge to produce sentences and paragraphs that are commonly expected of students at their respective grade levels.

Start Writing (Grades K-1 Only)

In *Start Writing*, Grades K–1 students copy words and sentences and write numbers and letters. In addition, students write English words identifying pictures of common objects.

Use Grammar and Conventions

In *Use Grammar and Conventions*, K–1 students select grammatically correct sentences and indicate whether a sentence has correct use of capital letters, punctuation, articles, singular and plural nouns, pronouns, and subject/verb agreement. In Grades 2–12, students select the grammatically–appropriate response to complete sentences and paragraphs. Grammatical features are selected according to each grade span and assess the correct use of capitalization, sentence-ending marks, articles, adjectives and adverbs, singular and plural nouns, pronouns,

subject/verb agreement, tense and aspect, prepositional phrases, conjunctions, commas, and auxiliary verbs.

Write Academic Texts

In *Write Academic Texts*, Grades 1–3 students write sentences that describe pictures representing two broad academic categories: (a) Language Arts, Social Studies, and History; and (b) Mathematics, Science, and Technical Subjects. These tasks approximate common real-world classroom assignments for which Grades 1–3 students are expected to write about something they see. Grades 2–3 students also write simple sentences to interpret, analyze, or state opinions regarding what they see.

Students in Grades 4–12 are first asked to write a short summary (two to five sentences) of a paragraph selected from a passage they had read earlier in the *Read Academic Texts* section of the Reading subtest. Next, students are shown a table, time line, pie chart, or checklist and asked to write one or two full sentences explaining the information it contains. Finally, students are asked to either (a) compare the paragraph and the information contained in the table, time line, pie chart, or checklist and explain in one or two sentences how they are the same or different or (b) provide an opinion or preference based on the content of both sets of information. These tasks approximate common real-world classroom assignments where students are expected to summarize, in their own words, course reading material; extract tabular information and express it in prose; and compare and contrast academic content.

Responses are scored on a 0–3 rubric to assess the student's ability to communicate effectively using appropriate grammar, vocabulary, and conventions.

Write to Express Ideas

In *Write to Express Ideas*, students are given an opportunity to write for personal communication. Grades K–1 students write a sentence describing a person. Students in Grades 2–3 write a letter. Students in Grades 4–12 write extended responses to an email message, note, or blog entry. The writing tasks for Grades 2–12 are designed for students to be able to demonstrate their ability to describe, explain, report, compare, narrate, persuade, or express ideas in writing. Responses are scored on a 0–4 holistic rubric to assess the student's use of appropriate grammar and vocabulary and the student's ability to express meaning in a cohesive and coherent manner.

2.1.3 Subskills/Objectives

Table 2.1 presents a complete list of subskills/objectives within the LAS Links 2012 Standards Framework. These subskills/objectives are organized by language domains.

Table 2.1 LAS Links 2012 Standards Framework

Listen	ing Sub	skills/Objectives
L1	Follow common, explicit oral directions to participate in diverse academic or social tasks	
L2	Respond to idiomatic expressions to participate in diverse academic or social tasks, including phrasal verbs with idiomatic meaning (e.g., give me a hand or settle for)	
L3	Demonstrate understanding of academic and social situations that contain diverse language genres, registers, and varieties	
	L3.1	Identify purpose
	L3.2	Identify main ideas
	L3.3	Identify supporting details
	L3.4	Relate to practical issue
L4	Interpret layers of meaning using critical listening skills and learning strategies in academic and social situations that contain diverse language genres, registers, and varieties	
	L4.1	Make predictions based on known information
	L4.2	Make inferences based on known information

Readi	Reading Subskills/Objectives		
R1	l Analyze words		
	R1.1	Identify rhyming words	
	R1.2	Apply letter-sound relationships to read English words	
	R1.3	Apply letter-sound relationships to read English phonemes	
	R1.4	Apply knowledge of morphemes and syntax to word meaning	
R2 Understand word meaning		rstand word meaning	
	R2.1	Associate words with their representation	
	R2.2	Classify words	
	R2.3	Interpret words and phrases as they are used in a text, including determining technical, connotative, and figurative meanings.	
R3 Comprehend written material			
	R3.1	Identify main ideas	
	R3.2	Identify supporting details	
	R3.3	Identify important literary features of text	
	R3.4	Analyze the structure of texts, including how specific sentences, paragraphs, and larger portions of the text (e.g., a section, chapter, scene, or stanza) relate to each other and the whole	
	R3.5	Identify point of view, tone, and attitude	
	R3.6	Make predictions based on known information	

R3.7 Make inferences based on known information

Speaking Subskills/Objectives			
S1	Participate in diverse academic or social conversations, with attention to appropriate register, grammar, vocabulary, and pronunciation		
	S1.1	Provide information	
	S1.2	Describe information	
	S1.3	Interpret and analyze information	
	S1.4	Relate information to personal experience or practical issue	
	S1.5	Express opinions and preferences	
	S1.6	Make requests	
	S1.7	Ask questions, request clarification, and negotiate for understanding	
	S1.8	Conduct transactions	
S2 Demonstrate knowledge related to diverse academic or social settings, with attention t appropriate register, grammar, vocabulary, and pronunciation		nstrate knowledge related to diverse academic or social settings, with attention to priate register, grammar, vocabulary, and pronunciation	
	S2.1	Identify an object (inanimate and animate) or concept	
	S2.2	Describe purpose, use, or feature, using words, phrases, or sentences	
	S2.3	Identify an academic or social situation and describe it, using sentences	
S3	83 Describe ideas, experiences, and immediate surroundings in diverse academic and social settings, with attention to appropriate register, grammar, vocabulary, and pronunciation		
	S3.1	Describe process	
	S3.2	Describe people, locations, and scenery	
S4	4 Speak persuasively in diverse academic or social situations, with attention to appropriate register, grammar, vocabulary, and pronunciation		
	S4.1	Explain process	
	S4.2	Explain ideas and opinions	
S 5	Talk in approj	n depth and with detail about diverse academic or social events, with attention to priate register, grammar, vocabulary, and pronunciation	
	S5.1	Interpret, narrate, and paraphrase events, using visual information	
S6	Preser	nt with integrated information	
	S6.1	Present with integrated information from multiple sources	

Writing Subskills/Objectives W1 Copy words and sentences W2 Write letters, numerals, and words **W3** Use appropriate grammar and style W3.1 Use articles W3.2 Demonstrate correct use of singular and plural W3.3 Use subject/verb agreement W3.4 Demonstrate correct use of tense and aspect W3.5 Use conjunctions W3.6 Use pronouns correctly W3.7 Distinguish adjectives and adverbs W3.8 Use prepositional phrases W3.9 Use auxiliary verbs W3.10 Use nominalization W3.11 Use parallel structure W4 Use appropriate capitalization and punctuation W4.1 Use appropriate capitalization W4.2 Use appropriate sentence-ending marks W4.3 Use commas appropriately W4.5 Use semi-colons appropriately W4.6 Use colons appropriately W5 Use appropriate sentence structure W5.1 Differentiate complete sentences from fragments W5.2 Differentiate complete sentences from run-ons W5.3 Form statements and questions W5.4 Use various types of clauses W5.5 Use various types of phrases (noun, verb, adjectival, adverbial, participial, prepositional, and absolute) **W6** Write sentences to summarize, describe, narrate, interpret, analyze, state opinion, relate, or explain W6.1 Write sentences to summarize W6.2 Write sentences to describe or narrate W6.3 Write sentences to interpret or analyze W6.4 Write sentences to state opinions W6.5 Write sentences to relate to personal experience or practical issue W6.6 Write sentences to explain W7 Write expository compositions W7.1 Write to describe, explain, report, compare, narrate, persuade, or express **W8** Write with integrated information Write with integrated information from multiple sources W8.1

2.1.4 Proficiency Level

The LAS Links 2012 Standards Framework represents a continuum of English language development in social, school, and academic contexts. LAS Links has the following five levels, and each level builds on to the next level (see Appendix D for a full description of the LAS Links Proficiency Level Definitions):

Beginning → Early Intermediate → Intermediate → Proficient → Above Proficient

To describe these levels, the following represents the progression of the development of ELLs' receptive and productive control of lexical, syntactic, phonological, and discourse features in English:

Developing \rightarrow *Emerging* \rightarrow *Exhibiting limited range* \rightarrow *Exhibiting control* \rightarrow *Commanding a high degree of control*

In terms of the complexity or the difficulty of texts that ELLs can comprehend and analyze, the following progression applies:

Very basic level \rightarrow *Familiar topics* \rightarrow *Range of grade-level appropriate* \rightarrow *Across and within disciplines (grade-level appropriate)* \rightarrow *Wide range*

Finally, in terms of communicative skills of ELLs, the following progression applies:

Developing the ability, using familiar topics \Rightarrow Developing the ability to communicate effectively \Rightarrow Refining the ability to communicate effectively, using context clues \Rightarrow Communicating effectively and beginning to express in creative forms \Rightarrow Communicating effectively, skillfully organize and explain information, and express subtle nuances.

2.1.5 Correspondence to External Standards

Correspondence between the LAS Links 2012 Standards Framework and the CCSS (2010) is highly valuable, because the CCSS serves as a set of overarching educational standards for K–12 students in the United States. The correspondence ensures that LAS Links shares the expectations of language proficiency in Listening, Speaking, Reading, and Writing, as well as knowledge and skills in various content areas relevant to social, school, and academic contexts.

Table 2.2 represents a sample correspondence of LAS Links standards to the CCSS (2010). This sample focuses on students' summarizing skills, determining/identifying main ideas, and explaining/supporting with details.

CCSS	LAS Links 2012 Standards Framework
SL.5.2: Summarize a written text read aloud or information presented in diverse media and formats, including visually, quantitatively, and orally.	 W6 Write sentences to summarize, describe, narrate, interpret, analyze, state opinion, or explain W6.1 Write sentences to summarize W6.2 Write sentences to describe or narrate W6.6 Write sentences to explain
	W7 Write expository compositionsW7.1 Write to describe, explain, report, compare, narrate, persuade, or express
	W8 Write with integrated informationW8.1 Write with integrated information from multiple sources
RL.5.2: Determine a theme of a story, drama, or poem from details in the text, including how characters in a story or drama respond to challenges or how the speaker in a poem reflects upon a topic; summarize the text.	L3 Demonstrate understanding of academic and social situations that contain diverse language genres, registers, and varieties L3.1 Identify purpose L3.2 Identify main ideas L3.3 Identify supporting details
RI.5.2: Determine two or more main ideas of a text and explain how they are supported by key details; summarize the text.	R3 Comprehend written material R3.1 Identify main ideas R3.2 Identify supporting details R3.5 Identify point of view, tone, and attitude
SL.5.3: Summarize the points a speaker makes and explain how each claim is supported by reasons and evidence.	S1 Participate in diverse academic or social conversations, with attention to appropriate register, grammar, vocabulary, and S1.1 Provide information S1.2 Describe information
	 S3 Describe ideas, experiences, and immediate surroundings in diverse academic and social settings, with attention to appropriate register, grammar, vocabulary and pronunciation S3.1 Describe process S3.2 Describe people, locations, and scenery
	 S4 Speak persuasively in diverse academic or social situations, with attention to appropriate register, grammar, vocabulary, and pronunciation S4.1 Explain process S4.2 Explain ideas and opinions
	S5 Talk in depth and with detail about diverse academic or social events, with attention to appropriate register, grammar, vocabulary, and pronunciation S5.1 Interpret, narrate, and paraphrase events,

 Table 2.2 Sample Correspondence of LAS Links Standards with the CCSS (2010)

CCSS	LAS Links 2012 Standards Framework
	using visual information
	S6 Present with integrated informationS6.1 Present with integrated information from multiple sources

It is valuable to compare the LAS Links context strands with the TESOL standards (2006) because TESOL standards play a critical role in developing ESL standards for teachers of K–12 students in the United States. LAS Links examines its correspondence with TESOL because the target audience of both LAS Links and TESOL involves students who use language other than English and who need to learn English to be successful inside and outside of the U.S. classroom. Table 2.3 shows how LAS Links reporting strands correspond to the TESOL standards (2006). LAS Links has combined the target language use skills into three strands for practical use and reporting.

Table 2.3 LAS	Links Strands	s and the	TESOL	Standards ((2006)

LAS Links	TESOL			
Strand 1: Students are able to listen, speak, read,	Standard 1: English language learners			
and write for Social, Intercultural, and	communicate for social, intercultural, and			
Instructional Communication.	instructional purposes within the school setting.			
Strand 2: Students are able to <u>listen</u> , <u>speak</u> , <u>read</u> , and <u>write</u> for Language Arts, Social Studies, and History.	Standard 2: English language learners communicate information, ideas, and concepts necessary for academic success in the area of Language Arts.			
	<u>Standard 5:</u> English language learners communicate information, ideas, and concepts necessary for academic success in the area of Social Studies .			
Strand 3: Students are able to <u>listen</u> , <u>speak</u> , <u>read</u> , and <u>write</u> for Mathematics , Science , and Technical Subjects .	Standard 3: English language learners communicate information, ideas, and concepts necessary for academic success in the area of Mathematics.			
	Standard 4: English language learners communicate information, ideas, and concepts necessary for academic success in the area of Science.			

LAS Links	TESOL
Strand 4: Students are beginning to develop	
Foundational Skills for reading and writing (only	
applicable for Grades K–3).	

The CEFR (2001) serves as an influential source in the development of language and education policies in Europe and beyond. Many language testers and education/examination boards refer to the CEFR to help define language proficiency levels and analyze language qualifications. Figure 2.1 shows how LAS Links proficiency levels conceptually align with the CEFR (2001).



Figure 2.1 Correspondence of LAS Links Proficiency Levels with the CEFR (2001)

2.2 Test Blueprint

LAS Links Forms C and D were developed for administration to five grade spans (K–1, 2–3, 4– 5, 6–8, and 9–12) and are used to measure four domains or skill areas of English language proficiency: Listening, Speaking, Reading, and Writing. They also measure the combined domains of Comprehension (Listening and Reading), Productive (Speaking and Writing), Oral (Speaking and Listening), Literacy (Reading and Writing), and Overall (Listening, Speaking, Reading, and Writing). Within each domain (or skill area), a combination of item types including selected-response (SR) (also known as multiple-choice), short constructed-response (SCR), and extended constructed-response (ECR) is used to provide diverse opportunities for students to demonstrate proficiency and to maintain reasonable testing time.

In general, constructed-response items are used to assess the productive skill areas of Speaking and Writing, whereas multiple-choice items are used to assess the receptive skill areas of Listening and Reading, as well as grammar-based items in Writing. A new feature in Forms C and D in the Reading skill area in Grades 4–12 is the inclusion of SCR test items, which are scored as either correct or incorrect. The SCR test items require students to complete graphics with a short written response.

The Forms C and D assessments include four language context strands to provide an additional perspective on language competencies and to target contextualized language used in schools. Three of the context strands focus on language used within academic practices: 1) Foundational Skills; 2) Language Arts, Social Studies, and History; and 3) Math, Science, and Technical Subjects. The fourth context strand (Social, Intercultural, and Instructional Communication) focuses on language used in school for instructional and interpersonal purposes.

Tasks within the Language Arts, Social Studies, and History strand focus on the vocabulary and textual features common to these subjects and inherent in the academic register and discourse. For example, social and historical language may include narratives or expository forms of writing and text students engage with in school contexts. Items in this strand contribute to the academic score.

Tasks within the Mathematics, Science, and Technical Subjects strand focus on the vocabulary and textual features common to these subjects and inherent in the academic register and discourse. Students may be asked to communicate using information, ideas, or abstract concepts necessary in the math, science, and technical topics. For example, science, mathematics, and technology can be more lexically diverse, contain more abstract comparisons, and use more technical terms than social science texts. Items in this strand also contribute to the academic score. The Foundational Skills strand encompasses beginning reading and writing skills that young students are developing in both their first and second languages. Tasks in this strand require students to demonstrate early English literacy and communication skills. Foundational Reading (*Read Words*) includes tasks such as applying letter-sound correspondences and decoding words. Foundational Writing (*Start Writing*) includes tasks such as writing letters and numbers, spelling and writing words, and copying sentences. Scores are reported for Foundational Reading and Foundational Writing separately. Items in this strand contribute to the academic score as well.

The Social, Intercultural, and Instructional Communication strand is the language used in school activities and associated with instructional language that is general across the curriculum. This strand provides information on the students' ability to communicate with peers, teachers, or other members of the community. The tasks may take the form of listening to announcements, requesting information, or writing correspondence, for example. Items in this strand are not included in the academic score and only contribute to the overall proficiency score.

Table 2.4 shows an overview of the test blueprint, including numbers and types of items, for each domain by grade span. Note that the actual item points for scoring in each operational test form (see Appendix C) may show some slight variation from the targets in the test blueprint.

Table 2.4 Test Blueprint Overview

Skill Area	Language Context Strand	Sub-skill area / subtest	K-1 Number of Items	2-3 Number of Items	4-5 Number of Items	6-8 and 9-12 Number of Items	Item Type (SR/SCR/ECR)	
Listening	Social, Intercultural, and Instructional Communication	Listen for Information	8	8	8	9)	
	Language Arts/Social Studies/History	Listen for Academic Instruction	2	3	3	3	SR	
		Listen for Information	4	3	3	4		
	Mathematics Science Technical Schicete	Listen for Academic Instruction	2	3	3	3		
	Mainematics/Science/Technical Subjects	Listen for Information	4	3	3	4		
		Total	20	20	20	23		
	Social, Intercultural, and Instructional Communication	Make Conversation	3	3	3	3	SCR	
		Describe and Request Information	2	2	2	2	SCR	
		Tell A Story	1	1	1	1	ECR	
Speaking	Language Ante/Social Studies/History	Use Academic Words	2	2	2	2	SCR	
	Language Aris/Social Studies/History	Present and Explain Information	4 (2 for K)	4	4	4	SCR	
	Mathematics/Science/Technical Subjects	Use Academic Words	2	2	2	2	SCR	
	Mathematics/Science/Technical Subjects	Present and Explain Information	4 (2 for K)	4	4	4	SCR	
		Total	18 (14 for K)	18	18	18		
	Foundational Skills	Read Words	12	6	N/A	N/A	SR	
	Social, Intercultural, and Instructional Communication	Read School Texts	10	10	14	14	SR	
		Read Academic Texts	2	5	4	4	SR	
Deeller	Language Arts/Social Studies/History		N/A	N/A	2	2	SCR	
Reading		Read School Texts (Gr. 1-12 only)	2 (N/A for K)	2	2	2	SR	
	Mathematics/Science/Technical Subjects	Read Academic Texts	2	5	4	4	SR	
			N/A	N/A	2	2	SCR	
		Read School Texts (Gr. 1-12 only)	2 (N/A for K)	2	2	2	SR	
		Total	30 (26 for K)	30	30	30		
Writing	Foundational Skills	Start Writing	8	N/A	N/A	N/A	SCR SCR	
	Social. Intercultural. and Instructional Communication	Use Grammar and Conventions	4	6	6	6	SR	
		Write to Express Ideas	1	N/A	N/A	N/A	SCR	
			N/A	1	1	1	ECR	
	Language Arts/Social Studies/History	Use Grammar and Conventions	1	2	2	2	SR	
		Write Academic Texts	2 (N/A for K)	3	3	3	SCR	
		Use Grammar and Conventions	1	2	2	2	SR	
	Mathematics/Science/Technical Subjects	Write Academic Texts	2 (N/A for K)	3	3	3	SCR	
	•	Total	20 (16 for K)	17	17	17		

2.3 Item Development and Review

CTB Content and Research experts worked together on the development of grade–level test specifications to conceptualize the LAS Links new generation of language proficiency assessments and to guide item writers through the test development process. The English Language Learners Advisory Panel (ELLAP; see Appendix A for a list of the panel members) reviewed the specifications and sample items and provided guidance during the LAS Links test specifications development process. The test specifications contain measures that are linked to the goals of the CCSS (2010). The specifications were designed to ensure that passage and items are appropriate in terms of content, difficulty level, item construct, and Universal Design considerations.

A team of writers/reviewers collaborated during the development of this project. Item writers and content specialists are experts in content alignment, and the majority of content editorial and supervisory staff had classroom teaching experience. Content development specialists were assigned to a specific grade span in the creation of LAS Links. Their prior experience teaching and working with the subject matter helped them effectively develop appropriate assessment content. Detailed item specifications guided item writers, and assignments contained information on avoiding biased content with details specific to the ELL student population. Every item created during the test development process was written and aligned to a specific standard in order to ensure a wide range of skills were covered in each test skill area. Items were developed in a team environment, and each item underwent several layers of content review by senior specialists. Figure 2.2 shows the general LAS Links test development process.



Figure 2.2 LAS Links 2nd Edition Test Development Process

To ensure that the content of the tests were consistent and appropriate with content that is taught in schools, the range of subject matter for the two academic school contexts (Language Arts/ Social Studies/History and Mathematics/Science/Technical Subjects) was limited to topics explicitly noted in the CCSS (2010) or the TESOL standards (2006).

Listening test considerations

Brown (1995) provides a very useful set of Cognitive Load Principles, which we have adapted below.

- Less is more. *It is easier to understand a text involving fewer individuals, characters, or objects*. As the number of people or things involved in a Listening passage increases so does the likelihood of confusion, even for native speakers, as these details must be retained in short-term memory.
- Distinguish between interactants. *It is less cognitively demanding to understand a text* (*e.g., narrative, description, instruction*) *involving individuals and objects that are easily distinguishable from one another.* It would be easier to understand and remember story details about a dump truck, an ambulance, and an SUV than one about three sedans. "The more individuals and objects are similar and the more they are described in similar terms, the more likely they are to be misidentified . . ." (Brown, 1995, p. 63).
- There's no "there there". *It is easier to understand texts that involve uncomplicated spatial relations.* When we listen to a story we construct a mental model of the scene and use this model as a stage on which to place the people and things and observe their actions. The simpler the spatial relations, the easier it is to visualize them. The same can be said for temporal relationships.
- Straight talk. *It is easier to understand texts when the order of telling matches the order in which the events occurred.* As they listen to a narrative, listeners assume the events happened in the order reported. Such narratives are easier to understand because they require less manipulation of the listeners' mental model and do not overburden short-term memory.
- Be clear. *It is easier to understand a text if relatively few inferences are necessary to relate each sentence to the preceding text.* In other words, avoid ambiguity and obscurity, and be clear with respect to orderliness. In the English spoken in the United States, the rhetorical style is for more general details to precede more specific ones and for causes to precede effects, to avoid non-linear narratives. On the other hand, a related pitfall we find
is that in attempting to "simplify" texts, some writers make the mistake of eliminating detail in an effort to shorten sentences. An analysis by Beck, McKeown, Sinatra, & Loxterman (1991) has shown that texts that present only facts with little explanation of their relationship are more difficult to comprehend than texts that provide more elaboration on how the material is connected. One reason for this may be that the lack of elaboration puts the onus of drawing all such inferences on the reader. Likewise, some syntactically simple texts are difficult to comprehend because the text is poorly organized. The following excerpt from a reading passage exemplifies this point:

A house on stilts is high above the ground. People build houses on stilts in Thailand. Thailand is a country in Southeast Asia. The weather in Thailand is very warm. Air can move around well in a house on stilts. In the summer the country has heavy rainstorms. These heavy storms are called monsoons. One area of Thailand gets the most rain.

The sentences are syntactically straightforward and, with the exception of "stilts", the vocabulary consists of mostly common words; however, the text lacks coherence, making it very difficult for even a skillful reader to understand. As a result, the excerpt is easy to read but not easy to comprehend.

• Expect the expected. *It is easier to understand a text if the information is consistent and fits with the listener's pre-existing knowledge.* Thus, it is easier to follow a narrative about a topic we already know well than one we know nothing about. It is, for example, a standard gambit to open a conversation by setting a common point of reference, such as, "Remember the time we went to Lake Revelstoke?" This strategy ensures that everyone involved in the conversation starts from the same point of reference and listeners can retrieve the shared background knowledge necessary for comprehension. If the information that follows is new but compatible with the old, it is easier for listeners to incorporate it into their knowledge system. According to Brown (1995), problems arise for listeners when the incoming information is ambiguous, expressed vaguely, or is not compatible with the listener's existing knowledge.

Speaking test considerations

- Specifications to develop stimuli for items in the Present and Explain Information subtest provided guidance to ensure test authenticity.
- For items in the Tell a Story subtest, art development was specified so that
 - o distinct events occurred in each illustration;
 - o actions were easily understood visually;

- the depicted events and actions had a beginning, middle, and end;
- art specifications did not rely on facial expressions, gestures, or body stance to convey action or meaning, e.g., "He is looking at the pear and the apple but can't decide which one to choose." These subtle clues could very well be tied to a particular culture unknown or unfamiliar to the student. If the narrative relied on these types of clues, students may not understand what is happening, and may stop their telling of the story. This could lead the test administrator to erroneously assume that the student lacks the language skills necessary to tell the story when the cause could in fact be more a matter of the pictures not telling the story.

Reading test considerations

- Given the expectation that all K–12 students read and comprehend more complex texts, including English Language Learners (ELL), the LAS Links Reading test was designed to reflect this trend. Thus, the criteria for developing extended passages were to ensure that texts were comparable to mainstream classroom texts currently in use throughout the United States in terms of construction, complexity, and appearance.
- ACT, Inc (2006) provided guidance on defining degrees of text complexity. It categorized texts as being *Uncomplicated*, *More Challenging*, or *Complex*. For the purposes of text development for LAS Links, the extended texts were written to align most closely to the *More Challenging* category, which is defined by the following text features: implicit relationships, detailed richness, involved structure, and a context-dependent use of some more complex vocabulary.
- Reading dichotomous constructed-response (DCR) items consist of a chart, table, or diagram with missing information for students to complete. To avoid raters having to make a judgment as to the veracity of the response, students are required to enter the information exactly as it appears in the text to improve reliability. The information required to respond is contained in the passage in order to ensure that students will not need to rely on background knowledge to complete the table.

Writing test considerations

• As there are far more assessable features of language than there are test items, developers were asked to target the essential aspects of syntax and mechanics. For guidance, they referred to the skills explicitly noted in the CCSS (2010) for English Language Arts & Literacy in History/Social Studies, Science, and Technical Subjects.

• The texts in the Writing prompts are designed to be grade-level appropriate and not requiring new background knowledge. This is crucial in order to assess students' language proficiency skills, instead of their content knowledge of specific topics.

2.4 Form Assembly

All items selected for the operational Forms C and D came from the Forms C and D field test item pool. Any items that demonstrated poor classical item statistics (e.g., *p*-value and item-total correlations) or failed to fit the Item Response Theory (IRT) models in use (see more information on the IRT models in Chapter 4.1) were removed from the set of field test items available for selection.

The construction of the C and D operational forms was aimed to fulfill both the content and psychometric criteria as listed in Table 2.5. Classical item statistics based on the field test data and item parameters obtained from preliminary IRT analyses were used to inform the item selection and form assembly. After the operational test forms were assembled, their psychometric properties were also examined based on the final IRT item parameters (see relevant discussion in Chapter 7.1).

Aspects	Criteria
Test blueprint	Adhere to sub-skill category quotas to ensure content coverage.
Item difficulty	Minimize the number of items with <i>p</i> -values ≤ 0.10 or ≥ 0.95 .
Item-total correlation	Minimize the number of items with item-total correlations <0.15 and MC items with any of the distractor point-biserial >0.05.
Item omit rate	Minimize the number of items with omit rates $>=5\%$.
Test information	Maximize test information at and around the LAS Links cut scores with the target test information equal to or greater than that on the operational Forms A and B.
Standard error of measurement	Minimize standard error of measurement for the target student ability span at each grade span.
IRT model fit	Minimize the number of poor-fitting items.
Distribution of MC answer key positions	The MC answer key positions should be evenly distributed throughout the form in general and should avoid the same position being repeated consecutively.

Table 2.5 Item Selection and Form Assembly Criteria

The form assembly process was conducted using CTB's proprietary program called Automated Test Assembly (ATA). The use of ATA allows balancing psychometric and content considerations in an efficient way. ATA has been in use for industry-level operations at CTB since 2011 for form selection as well as for investigating and evaluating the psychometric properties of tests. It permits the user to examine the test characteristic curves, standard error curves, test information curves, and the floors and ceilings of the tests built. ATA also enables developers to compare multiple forms, a particularly attractive feature when parallel forms from the same assessment are required or when forms from multiple editions of the assessment need to be compared. The output of ATA can also be used to compare forms across grade span levels through plots of the curves.

2.5 Quality Control Evidence

Items were reviewed for adherence to the item-writing specifications, which included developmental appropriateness, item difficulty, freedom from areas of potential bias, and appropriate answer choices and distracters on the basis of both content considerations (e.g., expert reviews) and statistical evidence (e.g., Classical Test Theory [CTT] statistics and differential item functioning [DIF] analyses). Additionally, items went through a thorough review by internal and external review panels for bias and sensitivity. During form development, items and the overall test construction were reviewed for considerations of Universal Design principles (see Section 2.5.2), including equitable use, flexibility in use, simple and intuitive use, perceptible information, tolerance for error, low physical effort, and size and space for approach and use.

2.5.1 Item Review Criteria

To ensure appropriate cognitive demands and readability, CTB/McGraw-Hill used the following processes, resources, and texts to develop items:

- Graded word lists, such as *EDL Core Vocabularies* and *The Living Word*, used to verify that item vocabulary is consistently at or below the targeted grade level
- Syntax that is grade-level appropriate
- Items including only the information necessary for assessing the skill or knowledge being tested
- Items containing detailed directions or large amounts of text divided into steps, sections, or bulleted lists to help students understand the task
- Key words or phrases in the items in a consistent style to make the task clear for the student

- After items were written, CTB/McGraw-Hill content specialists reviewed the material for standards alignment, grade-level-appropriateness, item difficulty, freedom from areas of potential bias, and appropriate answer choices and distractors. Every item underwent at least two reviews by the content specialists to ensure the following:
 - item correspondence to the identified standard and construct
 - relevance of each item to the purpose of the test
 - correspondence to the principles of quality item development
 - appropriate item difficulty
 - accuracy of content presented in the item
 - appropriateness of language, graphics, artwork, charts, and figures

LAS Links items must demonstrate a match to the LAS Links Standards Framework, high technical quality, and appropriate difficulty; provide appropriate alternative choices (distractors) in multiple-choice (MC) items; and provide complete answers for open-ended questions.

Match to LAS Links Standards Framework

Each item had to demonstrate a specific match to the selected standard. The item writers were required to establish the close correspondence between the standards and the test questions clearly; this correspondence was verified by CTB/McGraw-Hill content editors and development supervisors. This step represented the first verification of the content validity of each item.

Technical quality

For multiple-choice items, technical quality included fully stated stems (i.e., the stem states a complete question so that the student understands what is asked before reading the response options); balanced response options (no answer choice is conspicuous due to length, syntax, tone, level of specificity, or other reason); plausible and reasonable distractors; absence of cueing between stem and answer choices; brevity; and clarity. For open-ended items, technical quality included precisely and fairly stated prompts that yield appropriate responses and well-formed and effective scoring rubrics and sample student responses.

Difficulty level

Items were reviewed to ensure an appropriate difficulty level for the purpose of the test. CTB/McGraw-Hill's development team kept a record of the estimated difficulty of each item to ensure that items were written within a specific range of difficulty in any given test.

Appropriate distractors for multiple-choice items

Item writers submitted answer keys with their multiple-choice (MC) items. Writers were directed to double check distractors to verify that no ambiguous or misleading incorrect response options

existed, that there was only one clear correct answer per item, and that answer choices did not include outliers. CTB/McGraw-Hill content editors and development supervisors then verified the correct response.

Complete answers for open-ended items

When writing open-ended items, the writers provided a correct and complete answer, as well as a range of answers possible for each item. In addition, both the writers and the reviewers examined every item to ensure that none invited a discussion of the personal beliefs or practices of a student or student's family. Any such items were immediately revised or rejected. Development supervisors, content editors, and item writers further refined items collaboratively until all items met or exceeded both CTB/McGraw-Hill's high standards and the criteria in the specifications. All items developed for the LAS Links pool went through this exacting process.

2.5.2 Universal Design

CTB/McGraw-Hill's LAS Links program was developed in accordance with the criteria for test development, administration, and use listed in the Standards for Educational and Psychological Testing (1999). By applying the concept of Universal Design (UD) throughout the development process, CTB/McGraw-Hill created the LAS Links design to be accessible by students in large-scale assessments. In developing LAS Links, items and the overall test construction were reviewed for the elements of UD: equitable use, flexibility in use, simple and intuitive use, perceptible information, tolerance for error, low physical effort, and size and space for approach and use. LAS Links items went through extensive reviews by internal and external review panels for bias and sensitivity. These panels were composed of experts in ELD/ELP. In addition, accommodations were developed for students who have Individualized Education Programs (IEP) or 504 plans. Large Print and Braille versions of the test were developed for students who required these accommodations, and they follow the American Printing House for the Blind Guidelines. Other accommodations are also allowed in the test administration, such as clarifying directions, reading the test question (not normally read), using a scribe, spelling aides, and teacher marking the student's response in the student booklet.

2.5.3 Content and Bias/Sensitivity Review

Throughout the development process, item developers paid careful editorial attention to item content validity (measuring the test construct and nothing else). Item developers were instructed to pay careful attention to two McGraw-Hill guides to ensure fairness: *Guidelines for Bias-Free Publishing* (Macmillan/McGraw-Hill, 1993a) and *Reflecting Diversity and Multicultural Guidelines for Educational Publishing Professionals* (Macmillan/McGraw-Hill, 1993b). Bias can occur if the assessment measures different things for different groups. If the test includes

irrelevant skills or knowledge (however common), the possibility of bias is increased. Therefore, empirical evaluation techniques were applied to all LAS Links items (e.g., differential item functioning); all items flagged as biased were reviewed by experts.

The developers of the LAS Links 2nd Edition gave careful attention to questions of ethnic, racial, gender and age bias following the guidelines specified above. In addition to the internal reviews for bias and sensitive considerations, CTB/McGraw-Hill contracted with Second Language Testing, an external agency, to ensure expertise in item development with teaching experience to conduct the review of the item pool for content considerations and potential biases.

All the LAS Links items went through this professional external review using standard criteria used for CTB Content and Bias/Sensitivity Review prior to field testing. Each reviewer evaluated each item against the criteria and documented ratings with pertinent comments for test developers' consideration.

The internal Content editing staff worked with the Expert Review Committee to address all recommendations to edit language, subject matter, or representation of people. The developers then made revisions to the test items to eliminate potential sources of item bias.

Below are the criteria used by external reviewers for evaluating content and potential bias/sensitivity issues.

- grade span appropriate
- alignment to indicator
- content accuracy
- single correct answer (selected-response items only)
- accurate rubric (constructed- response items only)
- art accuracy (graphics only)
- clear graphics (graphics only)
- adherence to Universal Design principles
- bias and sensitivity issues

Below is a list of the major areas of assessment that were reviewed.

- passages
- artwork
- item questions
- distractors in selected-response items
- cognate "Say words" items (potentially favoring Spanish speakers)

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- interchangeable items (where items need to be scored together, and answers are interchangeable)
- scoring rubrics/sample answers
- item/test directions
- standards alignment

CHAPTER III DATA COLLECTION

Chapter 3 describes the field testing design for constructing LAS Links Forms C and D, characteristics of the student samples that were acquired to support field testing, and the related sample acquisition process.

3.1 Field Testing Design

The field testing design used for LAS Links Forms C and D included three field test forms per grade span with content characteristics and item types similar to those of the resulting operational tests (Forms C and D) being constructed. Each field test form had a similar length to the target length of an operational form. Using three field test forms per grade span was intended to provide additional items to support form selection based on content and psychometric criteria without overburdening the test administrators or student participants.

To ensure item quality and minimize chances of item suppression from empirical evaluation, the Forms C and D field test items were reviewed and selected with close attention to content quality and the target student population.

The field testing design was intended to place Forms C and D on the existing LAS Links English common scale (see more information on the common scale in Chapter 4.2) and to support item selection and empirical evaluation in form assembly. Under the design, there were a total of 15 LAS Links field test forms. Each field test form was administered to its corresponding grade span level (Level 1 for Grades K–1; Level 2 for Grades 2–3; Level 3 for Grades 4–5; Level 4 for Grades 6–8; and Level 5 for Grades 9–12).

Three scenarios were created under this design: LAS Links anchor, total battery, and vertical linking. Tables 3.1 through 3.5 outline the LAS Links Forms C and D field test sampling design in accordance with the three design scenarios.

LAS Links anchor scenario

Under this scenario, a group of students took the complete operational LAS Links Form A and subtests from the Forms C and D field test forms (Forms S/T/U) in order to establish a linkage at the subtest level between Form A and Forms S/T/U. The linkage allowed for placing Forms C and D on the LAS Links English common scale for each domain (Listening, Speaking, Reading, and Writing).

								LAS Li	nks Leve	l 1 (Gra	des K-1)						LAS Link	s Level 2	
		For	rm A		Listening	g		Speaking	,		Reading	;		Writing		Listening	Speaking	Reading	Writing
Grade	Design N	L1 L/S	L1/RW	L1S	L1T	L1U	S1S	S1T	S1U	R1S	R1T	R1U	W1S	W1T	W1U	L2S	S2S	R2S	W2S
LAS Links	Anchor																		
Κ	200	200	200	200			200												
1	200	200	200	150			150									50	50		
Κ	200	200	200		200			200											
1	200	200	200		200			200											
Κ	200	200	200			200			200										
1	200	200	200			200			200										
K	200	200	200	200						200									
1	200	200	200	150						150						50		50	
K	200	200	200		200						200								
1	200	200	200		200						200								
K	200	200	200			200						200							
1	200	200	200			200						200							
K	200	200	200				200						200						
1	200	200	200				150						150				50		50
K	200	200	200					200						200					
1	200	200	200					200						200					
Κ	200	200	200						200						200				
1	200	200	200						200						200				
Total	3600	3600	3600	700	800	800	700	800	800	350	400	400	350	400	400	100	100	50	50
Total Batter	у																		
K	300			300			300			300			300						
1	300			300			300			300			300						
K	300				300			300			300			300					
1	300				300			300			300			300					
K	300					300			300			300			300				
1	300					300			300			300			300				
Total	1800			600	600	600	600	600	600	600	600	600	600	600	600				
Grand Total	5400	3600	3600	1300	1400	1400	1300	1400	1400	950	1000	1000	950	1000	1000	100	100	50	50

Table 3.1 Forms C/D Field Test Sample Design, Grades K–1

								LAS Li	nks Leve	el 2 (Gra	des 2-3)]	LAS Lin	ks Level	3]	LAS Lin	ks Level	1
		Fo	·m A		Listening	ş		Speaking	ç.		Reading	ç		Writing		LI	SK	RD	WR	LI	SK	RD	WR
Grade	Design N	L2 L/S	L2/RW	L2S	L2T	L2U	S2S	S2T	S2U	R2S	R2T	R2U	W2S	W2T	W2U	L3S	S3S	R3S	W3S	L1S	S1S	R1S	W1S
LAS Lin	ks Anchor																						
2	200	200	200	170			170													30	30		
3	200	200	200	150			150									50	50						
2	200	200	200		200			200															
3	200	200	200		200			200															
2	200	200	200			200			200														
3	200	200	200			200			200														
2	200	200	200	170						170										30		30	
3	200	200	200	150						150						50		50					
2	200	200	200		200						200												
3	200	200	200		200						200												
2	200	200	200			200						200											
3	200	200	200			200						200											
2	200	200	200				170						170										
3	200	200	200				150						150				50		50		30		30
2	200	200	200					200						200									
3	200	200	200					200						200									
2	200	200	200						200						200								
3	200	200	200						200						200								
Total	3600	3600	3600	640	800	800	640	800	800	320	400	400	320	400	400	100	100	50	50	60	60	30	30
Total Ba	ttery																						
2	300			300			300			300			300										
3	300			300			300			300			300										
2	300				300			300			300			300									
3	300				300			300			300			300									
2	300					300			300			300			300								
3	300					300			300			300			300								
Total	1800			600	600	600	600	600	600	600	600	600	600	600	600								
Grand Total	5400	3600	3600	1240	1400	1400	1240	1400	1400	920	1000	1000	920	1000	1000	100	100	50	50	60	60	30	30

Table 3.2 Forms C/D Field Test Sample Design, Grades 2–3

								LAS Li	inks Lev	el 3 (Gra	ades 4-5)					L	AS Lin	ks Level	14	L	AS Linl	ks Level	2
		For	m A]	Listenin	g	:	Speaking	g		Reading	;		Writing		LI	SK	RD	WR	LI	SK	RD	WR
Grade	Design N	L3 L/S	L3/RW	L3S	L3T	L3U	S3S	S3T	S3U	R3S	R3T	R3U	W3S	W3T	W3U	L4S	S4S	R4S	W4S	L2S	S2S	R2S	W2S
LAS Lin	ks Anchor																						
4	200	200	200	170			170													30	30		
5	200	200	200	150			150									50	50						
4	200	200	200		200			200															
5	200	200	200		200			200															
4	200	200	200			200			200														
5	200	200	200			200			200														
4	200	200	200	170						170										30		30	
5	200	200	200	150						150						50		50					
4	200	200	200		200						200												
5	200	200	200		200						200												
4	200	200	200			200						200											
5	200	200	200			200						200											
4	200	200	200				170						170								30		30
5	200	200	200				150						150				50		50				
4	200	200	200					200						200									
5	200	200	200					200						200									
4	200	200	200						200						200								
5	200	200	200						200						200								
Total	3600	3600	3600	640	800	800	640	800	800	320	400	400	320	400	400	100	100	50	50	60	60	30	30
Total Bat	ttery																		•				
4	300			300			300			300			300										
5	300			300			300			300			300										
4	300				300			300			300			300									
5	300				300			300			300			300									
4	300					300			300			300			300								
5	300					300			300			300			300								
Total	1800			600	600	600	600	600	600	600	600	600	600	600	600	1							
Grand Total	5400	3600	3600	1240	1400	1400	1240	1400	1400	920	1000	1000	920	1000	1000	100	100	50	50	60	60	30	30

Table 3.39 Forms C/D Field Test Sample Design, Grades 4–

								LAS L	inks Lev	vel 4 (Gr	ades 6-8))]	LAS Lin	ıks Level	5		LAS Lin	ks Level	3
		For	·m A		Listenin	g	5	Speaking			Reading			Writing		LI	SK	RD	WR	LI	SK	RD	WR
Grade	Design N	L4 L/S	L4/RW	L4S	L4T	L4U	S4S	S4T	S4U	R4S	R4T	R4U	W4S	W4T	W4U	L5S	S5S	R5S	W5S	L3S	S3S	R3S	W3S
LAS Lin	iks Anchor																						
6	140	140	140	110			110													30	30		
7	140	140	140	140			140																
8	140	140	140	100			100									40	40						
6	140	140	140		140			140															
7	140	140	140		140			140															
8	140	140	140		140			140															
6	140	140	140			140			140														
7	140	140	140			140			140														
8	140	140	140			140			140														
6	140	140	140	110						110										30		30	
7	140	140	140	140						140													
8	140	140	140	100						100						40		40					
6	140	140	140		140						140												
7	140	140	140		140						140												
8	140	140	140		140						140												
6	140	140	140			140						140											
7	140	140	140			140						140											
8	140	140	140			140						140											
6	140	140	140				110						110								30		30
7	140	140	140				140						140										
8	140	140	140				100						100				40		40				
6	140	140	140					140						140									
7	140	140	140					140						140									
8	140	140	140					140						140									
6	140	140	140						140						140								
7	140	140	140						140						140								
8	140	140	140						140						140								
Total	3780	3780	3780	700	840	840	700	840	840	350	420	420	350	420	420	80	80	40	40	60	60	30	30
Total Ba	ittery																						
6	220			220			220			220			220										
7	220			220			220			220			220										
8	220			220			220			220			220										

Table 3.40 Forms C/D Field Test Sample Design, Grades 6–

								LAS Li	inks Lev	vel 4 (Gr	ades 6-8)					LAS Lin	ıks Level	5		LAS Lin	ks Leve	13
		For	rm A		Listenin	g	S	Speaking			Reading	g		Writing		LI	SK	RD	WR	LI	SK	RD	WR
Grade	Design N	L4 L/S	L4/RW	L4S	L4T	L4U	S4S	S4T	S4U	R4S	R4T	R4U	W4S	W4T	W4U	L5S	S5 S	R5S	W5S	L3S	S3S	R3S	W3S
6	200				200			200			200			200									
7	200				200			200			200			200									
8	200				200			200			200			200									
6	200					200			200			200			200								
7	200					200			200			200			200								
8	200					200			200			200			200								
Total	1860			660	600	600	660	600	600	660	600	600	660	600	600	1							
Grand Total	5640	3780	3780	1360	1440	1440	1360	1440	1440	1010	1020	1020	1010	1020	1020	80	80	40	40	60	60	30	30

 Table 3.5 Forms C/D Field Test Sample Design, Grades 9–12

								LAS Lir	nks Leve	l 5 (Grad	les 9-12)					Ι	LAS Lin	ks Level	4
		For	m A]	Listening	5		Speaking	5		Reading	[Writing		LI	SK	RD	WR
Grade	Design N	L5 L/S	L5/RW	L5S	L5T	L5U	S5S	S5T	S5U	R5S	R5T	R5U	W5S	W5T	W5U	L4S	S4S	R4S	W4S
LAS Link	s Anchor																		
9	100	100	100	90			90									10	10		
10	100	100	100	90			90									10	10		
11	100	100	100	90			90									10	10		
12	100	100	100	90			90									10	10		
9	100	100	100		100			100											
10	100	100	100		100			100											
11	100	100	100		100			100											
12	100	100	100		100			100											
9	100	100	100			100			100										
10	100	100	100			100			100										
11	100	100	100			100			100										
12	100	100	100			100			100										
9	100	100	100	90						90						10		10	
10	100	100	100	90						90						10		10	
11	100	100	100	90						90						10		10	
12	100	100	100	90						90						10		10	
9	100	100	100		100						100								
10	100	100	100		100						100								

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								LAS Lir	nks Leve	l 5 (Gra	des 9-12)					Ι	LAS Lin	ks Level	4
		For	m A		Listening	;		Speaking	:		Reading	;		Writing		LI	SK	RD	WR
Grade	Design N	L5 L/S	L5/RW	L5S	L5T	L5U	S5 S	S5T	S5U	R5S	R5T	R5U	W5S	W5T	W5U	L4S	S4S	R4S	W4S
11	100	100	100		100						100								
12	100	100	100		100						100								
9	100	100	100			100						100							
10	100	100	100			100						100							
11	100	100	100			100						100							
12	100	100	100			100						100							
9	100	100	100				90						90				10		10
10	100	100	100				90						90				10		10
11	100	100	100				90						90				10		10
12	100	100	100				90						90				10		10
9	100	100	100					100						100					
10	100	100	100					100						100					
11	100	100	100					100						100					
12	100	100	100					100						100					
9	100	100	100						100						100				
10	100	100	100						100						100				
11	100	100	100						100						100				
12	100	100	100						100						100				
Total	3600	3600	3600	720	800	800	720	800	800	360	400	400	360	400	400	80	80	40	40
Total Batte	ery																		
9	200				200			200			200			200					
10	200				200			200			200			200					
11	200				200			200			200			200					
12	200				200			200			200			200					
9	180			180			180			180			180						
10	180			180			180			180			180						
11	180			180			180			180			180						
12	180			180			180			180			180						
9	200					200			200			200			200				
10	200					200			200			200			200				
11	200					200			200			200			200				
12	200					200			200			200			200				
Total	2320			720	800	800	720	800	800	720	800	800	720	800	800				
Grand Total	5920	3600	3600	1440	1600	1600	1440	1600	1600	1080	1200	1200	1080	1200	1200	80	80	40	40

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Total battery scenario

Students took all four subtests (Listening, Speaking, Reading, and Writing) of each field test form (S/T/U). This enhanced the field-testing design by providing additional student sample data to support empirical evaluation at the item- and form- levels.

Vertical linking scenario

Under this scenario, subsets of field test forms were administered to groups of students from the highest grade of the lower level, for example, Grade 1 of Level 1 received Level 2 subtests, and to the lowest grade of the upper level, for example, Grade 2 of Level 2 received Level 1 subtests. The same design was implemented for all levels except for Level 1 and Level 5. For Level 1, only Grade 1 students were requested for the linking and they took Level 2 subtests. At Level 5, the linking students came from all available grades (Grades 9–12) and took Level 4 subtests only. The vertical linking scenario allowed for evaluation and enhancement of vertical linking across grade span levels for Forms C and D.

3.2 Sample Acquisition Operations

The design case count for the entire plan was around 3,600 cases per anchor scenario and 1,800 cases per total battery scenario per grade span level for a total of 27,760 cases. The sample acquisition efforts started in fall 2011 and lasted until summer 2012, with the majority of the sample obtained in 2012. The data came from CTB existing customers and new users across the nation. A total of around 26,000 cases were acquired to support psychometric analyses.

Test administrators and raters who participated in the field testing were required to receive training and be familiar with relevant test materials and test administration procedures prior to testing.

All test materials were shipped back to CTB for processing and scoring using the standardized methods and procedures developed for the LAS Links program. Raw scoring and editing of scanned data were performed in a client/server system, where a sophisticated system of edits were invoked to review the integrity of each batch scanned and to produce a list of error suspects. This system reduced editing time and provided a high degree of quality control. Online editing screens allowed an editor to focus on potential problems, and then he or she provided related information. The actual scanned documents were always available to the editor, and the software supported the review and correction of any field in the scanned record. Entry and verification of the necessary corrections were enhanced to ensure that each error was actually corrected. As batches were extracted for scoring, a final edit was performed to ensure that all requirements for scoring were met. This automated final edit flagged a batch for further editing if any error was

still detected. A batch containing errors was not allowed to be extracted for reporting. This ensured a high level of accuracy of the scored data.

Students' constructed-responses in the written format (for Reading and Writing constructedresponse items) were scored by human raters under the leadership of CTB's handscoring team. Prior to the actual scoring, CTB's handscoring team created training materials. The process included several presorting steps and subsequent iterative/consensus processes in order to achieve ever-increasing agreement and precision through a kind of "round robin" scoring, followed by discussion and selection. When all papers for a form were selected and assigned a status as good anchor, training, qualifying, or check-set papers, they were consolidated into training formats. Scoring Guides (consisting of rubrics, anchors, and annotations) served as a constant, setting the course for all subsequent training and scoring.

Qualification is a critical task in the assessment training process. It is the final determinant of reader readiness. All readers, including team leaders, must achieve a high level of exact agreement on the qualifying round following training. Those readers not validating on the first attempt received further training prior to taking an additional qualifying round. Only those who successfully validated were qualified as readers and allowed to score tests. Team leaders were required to complete one qualification round with satisfactory exact agreement.

Validity papers were used to provide consistent accurate scoring reflective of the scoring guides throughout the entire scoring session. Administering these pre-scored papers throughout scoring would determine whether the scoring teams/individuals were drifting from the original scoring criteria.

3.3 Student Samples

The Forms C and D field testing sample consisted of data from across the United States, including Arkansas, Arizona, California, Colorado, Connecticut, Illinois, Indiana, Louisiana, Nevada, New Mexico, New York, Ohio, Pennsylvania, Texas, Utah, and Washington. Over 75% of the samples were English language learners from Title III programs, and the rest either spoke English as their home language or were proficient English language learners who had been exempted or exited from Title III programs. Detailed demographic frequencies on grade, gender, home language, and ethnicity for the field testing sample can be found in Appendix B.

The sample consisted of approximately 4,000 to 6,000 cases per grade span (K-1, 2-3, 4-5, 6-8, and 9-12). The gender distribution shows that the percentages of female students were about 44% to 48% and had slightly lower percentages than males. More than 60 languages were included in the sample, and among students who specified a home language in the sample, the majority

spoke Spanish at home. The sample included students from a diversity of race and ethnicity backgrounds, with around 50% to 71% reporting being Hispanic/Latino. The demographic distributions are generally similar across the three field test forms at each grade span level on grade, gender, home language, and ethnicity.

3.4 Quality Control Evidence

The field testing design was constructed and reviewed with careful considerations of the types of psychometric analyses to be supported and the feasibility factors in sample acquisition. Distributions of sample sizes across grades and regions were closely monitored during the sample acquisition process. Rigorous requirements were in place and training materials were provided to ensure standardized field test administrations and local scoring of the Speaking items. High-quality imaging equipment, software presentation system, and data management system were used to provide valid and reliable scoring. Systematic quality assurance checks were in place throughout the scoring process to ensure accuracy of the field testing data.

CHAPTER IV SCALE DEVELOPMENT

Chapter 4 provides technical information regarding the psychometric models that were used in the scale development for Forms C and D, and the equating and scaling processes that were implemented. Similar to previous chapters, procedural evidence on quality control is also presented.

4.1 Psychometric Model

CTB/McGraw-Hill used Item Response Theory (IRT) techniques to calibrate and scale the LAS Links items. Since both multiple-choice (MC) and constructed-response (CR) items are included in the test, CTB/McGraw-Hill placed both item types on a single scale, using the three-parameter logistic (3PL) model (Lord & Novick, 1968; Lord, 1980) and the two-parameter partial credit model (2PPC) (Muraki, 1992; Yen, 1993). CTB/McGraw-Hill calibrated and scaled MC items with the 3PL model because it estimates student guessing in addition to item location (difficulty) and allows for differences in item discrimination.

Under the 3PL model, the probability that a student with ability θ responds correctly to item *i* is

$$P_i(\theta) = c_i + \frac{1 - c_i}{1 + \exp\left[-1.7a_i(\theta - b_j)\right]},$$

where a_i is the item discrimination, b_j is the item difficulty, and c_i is the probability of a correct response by a very low-scoring student.

For analysis of CR items, the 2PPC is used. The 2PPC model is a special case of Bock's (1972) nominal model. Bock's model states that the probability of an examinee with ability θ having a score at the *k*-th level of the *j*-th item is

$$P(x_{j} = k - 1 \not \theta) = \frac{\exp Z_{jk}}{\sum_{i=1}^{mi} \exp Z_{ji}}, k = 1...m_{j},$$

where

$$Z_{jk} = A_{jk}\theta + C_{jk},$$

and A_{jk} is the slope of the k-th level and C_{jk} is its intercept.

For the special case of the 2PPC model used here, the following constraints are used.

$$A_{jk} = \alpha_j (k-1)$$
 and $C_{jk} = -\sum_{i=0}^{k-1} \gamma_{ji}$,

where $\gamma_{i_0} = 0$ and α_j and γ_{ji} are the free parameters to be estimated from the data. The first constraint implies that higher item scores reflect higher ability levels and that the items may vary in their discriminations. For the 2PPC model, each item consists of $m_j - 1$ independent γ_{ji} parameters and one α_j parameter; a total of m_j individual item parameters are estimated for each item.

Goodness-of-fit statistics were computed for each item to examine how closely the item's data conform to the item response models. A procedure described by Yen (1981) was used to measure fit. In this procedure, students are rank ordered on the basis of their $\hat{\theta}$ values and sorted into ten cells with ten percent of the sample in each cell. Each item *j* in each decile *i* has a response from N_{ij} examinees. The fitted IRT models are used to calculate an expected proportion E_{ijk} of examinees who respond to item *j* in category *k*. The observed proportion O_{ijk} is also tabulated for each decile, and the approximate chi-square statistic

$$Q_{1j} = \sum_{i=1}^{10} \sum_{k=1}^{m_j} \frac{N (O - E)^2}{E_{ijk}},$$

 Q_{1j} should be approximately chi-square distributed with degrees of freedom (*DF*) equal to the number of "independent" cells, $10(m_j-1)$, minus the number of estimated parameters. The number of score levels for an item *j* are represented by m_j , so for the 3PL model $m_j = 2$, and DF = 10(2 - 1) - 3 = 7. For the 2PPC model, $DF=10(m_j-1)-m_j=9m_j-10$. Since *DF* differs between multiple-choice and constructed-response items and between performance assessment (PA) items with different score levels m_j , Q_{1j} is transformed, yielding the test statistic

$$Z_j = \frac{Q_{1j} - DF}{\sqrt{2DF}} \,.$$

The Z-statistic is useful for flagging items that fit relatively poorly. The statistic takes into account differing numbers of score levels as well as sample size. It is an index of the degree to which obtained proportions of students with each item score are close to the proportions that would be predicted by the estimated thetas and item parameters. Cutoff values for flagging an

item based on Z_j have been developed and were used to identify items for the item review. The cut-off value is (N/1500 x 4) for a given test, where N is the sample size.

4.2 Calibration and Equating

Student responses collected from the Forms C and D field testing were used in IRT calibrations and scaling analyses in order to establish the item parameters for field test items and place them on the LAS Links English Common Scale.

4.2.1 Calibrations

The three-parameter logistic (3PL) model and the two-parameter partial credit (2PPC) model as described in the earlier section were applied to scale the MC items and CR items, respectively. Each of the four domains of Listening, Speaking, Reading, and Writing was calibrated separately, and the calibrations were performed for each of the five grade span levels (K–1, 2–3, 4–5, 6–8, and 9–12). Fit statistics were also obtained using the aforementioned methodology.

The two IRT models (3PL and 2PPC) were estimated using CTB/McGraw-Hill's PARDUX software (Burket, 2002). PARDUX estimates parameters simultaneously for dichotomous and polytomous items using marginal maximum likelihood procedures implemented via the Expectation Maximization (EM) Algorithm (Bock & Aitkin, 1981; Thissen, 1982). Extensive simulation studies and comparisons between PARDUX and MULTILOG (Thissen, 1990), a program widely used for research purposes, have shown that PARDUX provides precise parameter and ability estimate, and it performs more efficiently than MULTILOG (Fitzpatrick, 1991).

Before running the calibrations, items demonstrating poor classical item statistics were removed. During the calibrations, items that did not converge and showed unsatisfactory fit statistics were also removed, and the calibrations were re-run with the updated set of field test items.

4.2.2 The LAS Links English Common Scale

Being able to demonstrate growth is a major advantage for an assessment. Similar to Forms A and B, Forms C and D provide scale scores at the domain and composite levels, in addition to proficiency level scores, to help educators track student growth on the LAS Links English common scale from year to year across Grades K–12.

With the common scale, students' original scale scores can be subtracted from their scores in subsequent years, yielding a measure of growth from one grade level to the next. A common scale allows for comparison of individual and groups of students within grades and across grade

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spans and permits the monitoring of student performance across years. A common scale permits educators to interpret the improvement in student scores from one test administration to the next as evidence of student growth in English language proficiency across grades and years in the bilingual or ESL program. Additionally, common scaling provides a way for linking test forms built for students from different grade spans to a single underlying scale score metric. As separate test forms were built to be grade-span appropriate, linking these test forms allows for tracking progress of individual students as they move from one grade level to the next.

Note that the common scale as implemented in LAS Links does not assume that students in a higher grade level will have greater English language proficiency than those at lower grade levels. This differentiates the common scale from a true vertical scale, the more typical way of developing a test scale to measure growth but one that assumes students have acquired more knowledge and skills in the tested subject at higher grade levels. Since student demonstration of language proficiency is not dependent upon grade level but rather possibly upon the time spent in a quality language program, CTB/McGraw-Hill has used a common scale in the development of LAS Links instead of a vertical scale.

CTB used a sophisticated IRT-based approach to establishing a common scale for LAS Links in 2006. The LAS Links English common scaling employed a common-examinee design, where some groups of students received an on-level test; others in Grades 2, 4, 6, and 9 received an onlevel and a below-level test; and still others in Grades 1, 3, 5, and 8 received an on-level and an above-level test. A concurrent calibration method that assumed separate ability distributions within a given level was then chosen for the common scale linking. This method estimated the mean and standard deviation of the ability distribution for each grade span along with the item parameters for all items across all levels. The middle grade span (Level 3) was assumed to have a mean of zero and standard deviation of one in order for the model to be identified. The concurrent calibration allowed the estimation of item parameters with higher precision for items taken by common examinees while maintaining unidimensionality within a level. A comparison of three vertical scaling methods on the same data set (Karkee, Wang, Green, & Patz, 2006) and vertical scaling in common item design (Karkee, Lewis, Hoskens, Yao, & Haug, 2003) showed that the concurrent method provides similar or in many circumstances better item parameter estimates and scaling results in terms of standard error of measurements, level-to-level growth, level-to-level variability, and separation of scores across grade levels. After the concurrent calibrations, the obtained theta scale was linearly transformed to a final scale score metric with a mean of 500 and a standard deviation of 50.

4.2.3 Placing Forms C and D on the LAS Links English Common Scale

To place Forms C and D on the same LAS Links English common scale that was established in 2006, the scale for Forms C and D was linked to the corresponding scale for Forms A and B, given that Forms A and B were already placed on the LAS Links common scale. Due to limited samples acquired for the LAS Links anchor design scenario (see more information about the design in Chapter 3.1), additional data and student samples from customers were obtained to support a modified linking design, where the linking was performed per grade span level (K–1, 2–3, 4–5, 6–8, and 9–12) per domain (Listening, Speaking, Reading, and Writing) using both the equivalent-sample and common-item approaches.

The equivalent-sample approach was taken as a first step, where test scores from equivalent customer samples obtained on the operational Form B and the operational Form C (which contains items evenly pulled from the three C and D field test forms) were used to find the linking function between Form B scale scores and Form C theta scores (on an arbitrary 0–1 theta metric).

During the linear transformation, the transformation constants (*A* and *B*) were set such that means and standard deviations (SDs) of the equivalent samples were the same on Form B and Form C for the same domain and grade-span level. The obtained transformation constants were then applied to convert the 0–1 theta metric from each Form C domain and grade-span level to the scale score metric on the LAS Links English common scale. The item parameters of Form C were also converted to the scale score metric accordingly.

After placing the Form C item parameters on the LAS Links English common scale with the equivalent-sample approach, the common-item approach was taken, where the Form C items were used as the anchor items to help place all the items from the Forms C and D field test item pool on the LAS Links English common scale. The equating process was conducted using the Stocking-Lord procedure (Stocking & Lord, 1983).

With all the Forms C and D field test items placed on the scale score metric, the resulting test characteristic curves (TCCs), standard error (SE) curves, and item characteristic curves (ICCs) for the Forms C and D field test forms, as well as for the C and D operational forms, were produced and inspected for reasonable performance through the test scale and across grade spans.

4.2.4 Lowest and Highest Obtainable Scale Scores

A maximum likelihood procedure cannot produce scale score estimates for students with perfect scores or scores below the level expected by guessing. Also, while maximum likelihood estimates are available for students with extreme scores other than zero or perfect scores,

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occasionally these estimates have standard errors of measurement that are very large, and differences between these extreme values have little meaning. Therefore, scores are established for these students based on a rational but necessarily non-maximum likelihood procedure. These values are set separately by level and are called the lowest obtainable scale score (LOSS) and the highest obtainable scale score (HOSS). The same LOSS and HOSS values can be used for number-correct and item-pattern scoring.

After placing Forms C and D on the LAS Links English common scale and assembling the operational test forms (see information on form assembly in Chapter 2.4), the test scale bounds per domain and grade-span level were examined based on psychometric properties of the final C and D operational forms and adjusted when needed to optimize the locations for LOSS and HOSS.

Optimizing the LOSSs and HOSSs is valuable in defining scale bounds for more accurate and effective score estimates of students with extreme scores. To minimize impact on users who transition from LAS Links Forms A and B to Forms C and D, all adjustments were made upward so that students' scores would not be artificially lowered due to any change in the scale bounds across the two editions of test forms. The upward adjustment may also benefit high-ability students with additional room provided at the higher scale end to reduce potential ceiling effect.

The final LOSS and HOSS values for LAS Links Forms C and D by domain and grade span are presented in Table 4.1. The derived LOSSs and HOSSs for the five composite scales (Overall, Oral, Comprehension, Literacy, and Productive) are also provided in the table.

In Forms C and D, composite scores are calculated as the unweighted average of the student's scale scores from corresponding domains, and the results are then truncated to the integer part for reporting purposes (see more information on composite scores and their calculation in Chapter 6.2). Accordingly, the LOSSs and HOSSs for the composite scales were derived with the same calculation procedure as the truncated average of the LOSSs and HOSSs from corresponding domains.

Part 1: De	omain-Le [,]	vel Scales						
Crades	Spea	aking	Liste	ening	Rea	ding	Wr	iting
Grades	LOSS	HOSS	LOSS	HOSS	LOSS	HOSS	LOSS	HOSS
K – 1	300	580	300	530	240	550	200	630
2 - 3	350	600	310	560	300	610	270	640
4 - 5	360	635	350	640	360	680	290	680
6 - 8	365	645	360	680	380	690	300	710
9 - 12	370	650	370	730	390	715	310	720

Table 4.1 Forms C/D Lowest and Highest Obtainable Scale Score

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Part 2: Co	omposite	Scales								
Creades	Ove	erall	O	ral	Compre	hension	Lite	racy	Produ	uctive
Grades	LOSS	HOSS	LOSS	HOSS	LOSS	HOSS	LOSS	HOSS	LOSS	HOSS
K – 1	260	572	300	555	270	540	220	590	250	605
2 - 3	307	602	330	580	305	585	285	625	310	620
4 - 5	340	658	355	637	355	660	325	680	325	657
6 - 8	351	681	362	662	370	685	340	700	332	677
9 - 12	360	703	370	690	380	722	350	717	340	685

Note. LOSS = Lowest Obtainable Scale Score; HOSS = Highest Obtainable Scale Score

4.3 Quality Control Evidence

By using LAS Links, customers benefit from the technical expertise that was utilized in the development of the test, such as the use of scale scores, a common scale to track growth, and the test form results based on calibration and scaling analyses with field test data from administration of LAS Links to a national reference group of around 26,000 students. The size of this reference group is important since many publishers of language proficiency assessments use a much smaller reference group and, therefore, do not have the wealth of data that CTB/McGraw-Hill has to support the calibration and scaling of its assessment using advanced psychometric models including 3PL and 2PPC IRT models. The accuracy of the underlying scale in determining student proficiency and measuring growth is enhanced by the quality of the information that has been used to calibrate those scores. This large sample and the use of common K–12 scale support accurate and reliable score results for measuring annual achievement objectives and progress across years.

The LAS Links comprehensive calibration and scaling procedures were evaluated by rigorous quality assurance procedures to facilitate the comparability of test scores and achievement levels across years. Because each of the four content domains—Listening, Speaking, Reading, and Writing—has been calibrated and scaled separately, the scale for each domain is unique, which means that students' scale scores on each domain can be subtracted from their scores in future years, yielding a comprehensive set of measures of growth from one grade level to the next across the four domains.

CHAPTER V RECOMMENDATIONS FOR TEST OPERATIONS

A test is standardized when "directions to examinees, testing conditions, and scoring procedures follow the same detailed procedures" (AERA, APA, & NCME, 1999, p. 61). By ensuring equal opportunities for examinees to demonstrate their ability, standardization supports accuracy of the assessment records, interpretability of the test scores, and fairness in score-based decisions. Test security measures also help to "ensure that no one has an unfair advantage" (p. 61) and therefore contribute to test reliability, validity, and test fairness.

Chapter 5 brings test users' attention to test operations of Forms C and D regarding the supporting administration materials to use, training activities to consider prior to test administration and scoring, familiarity with the test and test administration procedures, the types of test accommodations, and test security measures. Such information is provided with the purpose to inform users in preparing and implementing standardized test administrations in their local contexts.

5.1 Overview of Test Administration Materials

Test materials can be divided into two broad categories: testing materials and ancillary materials. Testing materials are comprised of test books and audio CDs used by students to take the test, whereas ancillary materials are aimed to train administrators and examiners to organize, deliver, and score the test, and to provide meaningful information on test results for scoring and interpretation.

Testing materials consist of the following:

- Audio Compact Discs (K–12), for use in the Listening test
- Student Content Books (4–12), nonscannable, for presenting test content
- Student Answer Books (4–12), scannable, for recording student responses
- Student Answer Books (K–1; 2–3), scannable, for both presenting test content and recording student responses—using only one test book reduces the cognitive and physical burden on young learners when taking a standardized assessment
- Speaking Cue Picture Books (K–1; 2–3), for use with the Student Answer Books in administration of the Speaking test to younger learners

Standard ancillary materials consist of the following:

- · Examiner's Guide, for test administrators
- Interpretation Guide, for test users to interpret reported scores

5.2 Training Activities

Adequate familiarity with test materials, test administration procedures, and scoring rubrics is an important factor in maintaining standardized test administration and scoring across personnel, test sites, and test occasions. When possible, training opportunities are recommended to be made available to all test proctors and assessment coordinators for them to be instructed in standardized test administration and scoring procedures prior to the test administration.

The pre-administration training may take various formats, depending on the local contexts. Commonly observed training formats include on-site trainings, live and recorded online webinars, guided self-study, or any combination of them. On-site training typically has the advantage of being more adaptive and interactive between the trainer(s) and trainees. Live and recorded webinars may be favored when logistics for travelling to physical sites for training are formidable or when on-demand distance learning is more desirable to ensure training opportunities for all personnel. Guided self-study (with possible follow-up Question & Answer activities) may be another alternative to consider especially for small-scoped test administrations.

Major aspects covered in pre-administration trainings usually include an introduction of the test materials to use, overall and subtest test administration procedures, materials handling, security, and Speaking scoring. The scoring component is important in the training because student responses in Speaking are locally scored by test proctors. To help with rater calibrations (or rater norming) to ensure inter-rater and intra-rater reliability, it is recommended that raters gain familiarity with the scoring rubrics and when possible, also receive opportunities to participate in mock scoring scenarios using representative student samples across task types and score levels.

When local scoring of student written responses is involved, similar rater training activities are recommended. When conditions allow, it is recommended that sample papers (or anchor papers) and their assigned scores be provided to raters for reference during the scoring event as well.

Additionally, test users may find it helpful to provide students opportunities prior to test administration to develop familiarity with any perceived new task types in the local educational context and with expectations from these task types on performance. This may help reduce language learner students' anxiety during the test and contribute to their optimal test performance.

5.3 Test Administration

All test sections are untimed to allow students every opportunity to demonstrate their English proficiency. For group tests, it is recommended to try to group students with similar linguistic competence and to keep groups small when most students are taking the test for the first time. In administering all sections of the test, it is always important that the testing area be quiet, comfortable, and without distractions or unusual interruptions.

The Speaking test is expected to be individually administered by a fluent English speaker. In Grades K–3, the examiner reads from the Student Answer Book and points to illustrations in the Speaking Cue Picture Book. In Grades 4–12, the examiner reads from the Student Answer Book and points to illustrations in the Student Content Book. The Speaking test consists of five subtests: *Make Conversation, Use Academic Words, Describe and Request Information, Present and Explain Information*, and *Tell a Story*. Kindergarten students take only the first set of questions in *Present and Explain Information*. All Speaking items are performance-based in format. They measure vocabulary and grammatically correct verbal expressions in social and academic language. Tasks in the Speaking subtest elicit the production of single-word responses as well as multiple sentences related to school-appropriate topics.

The Listening test is usually group-administered by a fluent English speaker using the audio CD. The examiner may not repeat practice items, listening passages, or test questions. The examiner reads aloud directions on how to answer practice questions and helps the students navigate through the test. Students listen to audio passages, such as an announcements, classroom directions, conversations, or discussions, on the audio CD. Questions and answer choices are also presented on the audio CD. The Listening test consists of two subtests: *Listen for Information* and *Listen for Academic Instruction*. All Listening items are multiple-choice in format.

The Reading test is expected to be administered to a group of students by a fluent English speaker who reads from the Examiner's Guide. The Reading test consists of three subtests in Grades K–3: *Read Words, Read School Texts*, and *Read Academic Texts*; and two subtests in Grades 4–12: *Read School Texts* and *Read Academic Texts*. Reading questions are multiple-choice in format with three answer choices (some picture-based and some text-based) in Grades K–3 and four text-based answer choices in Grades 4–12. In Grades K–1, the student reads all prompts and answer choices, but the questions are read to the students by the examiner. Note that Kindergarten students do not take all of the questions in the *Read School Texts* subtest. A new feature of *Read Academic Texts* in Grades 4–12 is the inclusion of four constructed–response questions that require students to complete a table, time line, or illustration with text taken directly from an extended reading passage.

The Writing subtest is typically administered to a group of students by a fluent English speaker who reads from the Examiner's Guide. The subtest consists of four sections for Grades K–1: *Start Writing, Write to Express Ideas, Write Academic Texts*, and *Use Grammar and Conventions* (Note: Kindergarten students do not take the *Write Academic Texts* section). For Grades 2–12, there are three sections: *Use Grammar and Conventions, Write Academic Texts*, and *Write to Express Ideas*. The Writing subtest includes both multiple-choice and constructed-response items that assess the student's knowledge of grammar, word order, and word choice and the student's ability to apply that knowledge to produce sentences and paragraphs that are commonly expected of students at their respective grade levels.

5.4 Test Accommodations

LAS Links 2nd Edition offers both Large Print and Braille versions of the assessment. Large print testing materials are intended for students who are visually impaired and require visual testing accommodations. The Large Print version of the test covers all K–12 grade spans. The Braille test is available to students in Grades 2–12 identified as being blind or visually impaired and requiring an accommodated form to access the test.

The content of the Braille version of the test was based on LAS Links Form C. Following the same protocol as the regular print version of the test, all Braille items were reviewed internally by the Content Development team and externally by a Braille expert. Items that could not be Brailled were replaced with substitute items appropriate for students who are visually impaired. Picture-based items from the standard form were reviewed and substituted for better presentation of the measurement for visually impaired or blind students. Specifically, five item types were developed to replace picture-based items. The five substitute item types are listed below:

- 1. audio-based items
- 2. tactographic items
- 3. performance-based items, where students identify objects
- 4. performance-based items, where students manipulate objects or perform physical actions in response to directions heard
- 5. items with alternative text prompts

Item difficulty and linguistic complexity were carefully matched in the construction of substitute items. Both Large Print and Braille versions of the LAS Links 2nd Edition assessment meet the industry standard specifications.

The listed accommodations for LAS Links are based on CTB/McGraw-Hill's research on accommodations published in the Assessment Accommodations Supplement for TerraNova,

Third Edition (CTB/McGraw-Hill, 2008). These accommodations are divided into three categories (Categories 1, 2, and 3). The categories are organized according to the potential effect of the accommodations on the appropriate interpretation of individual student results.

The list of accommodations is not intended to be exhaustive, nor are the classifications of accommodations intended to be definitive. The purpose is to provide an accommodations-classification framework that can be viewed in light of local policies and used with thoughtful applications. Assessment accommodations must be used in accordance with state and/or district policies.

Category 1 Accommodations

These accommodations are not expected to influence student performance in a way that alters the interpretation of either individual criterion- or norm-referenced test scores. An individual student's scores obtained using Category 1 accommodations should be interpreted in the same way as the scores of other students who take the test under default conditions. The scores of students using Category 1 accommodations may be included in summaries of results without notation of accommodation(s).

Examples of Category 1 accommodations include the following:

Presentation (of test materials)

- Use visual magnifying equipment.
- Use Large Print edition of the test.
- Use audio amplification device or noise buffer.
- Use of marker to maintain place.
- Have directions read aloud (when not normally read by examiner).
- Use a recording of directions aloud (when not normally played by audio device).
- Have directions presented through sign language.
- Use directions that have been marked with highlighting.

Response by student

- Mark responses in test booklet.
- Mark responses on Large Print Answer Book.
- For multiple-choice items, indicate responses to a scribe.
- Record responses on audio device (except for constructed-response writing tests).
- For multiple-choice items, use sign language to indicate response.
- Use a computer, typewriter, Braille writer, or other machine (e.g., communication board) to respond.

- Use a template to maintain place for responding.
- Indicate responses with other communication devices (e.g., speech synthesizer).
- Use a spell checker, except with a test for which spelling will be scored.

Setting

- Take the test at home or in a care facility (e.g., hospital) with supervision.
- Use adaptive furniture.
- Use special lighting and/or acoustics.
- Have the format of the test clarified.
- Have directions explained/clarified in English.
- Have directions explained/clarified in native language.
- Have both oral and written directions provided in English.
- Have directions (including recorded directions) translated into native language.

Category 2 Accommodations

These accommodations may have an effect on student performance, which should be considered when interpreting individual criterion- and norm-referenced test scores. In the absence of research demonstrating otherwise, scores and any consequences or decisions associated with them should be interpreted in light of the accommodation(s) used.

Examples of Category 2 accommodations include the following:

Presentation (of test materials)

- Have stimulus material, questions, and/or answer choices read aloud, except for the listening or reading tests.
- Use a recording for stimulus material, questions, and/or answer choices, except for the reading tests, when not normally delivered via recording.
- Have stimulus material, questions, and/or answer choices presented through sign language, except for the listening and reading tests.
- Use communication devices (e.g., text-talk converter), except for the reading tests.

Response by student

• For constructed-response items, indicate responses to a scribe, except for the writing tests.

Category 3 Accommodations

These accommodations change what is being measured and are likely to have an effect that alters the interpretation of individual criterion- and norm-referenced scores. This occurs when the accommodation is strongly related to the knowledge, skill, or ability being measured (e.g., having a reading test read aloud). In the absence of research demonstrating otherwise, test scores and any consequences or decisions associated with them should be interpreted not only in light of the accommodation(s) used, but also in light of how the accommodation(s) may alter what is measured.

Examples of Category 3 accommodations include the following:

Presentation (of test materials)

- Use Braille or other tactile form of print.
- On the listening and reading tests, have stimulus material, questions, and/or answer choices presented through sign language.
- On the reading tests, use a text-talk converter when the test taker is required to construct meaning and decode words from text.
- On the reading tests, use a recording of stimulus material, questions, and/or answer choices.
- Have directions, stimulus material, questions, and/or answer choices paraphrased.
- Use a dictionary when language conventions are assessed.

Response by student

- For a constructed-response writing test, indicate responses to a scribe.
- Use spelling aids, such as spelling dictionaries (without definitions) or spell/grammar checkers, for a test for which spelling and grammar conventions will be scored.
- Use a dictionary to look up words on the writing tests.

5.5 Test Security

According to the Standards for Educational and Psychological Testing (1999), "Test users have the responsibility of protecting the security of test materials at all times." (p. 64) To avoid unintended exposure of test material content to teachers and students prior to testing, all test materials should be kept confidential and secure. No part of the test materials (e.g., Student Content Books, Student Answer Books, Cue Picture Books, audio CDs, and Examiner's Guide) may be reproduced. Test security should be addressed with examiners and assessment coordinators before test administrations. It is recommended that directions be provided to relevant personnel regarding how to handle and maintain test materials and relevant documentation (such as confidential training materials) in a secure manner, and not to share them with students prior to testing.

CHAPTER VI SCORING AND REPORTING

To inform users in their score interpretations and score uses, Chapter 6 presents the LAS Links English proficiency levels and related standard-setting process for Forms C and D. In addition to proficiency level scores, other major types of scores and reports offered by Forms C and D are also summarized in this chapter.

6.1 Proficiency Levels and Performance Standards

State ELP standards are often used to explain what should be taught and what should be tested. Performance standards, including cut scores and proficiency level descriptors (PLDs), are used by states to define how much of the tested content must be achieved for a student to meet the state's performance levels. In 2005, CTB/McGraw-Hill convened a national committee of ELL educators to establish five language proficiency levels for LAS Links using a modification of the Bookmark Standard Setting Procedure (Lewis, Mitzel, & Green, 1996; Lewis, Mitzel, Mercado, & Schulz, 2012).

Although the LAS Links Forms C and D assessments are on the same scale as the first generation of LAS Links Forms A and B assessments, and the two editions of LAS Links generally assess the same construct, CTB determined that the cut scores for LAS Links Forms C and D should be reviewed in light of modifications made to the test blueprint to augment the measurement of academic language.

CTB conducted a review of the performance standards to determine if the existing cut scores were still appropriate and valid for the new assessments. The cut score review process can be viewed as an extension of the 2005 standard setting process, extending the standard setting committee's work to the new version of LAS Links.

The cut score review for LAS Links 2nd Edition convened a committee of ELL educators. These ELL educators reviewed the 2005 cut scores for LAS Links and found them to be applicable to Forms C and D. These educators also updated the PLDs to summarize the English-language skills that are held by students in each proficiency level as demonstrated in Forms C and D in light of the general LAS Links English proficiency level definitions.

The Bookmark Standard Setting Procedure is a widely used standard setting method to set cut scores for large-scale assessments in the United States. Accordingly, the performance standards established for LAS Links are defensible and should meet states' needs. A similar methodology was used to review cut scores and to revise PLDs for LAS Links Forms C and D.

6.1.1 Cut Score Review

The LAS Links English cut scores divide the scale into five proficiency levels: Beginning, Early Intermediate, Intermediate, Proficient, and Above Proficient. The proficiency level definitions use broad terms to define the types of English-language skills that students demonstrate to place in each proficiency level. The proficiency levels, proficiency level definitions, cut scores, and PLDs comprise the performance standards for LAS Links. States, school systems, educators, and stakeholders can use the LAS Links performance standards to present and to understand students' test results in a coherent manner.

The cut score review process comprised two phases:

- Phase 1: A committee of ELL educators engaged in a modified Bookmark Standard Setting Procedure to make judgments about the English-language skills that students are expected to have in each proficiency level.
- Phase 2: A subset of the committee of ELL educators worked in partnership with CTB Content Development and Research staff to review the cross-grade articulation of the cut scores to make policy-based decisions resulting in a coherent overall system of performance standards for LAS Links Forms C and D.

The two-phased cut score review enabled CTB/McGraw-Hill to obtain input on the reasonableness of the cut scores from a group of educators with experience teaching ELLs. In addition, CTB was able to support the consistency of the cut scores across all grades in the LAS Links assessment system. The following text describes both phases of the cut score review process. The final cut scores resulting from the cut score review are summarized in Table 6.1.

Phase 1: Modified Bookmark Procedure

Staff from CTB/McGraw-Hill designed and conducted the LAS Links Forms C and D Cut Score Review in Monterey, California on July 8–11, 2013. A modified Bookmark Standard Setting Procedure was used to review cut scores for 20 grade and domain combinations: Kindergarten and Grades 2, 4, 7, and 11 in Listening, Speaking, Reading, and Writing. These were the same 20 grade and domain combinations considered by the original LAS Links standard setting committee in 2005. The cut scores for all other grades and composite scores were derived from the cut scores of these grades and domains.

The modified Bookmark Procedure consisted of training, orientation, proficiency level description (PLD) writing, and two rounds of discussion and decision-making. Participants were divided into two groups: one group focused on Speaking and Listening, and another group

focused on Reading and Writing. Each group was composed of four participants who worked individually and in concert to review the performance standards for LAS Links Forms C and D. CTB Content Development staff facilitated each group through the cut score review procedure. These facilitators had recent training in the cut score review methodology.

Participants

CTB/McGraw-Hill turned to experienced teachers and curriculum specialists with expertise with English language learners to review the cut scores for LAS Links Forms C and D. CTB sought professionals with a deep understanding of the four domains and of the types of Englishlanguage skills that students should have in each grade level and invited eight participants to take part in the cut score review. Participants used their expertise and insight to recommend performance standards for LAS Links Forms C and D.

Materials

The Bookmark Standard Setting Procedure, as implemented for the cut score review, relied on two key materials: ordered item books and item maps.

CTB developed an ordered item book for each of the 20 grade and domain combinations of Forms C and D cut score reviews. Each ordered item book comprised the multiple-choice and constructed-response items from Forms C and D. The items were ordered by difficulty based on the item response theory (IRT) parameters for the items. The test data used to create the ordereditem booklets were scored using 3PL and 2PPC IRT model to place multiple-choice and constructed-response items on the same test scale.

Item maps summarize the materials in the ordered item book and indicate each item's IRT scale location, the booklet number on the operational test, the correct answer, and the standard that the item measures. CTB created an item map to accompany each of the 20 ordered item books.

Each item map referenced the existing LAS Links cut scores. For each item map, the existing LAS Links cut scores were represented by bookmarks that showed the sets of items that students would be expected to master in each proficiency level. For example, a bookmark might indicate that students in the Early Intermediate proficiency level were expected to master the first 12 items on the item map.

Methodology

The participants used the ordered item books and item maps to write new PLDs for LAS Links Forms C and D by (a) associating the items on the item map with the proficiency level the items best aligned to and (b) summarizing the English-language skills measured by the items associated with each proficiency level. For example, if the LAS Links cut scores indicated that

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Early Intermediate students were expected to master the first 12 items on the item map, then participants summarized the English-language skills measured by the 12 items to create the Early Intermediate PLD. Other PLDs were created using a similar approach.

For each grade and domain combination, participants considered a key question: "Are the new PLDs comparable with the old PLDs in terms of the overall level of rigor?" Specifically, participants considered whether the PLDs they developed for LAS Links Forms C and D were consistent with the PLDs from the original edition of LAS Links. The phrase "overall level of rigor" refers to the overall level of the English-language skills expected of students in each proficiency level. Because the new PLDs were created by applying the existing cut scores to LAS Links Forms C and D, consistency between the two sets of PLDs would comprise evidence that the cut scores established during the 2005 standard setting were valid for use with LAS Links Forms C and D.

Participants understood that the newer forms measure English language proficiency somewhat differently from the older forms. Accordingly, CTB advised participants that the new PLDs could vary somewhat from the older ones on the surface.

The PLDs guided participants' cut score recommendations. If the new PLDs, written for LAS Links 2nd Edition, were consistent with the older PLDs, then participants could recommend that the cut scores remain the same. However, if the PLDs were not consistent, then participants were instructed to recommend adjustments to the cut scores that would bring the new PLDs into line with the overall levels of language skills referenced by the older PLDs.

Participants considered the PLDs for each grade and domain combination. Working over two rounds of discussion and decision-making, participants made recommendations for each cut score. The committee recommended minor adjustments to some cut scores and no changes to others. CTB evaluated each of participants' recommendations during the second phase of the cut score review.

The first phase of the cut score review closed with a participant review of the PLDs for consistency across grade spans. This resulted in a system of PLDs that represented a specific, cohesive description of students' language abilities in English at each grade range and proficiency level in each of the four domains: Speaking, Listening, Reading, and Writing. These PLDs are designed to give teachers and stakeholders a useful profile of student's performance on LAS Links Forms C and D to support growth along the language continuum. See Appendix D for the PLDs by grade span and domain.

Phase 2: Policy-Based Review of the Cut Scores

A subset of cut score review participants worked in partnership with CTB Content Development and Research staff to review the entire system of cut scores. The goals of this policy-based review were two-fold: to promote a cohesive system of well-articulated performance standards across grades; and to evaluate the differences in the cut scores, if any, between LAS Links 2nd Edition and the original version of LAS Links.

The policy review committee found that participants' recommended cut scores were wellarticulated across grades, as were the original LAS Links cut scores. Moreover, the committee found that participants' recommended adjustments to the cut scores were generally minor: participants' recommended adjustments were typically well below one standard error of measurement (SEM) in magnitude.

To promote consistency with the original version of LAS Links, acknowledging that the recommended cut score adjustments were very minor, and honoring the voice of the national committee of ELL educators convened at the original LAS Links standard setting, the policy committee deemed participants' recommendations consistent with the original cut scores. The original cut scores may be applied to LAS Links Forms C and D without adjustment and are consistent with the judgments of both the 2005 standard setting committee and the 2013 cut score review committee.

6.1.2 Cut Score Results

The original cut scores established as part of the 2005 standard setting were validated by the 2013 cut score review process for use with LAS Links 2nd Edition. Additionally, cut scores for the new composite scales of Productive (PR) and Literacy (LT) were derived as the truncated average of the cut scores from corresponding domains.

The final cut scores at both the domain- and composite-levels are presented in Table 6.1. Forms C and D Raw Score to Scale Score Tables with the cut scores applied are included in Appendix E.

Proficiency Level Mastery	SK	LI	RD	WR	OV	OR	СО	LT	PR
	Kindergarten								
1	430	426	355	347	389	430	386	351	388
2	461	444	381	417	425	461	412	399	439
3	496	470	421	488	468	487	449	454	492
4	550	520	475	516	515	526	467	495	533
		-	Gr	ade 1	-	-		-	
1	432	432	360	355	394	432	390	357	393
2	462	450	385	435	433	463	416	410	448
3	496	476	423	489	471	490	452	456	492
4	551	521	479	535	521	530	486	507	543
			Gr	ade 2					
1	443	442	435	425	436	443	448	430	434
2	473	462	472	475	470	470	473	473	474
3	509	492	499	504	501	495	495	501	506
4	557	536	547	544	546	540	531	545	550
	T		Gr	ade 3			0		
1	443	447	436	428	438	444	452	432	435
2	474	468	474	484	475	471	482	479	479
3	509	504	504	529	511	505	500	516	519
4	558	546	549	560	553	548	533	554	559
			Gr	rade 4		4.50			
1	449	457	468	434	452	450	485	451	441
2	475	484	504	498	490	478	506	501	486
3	510	525	535	533	525	514	526	534	521
4	559	581	588	584	578	5/5	563	586	5/1
1	4.40	450	Gi	rade 5	452	450	401	450	4.42
1	449	458	4/0	435	453	452	491	452	442
2	4/5	490	505	499	492	485	509	502	48/
3	511	528	536	538	528	516	531	537	524
4	559	384	390	383 10 do 6	579	380	575	387	572
1	451	462	501		165	155	400	171	440
2	431	402	520	447	403	433	499 514	4/4 512	449
2	512	409 522	529	498	498 527	401 519	540	552	40/ 520
3	560	586	608	501	586	575	574	500	575
+	300	380	008 Gr	391 ade 7	380	575	574	399	575
1	451	463	502	$\frac{1}{1}$	165	460	500	171	110
2	<u>477</u>	492	530	498	400	485	517	514	487
3	513	533	560	548	538	521	546	554	530
<u> </u>	560	588	608	592	587	580	576	600	576
Grade 8									
1	451	467	502	448	467	465	501	475	449
2	477	498	532	499	501	492	519	515	488

Table 6.1 Forms C/D Final Cut Scores by Grade

Proficiency Level Mastery	SK	LI	RD	WR	OV	OR	со	LT	PR
3	514	535	561	548	539	525	553	554	531
4	560	590	608	593	587	582	579	600	576
			Gr	ade 9					
1	452	471	507	449	469	465	512	478	450
2	478	509	545	500	508	490	534	522	489
3	515	546	581	549	547	525	567	565	532
4	560	625	632	594	602	561	597	613	577
Grade 10									
1	452	475	508	449	471	468	514	478	450
2	478	511	546	500	508	495	536	523	489
3	516	550	582	549	549	527	569	565	532
4	560	627	633	594	603	566	606	613	577
Grade 11									
1	452	480	509	450	472	471	515	479	451
2	479	516	547	501	510	497	540	524	490
3	517	555	583	550	551	530	575	566	533
4	560	630	634	595	604	567	608	614	577
Grade 12									
1	452	481	510	451	473	472	515	480	451
2	479	517	548	502	511	500	540	525	490
3	518	560	584	550	553	531	575	567	534
4	560	633	635	596	606	569	610	615	578

Note. SK=Speaking. LI=Listening. RD=Reading. WR=Writing. OV=Overall. OR=Oral. CO=Comprehension. LT=Literacy. PR=Productive.

6.2 Types of Scores

To inform instructional decisions at various levels, LAS Links Forms C and D report five major types of scores based on observed student test performance: 1) scale scores, 2) proficiency level scores, 3) normative scores, 4) strand scores, and 5) Lexile[®] measures.

6.2.1 Scale Scores

Scale scores are units of a single equal-interval scale that is applied across all levels of a test regardless of grade or time of year of testing. Scale scores characterize proficiency in absolute terms without making comparisons to the proficiency or growth of students in a reference group. Higher scale scores indicate higher proficiency, and growth in scale score units indicates growth in proficiency. The equal-interval property of the scale makes scale scores especially appropriate for various statistical purposes. For example, scale scores can be added, subtracted, and averaged across test levels. Such computations permit direct comparisons of classes, schools, or entire districts.

LAS Links Forms C and D consist of four separately scaled sections: Listening, Speaking, Reading, and Writing. This allows for monitoring students' linguistic profiles across domains and tracking their growth in each domain. The base scales (Listening, Speaking, Reading, and Writing) are scored using raw-to-scale score tables (see the scoring tables in Appendix E). For each domain there is one table for each grade span per test form (C or D). The raw scores (RSs) for the tests are listed in the first column, their corresponding scale scores (SSs) in the second column, standard error of measurement in the third column, and proficiency level in the fourth column. To obtain the scale score that corresponds to a student's raw score on a test form, locate the corresponding table, find the raw score in the first column, and follow the row to the second column in the table.

In addition to the base scales, Forms C and D provide five composite scales: Overall, Oral, Comprehension, Literacy, and Productive. The composite scores are computed as the truncated average scale scores from corresponding base scales. Table 6.2 presents the correspondence between the composite scales and the four base scales.

Commonite Seelen	Base Scales					
Composite Scales	Listening	Speaking	Reading	Writing		
Overall	Х	Х	Х	Х		
Oral	Х	Х				
Comprehension	Х		Х			
Literacy			Х	Х		
Productive		Х		Х		

Table 6.2 Correspondence Between Composite Scales and Base Scales

Overall (based on Listening, Speaking, Reading, and Writing)

By averaging scale scores across domains, the Overall score provides a composite index of language proficiency that reflects not only language ability that is important and transferrable across domains (e.g., grammar knowledge), but also proficiency that is domain-specific (e.g., processing audio input in Listening). Both the general and domain-specific components of language proficiency are important contributing factors to success in real-life communications.

Oral (based on Listening and Speaking)

The Oral score, with a combination of the Speaking and Listening scores, demonstrates students' skills in a contextually appropriate approach. In the Listening section of the test, students listen to input, such as announcements or conversations, and then answer multiple-choice questions. Listening involves the receptive skills of making sense of sounds, stress patterns, words, phrases, and then interpreting meaning. The Speaking section of the test involves responding to information or interacting with another person by constructing meaning through sounds, words, phrases, stress patterns, and expressions of language. These skills are by no means an exhaustive

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list, but they do show a close relationship of the two domains. Oral language is necessary for students to interact, collaborate, and participate in social and academic tasks and practices.

Comprehension (based on Listening and Reading)

The Comprehension score, with a combination of the Listening and Reading scores, provides educators with an overview of students' understanding of spoken and written text. Comprehension is a necessary element of language learning and academic success. Students' comprehension skills in the Listening and Reading sections of the test involve skills that range from recognizing word and sound relationships and processing and developing vocabulary through context, to identifying patterns and analyzing, inferring, and connecting meaning or ideas. The comprehension score can help educators and other stakeholders track students' comprehension development. Once students begin to internalize the language that they hear or read, they will begin to build a foundation to learn a new language and support lifelong learning.

Literacy (based on Reading and Writing)

The Literacy score, with a combination of the Reading and Writing scores, provides educators with an overview of students' ability to read and write for various purposes. Literacy can be traditionally defined as the process of gaining and conveying meaning from written text. Students taking the Reading and Writing tests engage in a range of complex reading processes, including word-sounds relationships, spelling, word and sentence structure, vocabulary, and comprehension, among other important skills. As student gain reading skills, they also begin to learn to compose written text.

Productive (based on Speaking and Writing)

The Productive score, with a combination of the Speaking and Writing scores, provides educators with an overview of students' ability to produce language. Language production, whether in written or in spoken form, is about creating meaning to express oneself. Productive skills in the Speaking and Writing sections of the test include producing vocabulary, displaying knowledge of grammar usage, performing functions (e.g., requests, clarifications, directions, etc.), creating clear messages, and building coherent discourse. Measuring students' productive skills can help teachers understand students' skills and ability to interact and communicate in and out of the classroom.

6.2.2 Proficiency Level Scores

While the scale scores can be used to measure student growth from year to year and across grade spans, proficiency levels provide a broader categorization for the purposes of reporting. For each of the nine reported scales (Listening, Speaking, Reading, Writing, Overall, Oral, Comprehension, Literacy, and Productive), Forms C and D classify students into five LAS Links proficiency levels: Beginning, Early Intermediate, Intermediate, Proficient, and Above Proficient. Such classification is based on the LAS Links Forms C and D cut scores, and the cut scores are scale- and grade- specific. A summary of the cut scores can be found in Table 6.1 of Chapter 6, and the correspondence among raw scores, scale scores, and proficiency levels per grade for each test form is presented in Appendix E.

The LAS Links Forms C and D proficiency level definitions and proficiency level descriptors (PLD) are provided to facilitate interpretation of the proficiency level scores. Proficiency level definitions define in broad terms what students are able to do at each corresponding proficiency level, and the PLDs are detailed explanations of what skills a student can be expected to demonstrate at each proficiency level, and are meant to give teachers a helpful profile of a student's performance with an eye toward the next steps along the language development continuum. The same information can also be given to parents, guardians, or other stakeholders so they have a clear understanding of what students have learned and what English-language skills are yet expected to be developed. The Forms C and D proficiency level definitions and PLDs can be found in Appendix D.

6.2.3 Normative Scores

LAS Links Forms C and D use reference group norms and provide two types of normative scores: percentile rank (PR) and normal curve equivalent (NCE). The reference group norms were derived using the scale score distributions of the LAS links Forms C and D field testing sample as described in Chapter 3. Summative scale score statistics of the standardized field testing sample which was used in the norming analyses are provided in Appendix C.

The PR and NCE scores are available for each of the nine LAS Links Forms C and D scales, namely, Listening, Speaking, Reading, Writing, Overall, Oral, Comprehension, Literacy, and Productive.

Percentile rank

A percentile rank indicates the percentage of scores in a norm group that fall at or below a given student's score. For example, if a student's Speaking score converts to a percentile rank of 74, then the student scored higher than approximately 74% of the students in the LAS links normative group.

Note that a scale of percentile ranks is not composed of equivalent units; a given difference between two percentile ranks is larger in terms of the underlying scale score units usually near either end of the distribution than near the middle. For example, the Reading score difference at Grades 6–8 between percentile ranks of 96 and 92 is 23 (635–612), which is greater than the

Reading score difference between percentile ranks of 69 and 65, which is 7 (568–561). This characteristic makes percentile ranks unsuitable for computing means.

Percentile ranking was calculated using the following equation:

$$P_{ss} = 100 * \frac{\sum_{j=0}^{SS-1} N_j + 0.5 * N_{ss}}{N_{total}},$$

where N_j is the number of students that have scale score *j*. The above formula gives the percentile rank of scale score (*ss*).

To obtain the percentile rank for a student on a particular domain or composite scale, find the scale score (or scale score range) in the appropriate table and column in Appendix E and follow the row to find the corresponding percentile rank in the column labeled "PR".

Normal curve equivalent

The NCEs have many characteristics in common with percentile ranks, but have the additional advantage of being based on an equal-interval scale. That is, the difference between consecutive scores on the scale has the same meaning throughout the scale. The normal curve is represented on a scale of 1 through 99, with a mean of 50 and a standard deviation of approximately 21. The use of NCEs allows meaningful comparisons between different assessment series and between different tests within the same assessment series. For example, if a student has NCE scores of 76 in Listening and 52 in Speaking, this student is well above average in Listening but slightly above average in Speaking. The NCEs obtained by different groups of students on the same test form may also be averaged for purposes of comparison.

The NCE is a transformation of the PR.

$$NCE = \Phi_{50,21.063}^{-1}(p),$$

where p = percentile score (e.g., 0.5); $\Phi_{50,21.063}$ () is the distribution function of normal (50, 21.063). That is, the NCE is the quartile of distribution N(50, 21.063) for p.

Similar to looking up the PR values, to obtain the NCE for a student for a given domain or composite scale, locate the scale score (or scale score range) in the appropriate table and column in Appendix E and look across the row to find the corresponding NCE in the column labeled

"NCE."

6.2.4 Strand Scores

As noted in Chapter 2, four language context strands are interwoven through each core language domain in LAS Links Forms C and D. These strands include:

- Social, Intercultural, and Instructional Communication (SIIC)
- Language Arts, Social Studies, and History (LA/SS/H)
- Mathematics, Science, and Technical Subjects (MA/SC/TS)
- Foundational Skills (FS)

Based on various combinations of the four strands, a total of nine subskill score categories were selected for reporting in LAS Links Forms C and D. Those subskill score categories are listed in Table 6.3. Most of the subskill score categories have a total of six or more maximum possible score points. Any subskill categories with less than three maximum possible score points are excluded from reporting.

Note that the Social, Intercultural, and Instructional Communication (SIIC) strand is considered for a broader view of general language use at school and therefore is not included in any reported academic subskill categories that are directly related to engaging with academic content.

Domain/Composite	Subskill Category	Corresponding Strands		
Listening	Listening Academic	Listening: a) LA/SS/H; b) MA/SC/TS		
	Social, Intercultural, and	Listening: SIIC		
	Instructional Communication			
	Language Arts, Social	Listening: LA/SS/H		
	Studies, and History			
	Mathematics, Science, and	Listening: MA/SC/TS		
~	Technical Subjects			
Speaking	Speaking Academic	Speaking: a) LA/SS/H; b) MA/SC/TS		
	Social, Intercultural, and	Speaking: SIIC		
	Instructional Communication			
	Language Arts, Social Studies and History	Speaking: LA/SS/H		
	Mathematics Science and	Speaking: MA/SC/TS		
	Technical Subjects	Speaking. WA/SC/15		
Reading	Reading Academic	Reading: a) FS: b) LA/SS/H: c) MA/SC/TS		
reading	Foundational Reading	Reading: FS		
	Social. Intercultural. and	Reading: SIIC		
	Instructional Communication			
	Language Arts, Social	Reading: LA/SS/H		
	Studies, and History			
	Mathematics, Science, and	Reading: MA/SC/TS		
	Technical Subjects			
Writing	Writing Academic	Writing: a) FS; b) LA/SS/H; c) MA/SC/TS		
	Foundational Writing	Writing: FS		
	Social, Intercultural, and	Writing: SIIC		
	Instructional Communication			
	Language Arts, Social	Writing: LA/SS/H		
	Mathematics Science and	Writing: MA/SC/TS		
	Technical Subjects	witting. MA/SC/15		
Recentive	Receptive Academic	Listening: a) LA/SS/H: b) MA/SC/TS		
leephve		Reading: a) FS; b) LA/SS/H; c) MA/SC/TS		
Productive	Productive Academic	Speaking: a) LA/SS/H; b) MA/SC/TS		
		Writing: a) FS; b) LA/SS/H; c) MA/SC/TS		
Oral	Oral Academic	Listening: a) LA/SS/H; b) MA/SC/TS		
		Speaking: a) LA/SS/H; b) MA/SC/TS		
Literacy	Literacy Academic	Reading: a) FS; b) LA/SS/H; c) MA/SC/TS		
		Writing: a) FS; b) LA/SS/H; c) MA/SC/TS		
Social, Intercultural,	Social, Intercultural, and	Listening: SIIC		
and Instructional	Instructional Total	Speaking: SIIC		
		Reading: SIIC		
		Writing: SIIC		
Language Arts, Social	Language Arts, Social	Listening: LA/SS/H		
Studies, and History Studies, and History otal		Reading: LA/SS/H		

 Table 6.3 List of Subskill Score Categories and Correspondence to the Four Strands

Domain/Composite	Subskill Category	Corresponding Strands		
		Writing: LA/SS/H		
Mathematics, Science,	Mathematics, Science, and	Listening: MA/SC/TS		
and Technical Subjects	Technical Subjects Total	Speaking: MA/SC/TS		
		Reading: MA/SC/TS		
		Writing: MA/SC/TS		

It is worth noting that all these subskill categories use raw scores. Unlike scale scores, the raw scores can only be compared between students on the same test form for the same subskill category. As limited test items are available in each subskill category, it is highly recommended that users apply these scores primarily for low-stakes instructional decisions, and base their decisions on a triangulation of evidence from multiple sources, such as teacher classroom observations and student performance on assignments, in conjunction with the use of the reported subskill scores.

To facilitate interpretation and use of the subskill scores, LAS Links Forms C and D also provide users an opportunity to compare students' subskill scores against a fixed reference group index which is called reference group average (RGA). RGA is similar to the statistic of class average that has been typically used to interpret a student's relative raw-score performance in a given class. The major difference between the two indices is that the class average is dynamic and dependent on performance of the local class, whereas RGA is fixed and was derived based on performance from the LAS Links Forms C and D field testing sample. There is a fixed RGA value per subskill category for each grade span level (K, 1, 2–3, 4–5, 6–8, and 9–12). Teachers may use the RGA to compare a student's performance against the field testing sample (which serves as the reference group) to see if it is below or at/above the RGA on a given subskill category. Such information, in combination with that based on the class average, may provide teachers a more complete picture about a student's strengths and weaknesses on relevant subskills and help teachers target instruction accordingly. Similar to the class average, the RGA is intended for low-stakes formative uses only.

The RGA on each subskill category was obtained as the expected raw score mean of the reference group on the corresponding collection of test items. The expected raw score for an examinee with scale score θ is calculated using the following formula.

$$X(\theta) = \sum_{i=1}^{n_{sr}} P_i(\theta) + \sum_{j=1}^{n_{sr}} \sum_{k=1}^{m_j} (k-1) P_{jk}(\theta),$$

where

 n_{sr} is the number of selected-response items in the item collection;

 n_{cr} , the number of constructed-response items;

 m_t , the number of score categories of each constructed-response item;

P, the probability of answering the item correctly (for selected-response items) or being assigned the particular score category (for constructed-response items), derived using the 3PL/ 2PPC IRT models, with provided IRT item parameters and scale score θ .

6.2.5 Lexile® Measures

LAS Links Forms C and D provide users an option of reporting students' Lexile[®] measures, Lexile ranges, and a list of books based on the students' Lexile ranges. A student's Lexile measure is derived dynamically based on the student's scale score on LAS Links Forms C and D Reading, using a pre-determined linear transformation function to statistically define the correspondence between the two types of scores (MetaMetrics, 2013).

The linear transformation function was obtained with a common-examinee approach, where students in the LAS Links Forms C and D field testing took both assigned Lexile Reading items and LAS Links Forms C and D field test Reading items.

To facilitate instructional uses, the reported Lexile measures are rounded to the nearest 0 or 5 and also have the lower and upper scale bounds imposed.

A student's Lexile range is computed as a range from 100L below the reported Lexile measure to 50L above the Lexile measure. For example, if a student's Lexile measure is 800L, the student's Lexile range will be 700L to 850L. The student's Lexile range can then be used to match students with books at a level that provides challenges but not frustration.

6.3 Types of Reports

Score reports are an important vehicle for effectively communicating student test performance to stakeholders to inform their score-based decisions. In the design of LAS Links Forms C and D score reports, the five score types as described in Chapter 6.2 were carefully selected and organized into different score reports for each target group of stakeholders and reported at either the individual or group level depending on the intended purpose of the report. The major target groups of stakeholders in LAS Links Forms C and D reporting include students, parents/guardians, teachers, and administrators.

To provide flexibility and effectively address local educational needs, LAS Links Forms C and D offer four general channels of communication for reporting: a) paper-and-pencil, b) electronic (e.g., the PDF version of printed reports and electronically portable data files), c) online dynamic

reports that are generated through CTB facilities, and d) local reporting with CTB-provided templates for calculating and reporting scores.

CHAPTER VII TEST EVALUATION

Evaluation of intended test uses is a dynamic local process, where judgments about the extent to which the intended uses of a given test are justified "may be influenced by a variety of contextual factors including but not limited to the types of stakeholders involved (e.g., test takers, parents, admission officers, and university professors), the stakes of the test, the priorities and regulations of the local educational institutions, the availability of resources, and the cultural, societal, and educational value systems of the stakeholders" (Wang, Choi, Schmidgall, & Bachman, 2012, p. 604). The perceived impact of contextual factors on the judgments invite the test users' participation in evaluating and determining the degree of appropriate test use and interpretation for their specific setting, as suggested in Chapter 11 (*The Responsibility of Test Users*) of the Standards for Educational and Psychological Testing (1999).

Overall, this technical manual intends to provide a high-level guidance regarding the general types of intended uses of LAS Links Forms C and D and to serve as a documentation of the procedural and internal evidence regarding the test development and assembled test forms to support the test users' local evaluation and judgment of their substantiated local test uses. The test users are also encouraged to collect additional evidence pertinent to their evaluation, such as concurrent evidence that investigates the relationship between students' LAS Links test scores and scores on other locally-used language proficiency measures, and consequential evidence about the locally observed impact of the use of the test and test scores on school teaching and student learning.

The present chapter describes in Chapter 7.1 key statistics at the item- and test- levels based on data from the LAS Links Forms C and D field testing with the purpose to facilitate empirical evaluation of the test forms as part of the internal evidence. Furthermore, procedural and internal evidence that relates to test fairness as documented throughout this technical manual is summarized and presented in Chapter 7.2, which is followed by an overall summary and discussion of evidence on reliability and validity in Chapter 7.3.

7.1 Empirical Evidence from Field Testing

7.1.1 Item Difficulty and Discrimination Power

Item-level statistics such as *p*-value are useful in describing how items perform from a classical test theory approach. Such evidence may inform users of the test quality on an item-by-item basis from an empirical perspective.

The *p*-value for a multiple-choice (MC) item represents the proportion of students who answered the item correctly. The *p*-value for a constructed-response (CR) item represents the mean raw score for the item divided by the maximum possible score for that item.

As an operational test form is typically assembled with items selected from a field-testing item pool, and students from the field testing seldom had the opportunity to take the entire set of items selected in the operational test form, it is difficult, if not improbable, to directly calculate *p*-values using student item-level scores observed from field testing. To still provide readers a general picture about the test-item performance, expected *p*-values were calculated and reported. In this approach, ability distributions of the field testing sample at each domain and grade span level were used, and item-level scores were estimated using the corresponding student ability score distribution and the IRT item parameters for the particular item.

Let $f(\hat{\theta})$ be the relative frequency of $\hat{\theta}$ in the normative distribution of interest for a test and level; it should be noted that $\hat{\theta}$ is a maximum likelihood estimate based on item-pattern scoring. The LOSS and the HOSS are defined as the lowest and highest obtainable scale scores, respectively, and they cover the range of scale scores obtainable for any given level of a test. The estimated proportion-correct score (*p*-value) for the *i*-th selected-response item in a test is

$$\hat{P_i} = \sum_{\hat{\theta} = \text{LOSS}}^{\text{HOSS}} \hat{P_i(\hat{\theta})} f(\hat{\theta}).$$

The estimated percentage of maximum score (*p*-value) for the *j*-th constructed-response item in a test is

$$\hat{P}_{j} = \sum_{\hat{\theta} = \text{LOSS}}^{\text{HOSS}} \hat{P_{j}}(\hat{\theta}) f(\hat{\theta}),$$

where

$$\hat{P}_{j}(\theta) = \frac{1}{m-1} \sum_{k=1}^{j} (k-1) P_{jk}(\theta).$$

The average *p*-value for an *n*-item test is

$$P = \frac{1}{n} \left[\sum_{i=1}^{n_{sr}} P_i + \sum_{j=1}^{n_{cr}} P_j \right],$$

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where n_{sr} is the number of selected-response items, n_{cr} is the number of constructed-response items, and $n = n_{sr} + n_{cr}$.

Appendix F presents item-level expected *p*-values for each domain and grade span level. When the test design specifies that kindergarten students should take a subset of the K–1 test items, the *p*-values in the K–1 test form are separately reported for kindergarten and Grade 1. Summaries of the average *p*-values per domain and grade span level can be found in Appendix C under the raw-score statistics section.

It can be seen that the average *p*-values are in the typical difficulty range between 0.50 and 0.80, which suggests that the test forms are generally not too hard or too easy for the target test population. The *p*-value ranges are very similar between Forms C and D. Across grade span levels, the average *p*-values range from 0.63 to 0.79 for Listening, 0.71 to 0.82 for Speaking, 0.54 to 0.70 for Reading, and 0.55 to 0.77 for Writing. As expected, the items are slightly more difficult in Reading and Writing (literacy skills) than in Listening and Speaking (oral skills).

7.1.2 Raw Score Descriptive Statistics

Similar to the calculation of *p*-values, the student ability score distributions from the field testing and the IRT item parameters at the target domain and grade span level were used to obtain test-level descriptive statistics for LAS Links Forms C and D.

For selected-response items, let $\hat{a_i}, \hat{b_i}$, and $\hat{c_i}$ be the item discrimination, item difficulty, and item lower asymptote, respectively, for the *i*-th item in a given *n*-item test. The probability that an examinee with scale score $\hat{\theta}$ will answer item *i* correctly is

$$P_{i}(\theta) = c + \frac{1 - c_{i}}{1 + \exp[-1.7a_{i}(\theta - b_{i})]}$$

For constructed-response items, the probability of an examinee with ability $\hat{\theta}$ having a score at the *k*-th level of the *j*-th item is

$$P_{\mathscr{K}}(\theta) = P(x_j = k - 1 | (\theta) = \frac{\exp Z_{jk}}{\sum_{i=1}^{m_j}}, k = 1...m_{jk}$$

where

$$\hat{Z}_{jk} = \hat{A}_{jk} \hat{\theta} + \hat{C}_{jk}.$$

For the special case of the 2PPC model used here, the following constraints were used:

$$A_{jk} = \alpha_j (k-1)$$
, and $C_{jk} = -\sum_{i=0}^{k-1} \gamma_{ji}$,

where

$$\gamma_{i0} = 0$$
.

The obtained expected test-level raw score statistics are presented in Appendix C. Summative statistics of the standardized field testing sample are expressed on the scale score metric and provided in the same appendix.

7.1.3 Internal Reliability

Reliability is an index of the consistency of test scores. A reliable test is one that produces scores that are expected to be relatively stable if the test is administered repeatedly under similar conditions.

Internal consistency reliability measures, such as Cronbach's (1951) coefficient alpha and standard error of measurement, consider the consistency (reliability) of performance over all test questions in a given form, the results of which imply how well the test items measure the intended construct and could continue to do so over repeated administrations. Internal consistency reliability coefficients, such as the coefficient alpha, may range from 0.00 to 1.00, where 1.00 stands for a perfectly consistent test.

The coefficient alpha for the LAS Links C and D operational test forms was estimated per domain and grade span level for each test form, and the obtained values are presented in Appendix C, along with the expected test-level raw score descriptive statistics. The reported coefficient alpha values were produced using the following procedures:

The expected raw score for an examinee with scale score $\hat{\theta}$ is

$$X(\theta) = \sum_{i=1}^{n_{sr}} P_i(\theta) + \sum_{j=1}^{n_{sr}} \sum_{k=1}^{m_j} (k-1) P_{jk}(\theta).$$

The expected raw score mean is obtained from

$$\hat{\mu}_{X} = \sum_{\hat{\theta} = \text{LOSS}}^{\text{HOSS}} X(\hat{\theta}) f(\hat{\theta}).$$

An estimate of the variance of the true scores over examinees can be obtained from the following:

$$\sigma_T^2 = \sum_{\hat{\theta} = \text{LOSS}}^{\text{HOSS}} X^2(\hat{\theta}) f(\hat{\theta}) - \hat{\mu}_X^2$$

The conditional item score variance for selected-response items is

$$\sigma^2(X_i|\hat{\theta}) = P(\hat{\theta})Q(\hat{\theta}).$$

The conditional item score variance for constructed-response items is obtained from

$$\sigma^{2}(X_{j}|\theta) = \sum_{k=1}^{m} (k-1)^{2} P_{jk}(\theta) - \left[\sum_{k=1}^{m} (k-1) P_{jk}(\theta)\right]^{2}.$$

Note that the variance of the observed scores conditioned on $\hat{\theta}$ is the error variance. Given the assumption of local item independence, the raw score error variance for an examinee with scale score $\hat{\theta}$ is

$$\sigma_E^2(\hat{\theta}) = \sum_{i=1}^{n_{sr}} \sigma^2(X_i | \hat{\theta}) + \sum_{j=1}^{n_{sr}} \sigma^2(X_j | \hat{\theta}).$$

The raw score error variance across all examinees can be expressed as

$$\sigma_E^2 = \sum_{\theta = \text{LOSS}}^{\text{HOSS}} \sigma_E^2(\hat{\theta}) f(\hat{\theta}).$$

The item score variance for selected-response item i (not conditioned on $\hat{\theta}$) can be obtained from

$$\sigma_i^2 = P_i Q$$
.

For constructed-response items, the item score variance is

$$\sigma_{j}^{2} = \sum_{k=1}^{m_{i}} (k-1)^{2} P_{jk} - \left[\sum_{k=1}^{m_{i}} (k-1) P_{jk} \right]^{2}.$$

The coefficient alpha value is obtained by the standard formula,

$$C_{\alpha} = \frac{n}{n-1} \begin{bmatrix} & \sum_{i=1}^{n} \sigma_{i}^{2} \\ 1 - \frac{\sum_{i=1}^{n} \sigma_{i}^{2}}{\sigma_{X}^{2}} \end{bmatrix},$$

where

$$\sigma_X^2 = \sigma_T^2 + \sigma_E^2$$
 and $n = n + n_{sr}$.

High-stakes tests are typically considered to be of sound reliability when their reliability coefficients are in the range of 0.80 and above. It can be seen from relevant tables in Appendix C that most of the alpha values are greater than 0.80. The exceptions generally occur in Listening, where the alpha values may fall in the range of 0.70 to 0.80.

Another measure of internal consistency is the estimate of the degree of measurement error in students' total raw score on a test, or classical standard error of measurement (SEM). It represents the number of score points about which a given raw score can vary due to assessment errors from a classical test theory perspective. The classical SEM is dependent on the value of internal reliability and the standard deviation of the raw score distribution on the given test form. The value for the classical SEM is fixed once the internal reliability and standard deviation values are determined for a test form; unlike conditional SEMs, the value does not vary with the location of an individual student's obtained score point.

The classical SEMs for Forms C and D are reported in Appendix C, together with the test-level raw score descriptive statistics and estimated alpha coefficients. The observed SEMs were relatively small in comparison to the total length of the test scale and within one fourth to one half of the standard deviation. Conditional SEMs on scale scores based on Item Response Theory are discussed in the following section.

7.1.4 Test Characteristic Curves and Standard Error of Measurement

The resulting test characteristics curves (TCC) and standard error (SE) curves based on the final item parameters and the final LOSS and HOSS values for the LAS Links C and D operational test forms are presented for the four domains (Listening, Speaking, Reading, and Writing) across grade span levels in Figures 7.1 through 7.16.

In these figures, Level 00 represents the test form for kindergarten when only a subset of the K–1 test form is administered to the kindergarten students by design. The test form for Grade 1 (where Grade 1 students take the entire K–1 test form) is denoted by Level 01 in that scenario to be distinct from the kindergarten test form. When both the kindergarten and Grade 1 students take the entire K–1 test form, Level 10 is used instead. For the other grade span levels, Level 20 is used to denote the test form for Grades 2–3; Level 30, Grades 4–5; Level 40, Grades 6–8; and Level 50, Grades 9–12.





Figure 7.2 Form C Listening SEM Curve



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Figure 7.3 Form C Speaking TCC



Figure 7.4 Form C Speaking SEM Curve



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Figure 7.6 Form C Reading SEM Curve



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Figure 7.7 Form C Writing TCC



Figure 7.8 Form C Writing SEM Curve



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Figure 7.10 Form D Listening SEM Curve



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Figure 7.11 Form D Speaking TCC



Figure 7.12 Form D Speaking SEM Curve



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Figure 7.13 Form D Reading TCC



Figure 7.14 Form D Reading SEM Curve



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Figure 7.15 Form D Writing TCC



Figure 7.16 Form D Writing SEM Curve



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In the TCCs, the *x*-axis represents the scale scores, with the *y*-axis representing the expected number correct or proportion of points correct. TCCs predict the total proportion of points in a whole test that an examinee at a given ability level will answer correctly. This expected number correct is simply the sum of the probabilities of answering each of the individual items correct. Therefore, the TCCs represent the relative difficulty of a given test form, with TCCs on the right representing more difficult test forms.

It can be seen that the difficulty of test form typically increases across grade span levels, and the exception mainly occurs with Grades 9–12 (Level 50), where the TCC may be mostly or partly positioned to the left of that for Grades 6–8 (Level 40) in Speaking, Reading, and Writing. This exception is acceptable given that observations of empirical test data from the past show a tendency of high-school students having a wider range of ability distributions and similar (and sometimes lower) performance to middle-school students. This justifies a slightly easier (or partially easier) test form for the high-school grade level than that for middle school. Additionally, the TCCs for Grades 9–12 are generally close to the curves for Grades 6–8.

An important point to remember when scores are being analyzed and interpreted is that the results are only descriptions of a particular performance by the individual or group on the particular test administered. From these descriptions, inferences about the abilities of the students may be made. The fact that such inferences may not represent an individual's true status is taken into account by means of the conditional standard error of measurement (SEM). Figures 7.2, 7.4, 7.6, 7.8, 7.10, 7.12, 7.14, and 7.16, depict the conditional SEM associated with each TCC. In the SE curves, the *x*-axis represents the scale scores, with the *y*-axis representing the SEM. The lowest point on each of the curves is where the smallest amount of measurement error resides.

It is assumed that measurement error is associated with any test score. The conditional SEM is an estimate of the amount of error to be expected in a particular score from a particular test. This statistic provides a range within which a student's true score is likely to fall. Therefore, an obtained score should be regarded not as an absolute value but as a point within a range that probably includes a student's true score.

A student's true score is the hypothetical average score that would result if the test could be administered repeatedly without practice or fatigue effects. It is expected that 68 percent of the time a student's score obtained from a single testing would fall within one SEM of that student's true score and that 95 percent of the time the obtained score would fall within SEMs of the true score.

The SEM should be taken into account when test scores are being interpreted. The magnitude of the SEM varies from test to test; it also varies according to where a student's score falls within

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the range of a specific test. If a score is near the floor or ceiling of the range of performance measured by a given test, the corresponding SEM will be much larger than it would have been if the score had been near the middle of the range. The smaller the SEM, the more accurate the test score. The standard errors associated with each test score appear in Appendix E.

7.1.5 Inter-Rater Reliability

Consistency across raters is another contributing factor to reliability of test scores. As described in Chapter 3, the read-behind procedure was implemented in Forms C and D field testing to monitor and control inter-rater reliability in scoring of written constructed-response (CR) items. Approximately 10% of the student responses for each item were scored by a second rater. The data from the read-behind procedure were used to estimate the degree of inter-rater agreement. Appendix G shows the obtained inter-rater agreement statistics for each testing grade span for all written CR items that were selected into the C and D operational test forms.

In the tables, intraclass correlation and weighted Kappa coefficients were calculated to measure reader agreement (Fleiss & Cohen, 1973). The intraclass correlation does not consider chance agreement between two raters, but the weighted Kappa does take into account chance agreement. Therefore, in general, the weighted Kappa will have values equal to or smaller than the intraclass correlations. If agreement is perfect, then Kappa is +1. In the situation when agreement is at chance levels, Kappa is 0. Kappa values between 0.40 and 0.74 represent good agreement beyond chance, and values below 0.40 indicate poor agreement.

The obtained intraclass correlations and weighted Kappa values were uniformly high for all items of all levels and skill areas, which indicates good agreement between the first and second readers and provides evidence of high inter-rater reliability.

7.1.6 Classification Accuracy and Consistency

While it is always important to know the reliability of student scores in any assessment, it is also important to assess the reliability of the decisions based on these scores. A rigorous procedure for setting cut scores contributes to the accuracy of classifications, and details on the standard setting procedure for Forms C and D based on the LAS Links 2nd Edition Proficiency Levels can be found in Chapter 6.1. Conditional SEMs at and around the target cut scores provide another means to inform stakeholders of the classification accuracy and consistency using the test form of interest. Conditional SEMs can be found in Appendix E.

As classification accuracy and consistency are sensitive to the locations of the cut scores and the ability distributions of the target test population in a local test use context, users are highly

recommended to empirically estimate the classification accuracy and consistency with operational data collected from their local context, when conditions allow.

7.2 Test Fairness

Test fairness is an important consideration in test evaluation, and courts have interpreted fairness as the demonstration of validity as defined by the Standards for Educational and Psychological Testing (1999). Tests should be as fair as possible for test takers of different races, gender, ethnic backgrounds, or disability status. Fairness permeates all aspects of testing. For example, the Code of Fair Testing Practices in Education (Joint Committee on Testing Practices [JCTP], 2004) provides guidelines in four critical areas:

- developing and selecting appropriate tests
- administering and scoring tests
- reporting and interpreting test results
- informing test takers about the nature of the test, test takers' rights and responsibilities, the appropriate use of scores, and procedures for resolving challenges to scores

In the development of LAS Links Forms C and D, substantial resources were devoted to help ensure that the tests are as fair and unbiased as possible with respect to ethnicity, disabilities, and gender. Throughout the development process, item developers paid careful editorial attention to ensure fairness. In addition, the test items went through extensive reviews by internal and external review panels for bias and sensitivity. Items and the overall tests were also reviewed for key elements of Universal Design for optimal accessibility to most users.

Additionally, differential item functioning (DIF) analyses were performed on all items on gender, ethnicity, and ELL status. The DIF studies included a systematic item analysis to determine whether examinees with the same underlying level of ability had the same probability of getting the item correct. The Mantel-Haenszel (M-H) procedure (Mantel & Haenszel, 1959) was applied in the DIF analyses. The M-H procedure has been widely used in DIF studies. In this procedure, the focal and reference groups are matched on ability using a test score interval as a proxy.

Based on the DIF statistics, an item can be classified into one of three categories: A, B, or C. These categories stand for negligible, intermediate, and large DIF, respectively. The classification rules that were used in the evaluation are listed below. These rules align with those used in the National Assessment of Educational Progress (NAEP) to determine DIF (U.S. Department of Education, Office of Educational Research and Improvement, & National Center for Education Statistics, 2001). Delta statistics for multiple-choice items were also considered with the criteria of |Delta|<1 applied for Category A.

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- Category A. If either Mantel's chi-square is not significantly different from zero ($p \ge 0.05$), or if the absolute value of the effect size is less than or equal to 0.17.
- **Category B**. If Mantel's chi-square is significant and the absolute value of the effect size is over 0.17 and less than or equal to 0.25.
- **Category C**. If Mantel's chi-square is significant and the absolute value of the effect size is over 0.25.

Items flagged with Category B or Category C were then examined to determine whether item performance differences between identifiable subgroups of the population were due to extraneous or construct-irrelevant information, making the items unfairly difficult. The inclusion of items flagged with DIF was minimized in the test development process.

To support relevant evaluations, demographic distributions of the field testing sample, whose data were used in subsequent scale and item analyses, were examined prior to the analyses, and relevant distributional information is described in Chapter 3.

To support test fairness in test administration, accommodations, scoring, and reporting, relevant operational procedures were standardized and documented in detail in ancillary test materials such as the Examiner's Guide and the Interpretation Guide. It is also recommended that pre-test trainings be provided to examiners and administrators to support the standardization efforts. Regarding scoring of spoken and written constructed-response items, structured training and quality monitoring procedures are encouraged to be implemented to ensure intra-rater and interrater reliabilities.

Security of test materials and data confidentiality should also be assured by implementing rigorous procedures and security measures on test materials shipping, tracking, distributing, retrieval, and data analysis. It is suggested that test administrators who have access to test materials and scoring documents be adequately trained to guard against unapproved distributions or sharing of test materials and relevant test data.

7.3 Reliability and Validity

"Validity refers to the degree to which evidence and theory support the interpretations of test scores entailed by proposed uses of tests. Validity is, therefore, the most fundamental consideration in developing and evaluating tests. The process of validation involves accumulating evidence to provide a sound scientific basis for the proposed score interpretations" (AERA, APA, & NCME, 1999, p. 9). The purpose of test validation is not to validate the test itself but to validate interpretations of the test scores for particular purposes or uses. Validation is not a quantifiable property but an ongoing process or argument, beginning at initial conceptualization and continuing throughout the assessment process (Kane, 2006, pp. 131–152). Every aspect of an assessment may provide evidence in support of its validity (or evidence to the contrary), including but not limited to design, content specifications, item development, psychometric quality, and inferences based on the results.

Reliability is a necessary, but not sufficient, condition of validity. It refers to the consistency of students' test scores on parallel forms or administrations of a test. A reliable test is one that produces scores that are expected to be relatively stable if the test is administered repeatedly under similar conditions. Often, however, it is impractical to administer multiple forms of the test, and reliability is estimated on a single administration of the test. This type of reliability, known as internal consistency, provides an estimate of how consistently examinees perform across items within a test during a single test administration (Crocker & Algina, 1986).

Reliability and validity evidence for LAS Links Forms C and D is described throughout this technical manual. A summary of such evidence is provided in this section with an emphasis on the following three aspects of validity, including reliability, as informed by the approach of an assessment use argument (AUA; Bachman & Palmer, 2010).

- Consistency of test records. Measurement of a student's language ability should yield consistent results regardless of the testing location, proctor, test form, or test method.
- Appropriateness of score interpretations. Interpretations of the test scores should be substantially grounded, generalizable beyond the test to real-life language use domains, and impartial across subgroups.
- Fairness of decisions. Score-based decisions should be sensitive to existing educational and societal values and relevant legal requirements. The decisions should also be equitable.

Additionally, the intended test use and score-based decisions should lead to beneficial consequences, such as positive impact on learning and instruction. Consequences of test uses are often affected by a variety of social, cultural, and educational factors beyond content and psychometric properties of a test.

Consistency of test records

Key evidence may come from four aspects: 1) standardized and consistently followed administration procedures for all test taker groups, 2) reliable scoring of MC and CR items, 3) internal consistency of the test, and 4) similar psychometric properties between Forms C and D.

For LAS Links Forms C and D, relevant administration and scoring procedures were standardized and documented in ancillary test materials, and trainings are suggested for test administration and scoring.

When scoring through the CTB facilities, MC items obtained from the paper-and-pencil scorable documents can be scanned and scored with high-quality equipment following standardized procedures, and written CR items can be scored by CTB's professional handscoring team. The observed rater agreement from the Forms C and D field testing on items selected for the operational test forms was consistently high, as reflected by the intraclass and Kappa coefficients.

The estimated internal consistency reliability coefficients were generally high, with the values around or above 0.80 across most domains and grade span levels. The observed classical SEMs for raw scores were relatively small and typically within one fourth to one half of the standard deviation.

Forms C and D apply the same types of scoring rubrics and scoring process for spoken and written constructed-response items. The two test forms have very similar *p*-values and alpha coefficients across grade spans and domains. Test characteristic curves and standard error curves of the two forms were also inspected and evaluated to support the construction of parallel forms during the test development.

Both the procedural and empirical evidence as described above supports consistency of the Forms C and D test records.

Appropriateness of score interpretations

The summary of relevant evidence focuses on 1) test scores as an adequate indicator of the ability to be assessed, and 2) equally meaningful score interpretations across parallel test forms and across different groups of test takers.

The intended score interpretation is students' English language proficiency in the K–12 school context as reflected in the LAS Links 2012 Standards Framework. Alignment between each test item and the standards was systematically documented and closely monitored during the test development process. Adequate coverage of the test standards was reflected in the test design and adhered to in the test form assembly process. Considerable efforts were also made to

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minimize construct-irrelevant factors during the process of test design, item development, item selection, and test materials construction.

Empirical item- and test- level statistics suggest that each test scale provides a reasonable range of item difficulty for the target test population. The generally high internal consistency reliability coefficients and relatively small magnitude of SEMs support validity of the score interpretations in the sense that construct-irrelevant factors were controlled and minimized.

The development of operational Forms C and D was based on the same test blueprint and item writing specifications. The items that were selected into Forms C and D came from the same Forms C and D field test item pool, where all items were calibrated and placed on the same scale. Such efforts support equally meaningful score interpretations across the test forms.

DIF analyses on gender, ethnicity and ELL status, subsequent item flagging and review, and minimizing DIF items during the test development contribute to measurement of the same construct across subgroups.

Fairness of decisions

Major evidence in this aspect relates to two considerations: 1) Existing educational and societal values and relevant legal requirements are carefully considered in score-based decisions. 2) Cut scores are accurate and consistent.

When determining approaches for score-based decisions and the criteria to use in making such decisions, it is critical for the test vendor and test users to work collaboratively in reviewing and adhering to policy requirements and to be sensitive to educational preferences in the local test use context with the purpose to support fair score-based decisions.

The LAS Links program is committed to providing ongoing support and consultation to test users of the LAS Links assessment products, including LAS Links Forms C and D, to support such collaborations.

Regarding classification accuracy and consistency, evidence from the standard setting process based on the LAS Links 2nd Edition Proficiency Levels is presented in Chapter 6.1. Estimates on conditional SEMs are available in Appendix E to inform users of the degree of classification dependability at and around the target cut scores. Additionally, empirical evaluations using operational test data are encouraged to provide estimates of classification accuracy and consistency that are sensitive to the intended cut scores and test taker groups in stakeholders' particular local test use context.

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Appendix A English Language Learner Advisory Panel (ELLAP) Members

Jamal Abedi is a professor at the School of Education of the University of California, Davis, and a research partner at the National Center for Research on Evaluation, Standards, and Student Testing (CRESST). Abedi's research interests include studies in the area of psychometrics and test and scale developments. His recent works include studies on the validity of assessments, accommodations and classification for English language learners (ELLs) and students with disabilities, issues concerning comparability of alternate assessments for students with significant cognitive disabilities, opportunities to learn for ELLs, and measurement of creativity.

Abedi is the recipient of the 2003 National Professional Service Award in recognition of his "Outstanding Contribution Relating Research to Practice" by the American Educational Research Association. He is also the recipient of the 2008 Lifetime Achievement Award by the California Educational Research Association. He holds a MA degree and a Ph.D. degree from Vanderbilt University in Psychometrics.

Lyle Bachman is a professor emeritus in the Department of Applied Linguistics at the University of California, Los Angeles. He is a past president of the American Association for Applied Linguistics and of the International Language Testing Association. Bachman has twice won the Kenneth Mildenberger Prize from the Modern Language Association of America. In 2004, he received the Lifetime Achievement Award from the International Language Testing Association, and in 2010, he received the Distinguished Scholarship and Service Award from the American Association for Applied Linguistics. He currently serves on the Board on Testing and Assessment of the National Research Council, and the Board of Directors of the Center for Applied Linguistics.

Bachman has published numerous articles and books, including *Fundamental Considerations in Language Testing* (Oxford University Press) and *Language Testing in Practice* (with Adrian Palmer, Oxford University Press), which are considered to be seminal works in the field. His publication *Statistical Analyses for Language Assessment* (Cambridge University Press) is widely used in language testing courses around the world. His most recent book, *Language Assessment in Practice: Developing Language Assessments and Justifying their Use in the Real World* (with Adrian Palmer, Oxford University Press) was published in 2010.

Bachman also teaches courses and conducts practitioner training workshops in language assessment and serves as a consultant to universities and government agencies around the world. His current research interests include validation theory, epistemological issues in Applied Linguistics research, issues in assessing the academic achievement and academic English of English language learners in schools, and the interface between language testing research and second language acquisition research. **Lynne Díaz-Rico** is a professor of Education at California State University, San Bernardino, where she coordinates the M.A. in Education, Teaching English to Speakers of Other Languages program. She began her career in ESL as a high school teacher in Puerto Rico. After completing a B.A. in philosophy at the University of Pittsburgh, Dr. Diaz-Rico obtained an M.A. in Education from Arizona State University and the Ed.D. degree from InterAmerican University in Puerto Rico.

In 2000, and currently, Dr. Díaz-Rico has served as Coordinator of the Intercultural Communication Interest Group (ICIG) of California Teachers of English to Speakers of Other Languages (CATESOL), submitting ICIG articles to The CATESOL Journal and CATESOL News. She is a well-known presenter at CATESOL regional and state conferences. She served as president of CATESOL from 2009–2010.

Alison Bailey is a professor and a former Division Head of the Psychological Studies in Education program of the Department of Education, University of California, Los Angeles, in addition to being a faculty associate researcher at the National Center for Research on Evaluation, Standards and Student Testing (CRESST).

A graduate of Harvard University, Dr. Bailey's research focuses primarily on language and literacy development, English language development in young second-language learners, and language and literacy assessment. She serves on the advisory boards of the California Department of Education, the consortia of numerous other states, and commercial publishers developing language and literacy assessments for English language learners.

Dr. Bailey is editor and contributing author to *The Language Demands of School: Putting Academic English to the Test*, (Yale University Press, 2007), co-author with Margaret Heritage of *Formative Assessment for Literacy K–6: Building Reading and Academic Language Skills across the Curriculum*, (Corwin/Sage Press, 2008), and co-editor with Allyssa McCabe and Gigliana Melzi and contributing author to *Spanish-Language Narration and Literacy: Culture, Cognition, and Emotion*, (Cambridge University Press, 2008).

Her most recent research is as Co-Principal Investigator on a five-state Enhanced Assessment Grant from the USDOE for Evaluating the Validity of English Language Assessments. When she has time, she spends it in Pre-K and K classrooms in downtown Los Angeles, where she and her graduate students learn what matters most to teachers and young children acquiring English. **Charlene Rivera** is a research professor in The George Washington University's (GW) Graduate School of Education and Executive Director and founder of The George Washington University Center for Equity and Excellence in Education (GW-CEEE). For 20 years, Rivera has served as the principal investigator for GW-CEEE's technical assistance projects, and policy and evaluation studies for clients in state education agencies, school districts, schools, foundations, and federal agencies. Rivera's areas of expertise include assessment, evaluation design, national standards, literacy, and state assessment policies and practices for high-needs students.

Her research interests include inclusion and accommodation issues impacting the assessment of English language learners, standards and accountability, and reading development. Rivera has published extensively and recently co-authored *Test Accommodations for English Language Learners: A Meta-Analysis of Experimental Studies for Educational Measurement: Issues and Practices*. Rivera serves on several boards and technical working groups such as the Teacher Education Accreditation Council (TEAC) Board of Directors, National Academies of Education Panel to Review Alternative Data Sources for Funding States in serving English language learners under Title III of the Elementary Secondary Education Act, the National Assessment Governing Board's Technical Advisory Panel for Uniform National Rules for NAEP Testing of English language learners, and multiple state assessment technical advisory committees. She has recently been named a member of the Gordon Commission: a Commission on the Future of Assessment in K–12 Education. Rivera is one of 20 of the most distinguished scholars in the fields of education sciences, psychometrics, and public policy selected for the committee.

John Schmidt majored in Spanish Education and Ibero-American Studies as an undergraduate at the University of Wisconsin. He began his career in foreign language instruction as a Spanish teacher in an elementary school and a high school in Wisconsin. He went on to teach and supervise Spanish courses at the University of Illinois as a graduate teaching assistant. A Fulbright scholar studying Romance Linguistics at the Universitat de Barcelona in Spain, Dr. Schmidt taught English there before transferring to the University of Texas at Austin to pursue a doctorate in Foreign Language Education. His dissertation at the University of Texas was a criterion-related predictive validity study to determine predictor variables of university performance for 1,500 Malaysian students on a Texas International Education Consortium (TIEC)-affiliated campus near Kuala Lumpur.

Dr. Schmidt's interest and experience in assessment date back to his work at the University of Illinois as a supervisor and test developer of department-wide oral and written Spanish exams. In Austin, he has taught and administered English as a Second Language courses at the Texas Intensive English Program (TIEP) of the Texas International Education Consortium (TIEC). As part of his work, he has been regularly involved in placement testing and in the development of tests for all levels and subjects to assess students' English proficiency. He also supervises and conducts oral assessments of prospective international teaching assistants of the University of Texas aspiring to teach at the University.

As part of a TIEC project sponsored by the Korean Fulbright Commission in Seoul, Dr. Schmidt developed an English-proficiency assessment measure and trained a team of

American teachers of English to test secondary students in Korea. In addition to assessment work in South Korea, he has conducted language testing in Mexico, Malaysia, and Qatar. In his role as an Academic Coordinator at TIEC/TIEC, Dr. Schmidt supervises Academic Program courses. Additionally, he has also developed and implemented more than fifty special short-term programs for both students and for teachers of English. The teachers in the courses that he administers and instructs come from Japan, South Korea, India, and Latin American countries.

Professionally, Dr. Schmidt has lectured, trained teachers, and undertaken project development work in three dozen countries on five continents. His volunteer work for humanitarian organizations has focused on Latin America and the Caribbean. He has served as the President of Texas Partners of the Americas, in collaboration with Compañeros de las Américas in Peru and in Mexico, and as the Vice President of the U.S.-Latin American Medical Aid Foundation, affiliated with hospitals and medical organizations in Cuba. His service work within the profession has included TEXTESOL III affiliate officer roles, including the presidency, as well as committee work for TESOL (Teachers of English to Speakers of Other Languages) and three years on the TESOL Board of Directors. He has since taken on the role of Associate Chair of the TESOL 2012 Convention in Philadelphia.

Charles W. Stansfield is an authority on second language testing. During his 40-year career, he has been a secondary school teacher of Spanish, a teacher of ESL, a tenured professor of Spanish at the University of Colorado, where he trained teachers of ESL, bilingual education, and foreign languages in language testing, a test program administrator at Educational Testing Service, director of the ERIC Clearinghouse on Languages and Linguistics, and director of the Division of Foreign Language Education and Testing at the Center for Applied Linguistics in Washington, D.C.

He has developed and published proficiency tests in English as a second language and in 15 other languages. Under contracts with different government agencies, he has developed tests of all four skills as well as tests of languages for specific purposes. He is currently working on tests of speaking skills in American Indian languages for the Bureau of Indian Education. He is the author or editor of over a dozen books and research monographs and 50 research articles published in professional journals. He has served on the editorial boards of Language Testing, the Journal of Second Language Writing, TESOL Quarterly, and others. He is President of Second Language Testing, Inc. (SLTI), and since 1994, when SLTI was founded, Dr. Stansfield has devoted himself full-time to the management of SLTI test development projects.

Appendix B Student Sample Demographic Frequencies

Level	Grade	Ν	%
1	K-1	6071	
	Κ	2885	47.52
	1	3139	51.70
	2	45	0.74
	Not Provided	2	0.03
2	2-3	6137	
	2	3019	49.19
	3	3109	50.66
	Not Provided	9	0.15
3	4-5	5674	
	4	2947	51.94
	5	2710	47.76
	6	11	0.19
	Not Provided	6	0.11
4	6-8	4304	
	6	1404	32.62
	7	1380	32.06
	8	1509	35.06
	9	11	0.26
5	9-12	3899	
	9	1273	32.65
	10	887	22.75
	11	935	23.98
	12	804	20.62

 Table B.1 Forms C/D Student Grade

Table B.2 Forms C/D Student Gender

Gender	K-1		2-3		4-5		6-8		9-12	
	Ν	%	Ν	%	Ν	%	Ν	%	Ν	%
Female	2896	47.70	2902	47.29	2622	46.21	1898	44.10	1743	44.70
Male	3109	51.21	3176	51.75	3003	52.93	2314	53.76	2047	52.50
Not Provided	66	1.09	59	0.96	49	0.86	92	2.14	109	2.80
Total	6071	100.00	6137	100.00	5674	100.00	4304	100.00	3899	100.00

Home Language	K	-1	2	-3	4	-5	6	-8	9-	12
	Ν	%	Ν	%	Ν	%	Ν	%	Ν	%
Albanian	273	4.50	365	5.95	310	5.46	132	3.07	23	0.59
Amharic	33	0.54	44	0.72	29	0.51	30	0.70	43	1.10
Arabic	50	0.82	51	0.83	30	0.53	42	0.98	82	2.10
Armenian	1	0.02	1	0.02	7	0.12			1	0.03
Assyrian					5	0.09				
Bengali	17	0.28	15	0.24	7	0.12	3	0.07	4	0.10
Bosnian	5	0.08	2	0.03	5	0.09	5	0.12	4	0.10
Burmese	2	0.03	15	0.24	7	0.12	7	0.16	17	0.44
Cantonese	40	0.66	45	0.73	25	0.44	14	0.33	30	0.77
Cebuano	1	0.02					1	0.02	r	0.05
(Visayan)	1	0.02	•	•	•	•	1	0.02	Z	0.05
Chaldean									6	0.15
Chamorro	1	0.02	2	0.03	2	0.04	1	0.00	2	0.08
(Guamanian)	1	0.02	2	0.03	2	0.04	4	0.09	5	0.08
Chaozhou	1	0.02							1	0.02
(Chaochow)	1	0.02	•	•	•	•	•		1	0.05
Croatian	5	0.08	13	0.21	9	0.16	2	0.05		
Dutch	6	0.10			1	0.02	1	0.02	1	0.03
English	551	9.08	551	8.98	517	9.11	68	1.58	36	0.92
Farsi	5	0.08	1	0.07			8	0.10	8	0.21
(Persian)	5	0.08	-	0.07	•	•	0	0.19	0	0.21
Filipino										
(Pilipino or	34	0.56	81	1.32	50	0.88	42	0.98	47	1.21
Tagalog)										
French	8	0.13	14	0.23	26	0.46	19	0.44	16	0.41
French Creole	13	0.21	12	0.20	10	0.18	9	0.21	6	0.15
German	3	0.05	2	0.03	3	0.05	5	0.12	3	0.08
Greek	1	0.02			1	0.02	1	0.02		
Gujarati	9	0.15	9	0.15	14	0.25	4	0.09	3	0.08
Hebrew	4	0.07	3	0.05	2	0.04			1	0.03
Hindi	22	0.36	12	0.20	4	0.07	2	0.05	6	0.15
Hmong	4	0.07	7	0.11	3	0.05	3	0.07		
Hungarian	1	0.02	3	0.05	1	0.02	1	0.02	•	
Ilocano			1	0.02	1	0.02				
Indonesian	3	0.05	1	0.02	1	0.02	2	0.05	4	0.10
Italian	1	0.02							2	0.05
Japanese	17	0.28	21	0.34	23	0.41	17	0.39	7	0.18

Table B.3 Forms C/D Student Home Language

Home Language	ŀ	K-1	2	2-3	4	-5	6	5-8	9	-12
Home Language	N	%	Ν	%	Ν	%	Ν	%	Ν	%
Khmer (Cambodian)	18	0.30	16	0.26	11	0.19	22	0.51	18	0.46
Korean	29	0.48	25	0.41	28	0.49	28	0.65	51	1.31
Kurdish	2	0.03	5	0.08	2	0.04	1	0.02	1	0.03
Lao	6	0.10	8	0.13	6	0.11	9	0.21	5	0.13
Mai Mai	3	0.05	3	0.05	5	0.09	2	0.05		•
Mandarin (Putonghua)	30	0.49	30	0.49	13	0.23	23	0.53	43	1.10
Marshallese	16	0.26	11	0.18	19	0.33	13	0.30	33	0.85
Mien (Yao)	1	0.02	2	0.03	2	0.04			1	0.03
Mixteco	3	0.05	5	0.08	6	0.11	19	0.44	18	0.46
Pashto	1	0.02					3	0.07	1	0.03
Polish	9	0.15	9	0.15	4	0.07	2	0.05	5	0.13
Portuguese	8	0.13	9	0.15	6	0.11	4	0.09	4	0.10
Punjabi	24	0.40	11	0.18	18	0.32	8	0.19	29	0.74
Rumanian	13	0.21	7	0.11	8	0.14	6	0.14	9	0.23
Russian	113	1.86	99	1.61	78	1.37	65	1.51	60	1.54
Samoan	11	0.18	14	0.23	19	0.33	17	0.39	15	0.38
Serbo-Croatian (Serbian)	1	0.02	2	0.03			2	0.05		
Somali	47	0.77	52	0.85	59	1.04	55	1.28	92	2.36
Spanish	3452	56.86	3386	55.17	3178	56.01	2013	46.77	1624	41.65
Taiwanese	1	0.02					2	0.05		
Thai	5	0.08	5	0.08	9	0.16	7	0.16	14	0.36
Tigrinya	10	0.16	13	0.21	9	0.16	7	0.16	21	0.54
Toishanese	1	0.02	3	0.05	2	0.04	3	0.07	9	0.23
Tongan			1	0.02	1	0.02			1	0.03
Turkish	6	0.10	6	0.10	4	0.07	5	0.12	12	0.31
Ukrainian	43	0.71	46	0.75	36	0.63	32	0.74	25	0.64
Urdu	10	0.16	11	0.18	8	0.14	3	0.07	6	0.15
Vietnamese	117	1.93	106	1.73	79	1.39	65	1.51	122	3.13
Others	137	2.26	111	1.81	112	1.97	140	3.25	215	5.51
Not Provided	843	13.89	867	14.13	859	15.14	1326	30.81	1109	28.44
Total	6071	100.00	6137	100.00	5674	100.00	4304	100.00	3899	100.00

Table B.3 Forms C/D Student Home Language (continued)

Ethnicity	K-1		2-3		4-5		6-8		9-12	
	Ν	%	Ν	%	Ν	%	Ν	%	Ν	%
Hispanic/ Latino	4306	70.93	4226	68.86	3917	69.03	2545	59.13	1947	49.94
Not Hispanic/ Latino	1352	22.27	1390	22.65	1307	23.03	1555	36.13	1407	36.09
Not Provided	413	6.80	521	8.49	450	7.93	204	4.74	545	13.98
Total	6071	100.00	6137	100.00	5674	100.00	4304	100.00	3899	100.00

Table B.4 Forms C/D Student Ethnicity

Appendix C Score Descriptive Statistics

Raw Score Descriptive Statistics

Form C

Table C.1 Form C Speaking Raw Score Statistics

	Grade Span								
Statistics	K	1	2-3	4-5	6-8	9-12			
Total Score Points	28	40	41	41	40	41			
Mean	17.99	30.97	33.49	30.92	28.69	32.76			
SD	7.29	8.05	7.63	7.91	8.79	7.83			
Average Difficulty	0.71	0.81	0.81	0.78	0.72	0.77			
Alpha	0.90	0.91	0.92	0.90	0.92	0.93			
SEM	2.36	2.48	2.21	2.48	2.53	2.15			

Table C.2 Form C Listening Raw Score Statistics

	Grade Span								
Statistics	K-1	2-3	4-5	6-8	9-12				
Total Score Points	20	20	20	23	23				
Mean	14.23	15.43	13.35	15.70	14.39				
SD	4.22	3.20	3.46	3.86	3.72				
Average Difficulty	0.71	0.77	0.67	0.68	0.63				
Alpha	0.83	0.75	0.70	0.73	0.68				
SEM	1.76	1.62	1.91	1.99	2.09				

Table C.3 Form C Reading Raw Score Statistics

	Grade Span								
Statistics	K	1	2-3	4-5	6-8	9-12			
Total Score Points	26	30	30	30	30	30			
Mean	14.66	20.46	18.73	16.55	16.65	17.58			
SD	5.31	6.38	6.67	6.55	6.15	6.11			
Average Difficulty	0.56	0.68	0.62	0.55	0.56	0.59			
Alpha	0.83	0.89	0.88	0.87	0.85	0.85			
SEM	2.22	2.15	2.31	2.37	2.37	2.39			

	Grade Span								
Statistics	K	1	2-3	4-5	6-8	9-12			
Total Score Points	20	32	32	32	32	32			
Mean	10.78	22.88	21.67	20.03	17.25	19.94			
SD	4.14	7.05	6.58	5.98	6.18	5.53			
Average Difficulty	0.56	0.75	0.64	0.69	0.58	0.64			
Alpha	0.77	0.85	0.85	0.84	0.85	0.81			
SEM	1.99	2.69	2.57	2.38	2.41	2.40			

Table C.4 Form C Writing Raw Score Statistics

Form D

Table	C.5	Form	D	Spea	king	Raw	Score	Statistics
1 ant	\mathbf{C} . \mathbf{C}	I UI III	$\boldsymbol{\nu}$	opea	mins	Trait	SCOLC	Statistics

	Grade Span								
Statistics	K	1	2-3	4-5	6-8	9-12			
Total Score Points	29	41	41	41	41	41			
Mean	18.67	31.27	33.55	30.85	29.75	31.32			
SD	7.76	8.43	7.47	7.84	9.10	8.64			
Average Difficulty	0.71	0.81	0.82	0.76	0.75	0.76			
Alpha	0.90	0.91	0.91	0.91	0.92	0.92			
SEM	2.40	2.51	2.24	2.36	2.59	2.38			

Table C.6 Form D Listening Raw Score Statistics

	Grade Span									
Statistics	K-1	2-3	4-5	6-8	9-12					
Total Score Points	20	19	20	23	23					
Mean	14.13	14.98	13.75	15.57	14.41					
SD	4.22	3.24	3.59	4.25	4.16					
Average Difficulty	0.71	0.79	0.69	0.68	0.63					
Alpha	0.82	0.77	0.74	0.78	0.76					
SEM	1.79	1.57	1.82	1.98	2.04					

		Grade Span				
Statistics	K	1	2-3	4-5	6-8	9-12
Total Score Points	26	30	30	30	29	30
Mean	15.08	20.85	18.32	16.28	16.47	17.65
SD	5.27	6.27	6.80	6.28	6.10	6.84
Average Difficulty	0.58	0.70	0.61	0.54	0.57	0.59
Alpha	0.81	0.88	0.88	0.86	0.86	0.88
SEM	2.27	2.20	2.34	2.32	2.28	2.36

Table C.7 Form D Reading Raw Score Statistics

Table C.8 Form D Writing Raw Score Statistics

		Grade Span				
Statistics	K	1	2-3	4-5	6-8	9-12
Total Score Points	20	32	32	32	32	32
Mean	11.00	23.54	22.10	19.61	18.87	19.07
SD	4.19	7.05	6.61	6.20	6.53	5.68
Average Difficulty	0.58	0.77	0.68	0.67	0.65	0.61
Alpha	0.77	0.86	0.85	0.85	0.88	0.82
SEM	2.02	2.68	2.59	2.39	2.27	2.44

Scale Score Descriptive Statistics

Table	C.9 Forms	C/D S	Sneaking	Scale	Score]	Descriptive	Statistics
1 4010			pruning	Scale		Deserptive	Statistics

Grades	Mean	SD	Median
K	465	44.97	464
1	484	39.53	483
2-3	513	41.26	505
4-5	528	44.94	522
6-8	530	46.43	523
9-12	537	47.17	530

Grades	Mean	SD	Median
K-1	445	38.16	445
2-3	482	37.76	481
4-5	514	46.94	514
6-8	530	53.73	530
9-12	535	55.79	536

Table C.10 Forms C/D Listening Scale Score Descriptive Statistics

Table C.11 Forms C/D Reading Scale Score Descriptive Statistics

Grades	Mean	SD	Median
Κ	368	52.02	366
1	421	48.41	417
2-3	469	56.95	471
4-5	517	57.63	519
6-8	540	55.29	542
9-12	543	55.09	544

Table C.12 Forms C/D Writing Scale Score Descriptive Statistics

Grades	Mean	SD	Median
Κ	333	78.67	333
1	418	75.44	414
2-3	480	59.79	480
4-5	522	53.80	525
6-8	533	54.65	539
9-12	545	51.99	548

Appendix D Proficiency Level Definitions and Proficiency Level Descriptors

LAS Links 2nd Edition Proficiency Level Definitions

Table D.1 LAS Links 2nd Edition Proficiency Level Definitions

5 Above Proficient	Level 5 students communicate effectively in English, with few if any errors, across a wide range of grade-level-appropriate language demands in social, school, and academic contexts. The students command a high degree of productive and receptive control of lexical, syntactic, phonological, and discourse features when addressing new or familiar topics. Level 5 students apply their language mastery to critically evaluate and synthesize written and oral information and to formulate hypotheses. Their facility with language allows them to analyze information, draw sophisticated inferences, and explain their reasoning. They skillfully organize information for presentations and can express subtle nuances of meaning. They apply literary techniques such as identifying author tone and point of view and can tailor language to a particular purpose and audience.
4	Level 4 students communicate effectively in English, but with some errors, across a range of grade-level-appropriate language demands in social, school, and academic contexts. The students exhibit productive and receptive control of lexical, syntactic, phonological, and discourse features when addressing new or familiar topics.
Proficient	Level 4 students interpret, analyze, and evaluate written and oral information, basing their responses on implicit and explicit context clues and information from personal and academic experiences. They adequately express themselves and organize their responses in logical and sequenced order. They distinguish nuances of meaning and incorporate idiomatic expressions and academic vocabulary.

3	Level 3 students communicate in English across a range of grade-level-appropriate language demands in social, school, and academic contexts. However, errors interfere with their communication and comprehension. Repetition and clarification are often needed. The students exhibit a limited range of productive and receptive control of lexical, syntactic, phonological, and discourse features when addressing new or familiar topics.
Intermediate	Level 3 students use limited vocabulary when defining concepts across and within academic disciplines. They can compare, contrast, summarize, and relate text to graphic organizers. They decode words, apply grammar conventions, and use context clues to identify word meanings. They identify proper and improper use of basic grammar. Although their language is generally coherent, it lacks significant elaboration or detail.
2	Level 2 students are developing the ability to communicate in English in social, school, and academic contexts. Errors frequently impede basic communication and comprehension. Their receptive and productive control of lexical, syntactic, phonological, and discourse features of English is emerging.
Early Intermediate	Early Intermediate students have minimal vocabulary and grammar skills. They identify, describe, and discuss simple pictorial or text prompts. Students interpret language related to familiar social, school, and academic topics. They draw simple inferences and make simple comparisons. They restate rather than create original expressions. Restricted vocabulary and rudimentary grammar limit their expression and comprehension.
1 Beginning	Level 1 students are starting to develop receptive and productive uses of English in social, school, and academic contexts. Their comprehension may be demonstrated nonverbally or through their native language rather than in English.

Grade Span Level Proficiency Level Descriptors

Table D.2 Proficiency Level Descriptors, Kindergarten

Kindergarten	Speaking	Listening	Reading	Writing
1 Beginning	Beginning students are starting to develop receptive and productive skills in English.	Beginning students are starting to develop receptive and productive skills in English.	Beginning students are starting to develop receptive and productive skills in English.	Beginning students are starting to develop receptive and productive skills in English.
2 Early Intermediate	Early Intermediate students typically use basic vocabulary and simple phrases to name or describe common objects and express opinions or preferences in social and academic situations. They narrate a story related to a sequence of pictures about school-related activities using basic vocabulary. Restricted vocabulary and developing grammar limit expression. Errors frequently impede communication.	Early Intermediate students typically follow some simple oral directions using knowledge of everyday tasks and basic academic vocabulary. They identify common shapes, letters, numbers, and familiar locations. They identify details in simple oral stories. Their restricted vocabulary and developing grammar limit comprehension. Errors frequently impede communication and comprehension.	Early Intermediate students typically identify capital and lowercase letters in isolation and identify beginning, middle, and ending sounds. They identify main ideas and details in simple text, match text to pictures, and apply letter- sound relationships. Their restricted vocabulary and developing grammar limit comprehension. Errors frequently impede comprehension.	Early Intermediate students copy simple words and sentences that describe pictures or respond to other prompts. Errors frequently impede communication.
3 Intermediate	Intermediate students typically use appropriate words and phrases when conducting transactions, making requests, and asking for clarification in social and academic settings. They narrate a story related to a sequence of pictures about school- related activities using mostly accurate, although limited, vocabulary. They provide mostly clear information although errors interfere with communication.	Intermediate students typically follow simple oral directions and identify locations. They identify main ideas and make some inferences in simple oral stories. Errors interfere with communication and comprehension.	Intermediate students typically decode words with short vowel sounds, match text to pictures, and recall details and main ideas in short passages. Students make simple inferences and recognize words that relate to spatial relationships. Errors interfere with comprehension.	Intermediate students typically write one or more words to describe a picture or respond to other prompts. Students are beginning to recognize correct sentence format. Errors interfere with communication.
4 Proficient	Proficient students typically produce simple and accurate sentences when making requests and asking for clarifications. They use appropriate words and phrases to label and describe the purpose of less common objects. They narrate a story related to a sequence of pictures about school-related activities using accurate vocabulary. Minor errors do not interfere with communication.	Proficient students typically follow oral directions to distinguish the location of an object in relation to another object, recall details in an oral story, and make inferences. They identify main ideas in more complex stories.	Proficient students typically identify rhyming words, match words to definitions or descriptions, make inferences, recall events from short passages, and read simple sentences independently. Errors do not interfere with comprehension.	Proficient students typically use correct basic grammar, capitalize the beginning of a sentence, and use correct ending punctuation in declarative, interrogative, and imperative sentences. They identify standard sentence structure and generate descriptive and explanatory sentences. Errors do not interfere with communication.
5 Above Proficient	Above Proficient students typically produce simple sentences and use correct grammar when making requests, asking for clarification, and describing situations. They narrate a story with extensive and accurate vocabulary and grammar appropriate to their age.	Above Proficient students typically recall details and sequence of events, and determine main ideas in oral stories that have advanced vocabulary.	Above Proficient students typically use context clues to determine meanings of words and recall subtle details. They identify sequence in short passages and recognize words that relate to spatial relationships.	Above Proficient students typically write a complete sentence to describe a picture or respond to other prompts. They form regular plural nouns and possessive pronouns, and choose correct sentence-ending punctuation. Communication is clear and complete, although content may contain minor errors.

Table D.3 Proficiency Level Descriptors, Grade 1

Grade 1	Speaking	Listening	Reading	Writing
1 Beginning	Beginning students are starting to develop receptive and productive skills in English.	Beginning students are starting to develop receptive and productive skills in English.	Beginning students are starting to develop receptive and productive skills in English.	Beginning students are starting to develop receptive and productive skills in English.
2 Early Intermediate	Early Intermediate students typically use basic vocabulary and simple phrases to name or describe common objects and express opinions or preferences in social and academic situations. They narrate a story related to a sequence of pictures about school-related activities using basic vocabulary. Restricted vocabulary and developing grammar limit expression. Errors frequently impede communication.	Early Intermediate students typically follow some simple oral directions using knowledge of everyday tasks and basic academic vocabulary. They identify common shapes, letters, numbers, and familiar locations. They identify details in simple oral stories. Their restricted vocabulary and developing grammar limit comprehension. Errors frequently impede communication and comprehension.	Early Intermediate students typically identify capital and lowercase letters in isolation, identify beginning, middle, and ending sounds, and recall main ideas and important details in simple text. They apply letter-sound relationships. Their restricted vocabulary and developing grammar limit comprehension. Errors frequently impede comprehension.	Early Intermediate students typically copy simple sentences and write one or more words to describe or explain a picture. They select grammatically correct sentences from a set of choices. Their restricted vocabulary and developing grammar limit expression. Errors frequently impede communication.
3 Intermediate	Intermediate students typically use appropriate words and phrases when conducting transactions, making requests, and asking for clarification in social and academic settings. They narrate a story related to a sequence of pictures about school-related activities using mostly accurate, although limited, vocabulary. They provide mostly clear information although errors interfere with communication.	Intermediate students typically follow simple oral directions and identify locations. They identify main ideas and draw simple inferences in simple oral stories. Errors interfere with communication and comprehension.	Intermediate students typically decode basic words and match text to pictures. Students make simple inferences and recognize words related to spatial relationships. Errors interfere with comprehension.	Intermediate students typically write words, phrases, or sentences that attempt to describe or explain a picture. They are beginning to recognize sentences illustrating correct grammar, proper subject/verb agreement, and correct pluralization and capitalization. They have limited range of vocabulary knowledge. Errors interfere with communication.
4 Proficient	Proficient students typically produce simple and accurate sentences when making requests and asking for clarifications. They use appropriate words and phrases to label and describe the purpose of less common objects. They narrate a story related to a sequence of pictures about school-related activities using accurate vocabulary. Minor errors do not interfere with communication.	Proficient students typically follow oral directions to distinguish the location of an object in relation to another object, recall details in an oral story, and draw inferences. They identify main ideas in more complex stories.	Proficient students typically identify rhyming words, match basic text to pictures, make inferences, recall details and main ideas in short passages, and read simple sentences independently. Errors do not interfere with comprehension.	Proficient students typically use correct basic grammar, capitalize the beginning of a sentence, and use correct ending punctuation in declarative, interrogative, and imperative sentences. They identify standard sentence structure and generate descriptive and explanatory sentences. Errors do not interfere with communication.
5 Above Proficient	Above Proficient students typically produce simple sentences and use correct grammar when making requests and conducting transactions in the classroom or describing familiar social situations or a process. They narrate a story with extensive and accurate vocabulary and grammar appropriate to their age.	Above Proficient students typically recall details and the sequence of events, and determine main ideas in oral stories that have advanced vocabulary.	Above Proficient students use context clues to determine meanings of words, recall subtle details, and determine sequence in short passages. They use interpretation and inference to comprehend a story. Students recognize words that relate to spatial relationships.	Above Proficient students typically write a complete sentence to describe a picture or respond to other prompts. They form regular plural nouns and possessive pronouns, and choose correct sentence-ending punctuation. Communication is clear and complete, although content may contain minor errors.

Table D.4 Proficiency Level Descriptors, Grades 2–3

Grades 2-3	Speaking	Listening	Reading	Writing
1 Beginning	Beginning students are starting to develop receptive and productive skills in English.	Beginning students are starting to develop receptive and productive skills in English.	Beginning students are starting to develop receptive and productive skills in English.	Beginning students are starting to develop receptive and productive skills in English.
2 Early Intermediate	Early Intermediate students typically use basic vocabulary and grammar, and simple phrases or sentences to make requests or comparisons, ask questions, express opinions or preferences, or describe a sequence of pictures about familiar events and situations. Errors frequently impede communication.	Early Intermediate students typically follow simple oral directions and identify high- frequency vocabulary. They identify a few details and draw simple inferences in oral stories. Errors frequently impede communication and comprehension.	Early Intermediate students typically understand word meanings and synonyms, possess basic knowledge of morphemes and syllables, identify one-syllable words, recognize simple rhyming words, and make simple inferences. Errors frequently impede comprehension.	Early Intermediate students typically describe, explain, or express ideas in sentences. They make simple comparisons. Students demonstrate basic vocabulary knowledge and grammar skills such as use of auxiliary verbs, verb tenses, and conjunctions. Errors frequently impede communication.
3 Intermediate	Intermediate students typically use appropriate words and phrases when expressing a preference, asking questions, providing information and explanations, naming common objects, and describing common functions. They produce mostly accurate sentences when narrating simple stories about familiar events and situations. Errors interfere with communication.	Intermediate students typically understand a limited range of vocabulary. They recall details, identify main ideas, and draw inferences in more complex oral stories. Errors interfere with communication and comprehension.	Intermediate students typically match words to definitions or descriptions, interpret words and basic phrases, and apply knowledge of morphemes and syllables. They recall stated details and main ideas, make inferences, and determine characters' feelings. Errors interfere with comprehension.	Intermediate students typically respond to various prompts or pictures using multiple sentences. Students make simple predictions and express some opinions in response to pictures. Meaning is somewhat clear although vocabulary may be limited. They identify appropriate verb forms and articles based on contextual clues. Errors interfere with communication.
4 Proficient	Proficient students typically produce complete sentences with few grammatical and vocabulary errors when describing situations, explaining their reasoning, or narrating a story. They use broad vocabulary to accurately express opinions or preferences and ask appropriate questions. Minor errors do not interfere with communication.	Proficient students typically understand academic vocabulary and follow some complex directions. They recall subtle details, determine main ideas, and identify speaker purpose.	Proficient students typically identify synonyms of social and academic vocabulary and interpret words and phrases. They use context clues to determine meaning, recall implicit details and main ideas, draw complex inferences, identify literary features, and transfer concepts to new situations. Errors do not interfere with comprehension.	Proficient students typically make predictions and express opinions in response to pictures using complete sentences. They use correct auxiliary verb forms and verb tenses and correctly use writing conventions such as capitalization and punctuation. They organize and write responses in logical and sequential order. Errors do not interfere with communication.
5 Above Proficient	Above Proficient students typically produce sentences with sophisticated vocabulary and correct grammar when providing information, describing situations, or explaining their reasoning.	Above Proficient students typically recall details and sequence of events, and determine main ideas in oral stories that have advanced vocabulary.	Above Proficient students typically identify two-syllable words and rhyming words written with digraphs, use common multiple-meaning words, and recognize synonyms. They determine story sequence and details of fictional and academic texts, make generalizations, and use self-monitoring techniques to check for understanding.	Above Proficient students typically write fluently to a variety of pictures, prompts, or purposes with precise vocabulary and ease of expression. They use correct verb tenses and subject/verb agreement, appropriate articles and punctuation. Responses contain few digressions or repetitions. Communication is clear and complete, though it may contain minor errors.

Table D.5 Proficiency Level Descriptors, Grades 4–5

Grades 4-5	Speaking	Listening	Reading	Writing
1 Beginning	Beginning students are starting to develop receptive and productive skills in English.	Beginning students are starting to develop receptive and productive skills in English.	Beginning students are starting to develop receptive and productive skills in English.	Beginning students are starting to develop receptive and productive skills in English.
2 Early Intermediate	Early Intermediate students typically use basic vocabulary and grammar and simple sentences to identify common objects and describe their function, provide basic information, make requests, ask questions, and express opinions or preferences. They construct a narrative from a sequence of pictures about familiar events and school-related activities and compare and contrast information found in texts and graphic organizers using basic vocabulary. Errors frequently impede communication.	Early Intermediate students typically follow some simple oral directions and understand common vocabulary and idiomatic expressions. They identify details. Errors frequently impede communication and comprehension.	Early Intermediate students typically interpret basic words and phrases and identify some main ideas and details in simple text. Errors frequently impede comprehension.	Early Intermediate students typically write sentences using basic vocabulary and grammar to describe and discuss text, interpret graphic organizers, and compare and contrast information. Errors in organization, grammar, word choice, and mechanics frequently impede communication.
3 Intermediate	Intermediate students typically use appropriate words and phrases and complete sentences when making requests, expressing opinions or preferences, providing information, and describing locations. They construct a narrative from a sequence of pictures and compare and contrast information found in texts and graphic organizers using mostly accurate, although limited, vocabulary. Errors interfere with communication.	Intermediate students typically follow oral directions and interpret both basic vocabulary and idiomatic expressions. They identify some main ideas and make simple inferences from passages and understand details within graphic organizers. Errors interfere with communication and comprehension.	Intermediate students typically use knowledge of high-frequency affixes to determine word meanings. They recall main ideas and stated details in text, and interpret simple words and phrases. Errors interfere with comprehension.	Intermediate students typically respond appropriately to various verbal prompts or graphic organizers by using complete sentences that exhibit correct basic grammar. Meaning is somewhat clear, although vocabulary may be limited. They demonstrate a grasp of pronouns, prepositions, auxiliary verbs and verb tenses. Errors in organization, grammar, word choice, and mechanics interfere with communication.
4 Proficient	Proficient students typically produce complete sentences when providing information, asking questions, explaining a process, expressing an opinion, and narrating a story. They organize responses in logical and sequential order. They accurately identify and compare and contrast features of less common objects. Minor errors do not interfere with communication	Proficient students typically follow multistep directions using academic vocabulary, recall details, identify main ideas, and determine sequence of steps in classroom discussions and lessons. They draw inferences from more complex oral stories and interpret tables and other graphic organizers.	Proficient students typically use knowledge of more advanced affixes to determine word meanings. They identify synonyms, use context clues to determine word meanings, and interpret slightly complex words and phrases. They read for specific information in graphic organizers, infer information, and draw conclusions. Errors do not interfere with comprehension.	Proficient students typically write complete sentences with mostly accurate vocabulary and grammar that demonstrates appropriate use of punctuation, prepositional phrases, and other conventions. They summarize passages; interpret, compare, and contrast information from graphic organizers and from implicit and explicit context clues; and organize and write responses to open- ended questions in logical and sequential order. Errors do not interfere with communication.
5 Above Proficient	Above Proficient students typically produce sentences with sophisticated vocabulary and correct grammar when providing information, describing situations, asking questions, expressing opinions and subtle nuances of meanings, and explaining processes and their reasoning. They create a detailed and structured narrative.	Above Proficient students typically follow directions that use verb phrases and determine key information to summarize a task. They recall subtle details, identify main ideas and speaker purpose, and draw sophisticated inferences from classroom discussions and lessons.	Above Proficient students typically identify synonyms and antonyms of less familiar words and interpret complex words and phrases. They use prediction, determine story sequence, and use self- monitoring techniques to check for understanding.	Above Proficient students typically write fluently in response to a variety of prompts and purposes. They skillfully organize, interpret, summarize, and evaluate information from texts and graphic organizers. Communication is clear and complete, though it may contain minor errors.

Table D.6 Proficiency Level Descriptors, Grades 6-8

Grades 6-8	Speaking	Listening	Reading	Writing
1 Beginning	Beginning students are starting to develop receptive and productive skills in English.	Beginning students are starting to develop receptive and productive skills in English.	Beginning students are starting to develop receptive and productive skills in English.	Beginning students are starting to develop receptive and productive skills in English.
2 Early Intermediate	Early Intermediate students typically produce simple sentences using basic vocabulary and grammar when describing social situations, giving instructions, and identifying locations. They construct a narrative from a sequence of pictures about familiar events and school- related activities and compare and contrast information found in texts and graphic organizers. Errors frequently impede communication.	Early Intermediate students typically follow simple oral directions and understand common vocabulary and idiomatic expressions. They identify details. Errors frequently impede communication and comprehension.	Early Intermediate students typically follow simple oral directions and understand common vocabulary and idiomatic expressions. They identify some details. Errors frequently impede comprehension.	Early Intermediate students typically write complete sentences using basic vocabulary and grammar to describe, explain, or compare verbal or graphic prompts. They respond to simple open-ended questions and summarize simple passages. Errors in organization, grammar, word choice, and mechanics frequently impede communication.
3 Intermediate	Intermediate students typically use appropriate words and phrases and complete sentences when expressing opinions, providing information, conducting transactions, or describing common functions. They describe common social situations and narrate simple stories. Grammatical or vocabulary errors interfere with communication, but the intended meaning is somewhat clear.	Intermediate students typically follow multistep directions that use academic vocabulary. They recall details from class discussions or short oral stories and identify the main purpose of conversation. They interpret graphic organizers and extrapolate conclusions from discussions. Errors interfere with communication and comprehension.	Intermediate students identify synonyms of familiar social and academic vocabulary and interpret common idioms using context clues. They distinguish main ideas from supporting details and draw inferences from clues in text. Errors interfere with comprehension.	Intermediate students typically write complete sentences to describe, explain, or compare or contrast verbal or graphic prompts. They write responses to open-ended questions and summarize passages. They use sentence-ending punctuation, pronouns, prepositional phrases, auxiliary verbs, and verb tenses. Responses have limited range of vocabulary. Errors in organization, grammar, word choice, and mechanics interfere with communication.
4 Proficient	Proficient students typically produce complete sentences to express opinions, provide information, conduct transactions, make a request, explain processes, give instructions, and describe social situations. They produce generally fluent narratives with some hesitations or self-corrections that do not obscure meaning. They organize responses in logical and sequential order and incorporate idiomatic expressions. Speech is coherent and clear but lacks elaboration or detail.	Proficient students typically follow complex multistep directions. They determine main ideas, infer directions, draw simple conclusions and predict logical outcomes in oral stories. They understand metaphorical language and uncommon idiomatic expressions, and recognize technical academic vocabulary.	Proficient students interpret idioms and determine synonyms of grade- level words. They recall stated and implicit details in a variety of genres, identify specific information in graphic organizers, and determine main ideas in fiction and academic texts. They analyze the structure of texts and identify literary techniques. Errors do not interfere with comprehension.	Proficient students typically write logically- sequenced responses that incorporate idiomatic expressions and convey original thought in response to open-ended prompts. They accurately interpret pictures or graphical information. They use correct verb tense and agreement, subordinating conjunctions, capitalization, punctuation, and adjective and adverb placement. Errors do not interfere with communication.
5 Above Proficient	Above Proficient students typically produce sentences with sophisticated vocabulary and correct grammar and subtle nuances of meaning, when expressing opinions, providing information, making requests, identifying and describing objects, and explaining processes and their reasoning. They produce detailed narratives of complex structure and skillfully organize information for presentations.	Above Proficient students typically follow complex instructions, recall subtle details, determine and evaluate key information to summarize a task, and make sophisticated inferences and predictions from classroom discussions or lengthy oral stories. They understand increasingly abstract idiomatic expressions, locate new information in a wider context, and distinguish relevant from extraneous information.	Above Proficient students typically identify synonyms and antonyms, interpret less familiar idioms, apply word definitions, and restate meanings in variant language. They prioritize main and supporting details, and read closely to make logical inferences. They use prediction to read fluently and to identify author's purpose and literary techniques.	Above Proficient students typically craft original responses to prompts, fluently conveying sequenced logical exposition. Students respond to open-ended questions requiring them to extrapolate from information indicated in prompts, interpret and synthesize complex information from graphic organizers, draw sophisticated inferences, explain reasoning, and express and support opinions. Minor errors are possible, but generally negligible.

Table D.7 Proficiency Level Descriptors, Grades 9–12

Grades 9-12	Speaking	Listening	Reading	Writing
1 Beginning	Beginning students are starting to develop receptive and productive skills in English.	Beginning students are starting to develop receptive and productive skills in English.	Beginning students are starting to develop receptive and productive skills in English.	Beginning students are starting to develop receptive and productive skills in English.
2 Early Intermediate	Early Intermediate students typically produce simple sentences using basic vocabulary and grammar when interpreting language related to social, school, and academic contexts, explaining personal preferences or describing a sequence of pictures about familiar events and social situations. Minimal vocabulary and grammar knowledge and errors frequently impede communication.	Early Intermediate students typically follow multistep directions. They identify main ideas and draw simple inferences and conclusions. Errors frequently impede communication and comprehension.	Early intermediate students recall simple information from text, identify main ideas and supporting details, and make simple inferences. They identify common idiomatic expressions and paraphrase passages. Errors frequently impede comprehension.	Early Intermediate students typically write complete sentences using basic vocabulary and grammar to express ideas. They compare and summarize information found in texts or graphic organizers. They demonstrate a basic knowledge of auxiliary verbs, pronouns, and conjunctions. Errors in organization, grammar, word choice, and mechanics frequently impede communication.
3 Intermediate	Intermediate students typically use appropriate words and phrases and complete sentences when providing information, expressing preferences, conducting transactions, and describing personal experiences. They describe social situations, give instructions, and narrate a simple story. Intended meaning is mostly clear, but sometimes requires comprehension-check questions. They are capable of communicating some nuances of meaning. Grammatical or vocabulary errors interfere with communication, but the intended meaning is somewhat clear.	Intermediate students typically interpret simple academic vocabulary and idiomatic expressions. They extrapolate logical outcomes, place new information in a broader context, and recall details from classroom discussions or oral stories. Errors interfere with communication and comprehension.	Intermediate students typically use knowledge of high-frequency affixes and context clues to determine word meanings and identify synonyms of high-frequency social and academic vocabulary. From a simple narrative, they recall stated and implicit details, distinguish main ideas, compare and contrast information, draw conclusions, and make some inferences. Errors interfere with comprehension.	Intermediate students typically use correct basic grammar and begin to demonstrate use of conjunctions in compound sentences. They summarize texts and analyze information in graphic organizers. Meaning is somewhat clear, although vocabulary may be limited. Errors interfere with communication.
4 Proficient	Proficient students typically use complete sentences to express opinions, explain processes, conduct transactions, and describe personal experiences. They use accurate vocabulary and grammar to describe the purpose of less common objects and fluently narrate stories with creative detail. They organize responses in logical and sequential order and incorporate idiomatic expressions. They convey subtle distinctions through rich, specific, and varied vocabulary.	Proficient students typically interpret idiomatic expressions and complex academic vocabulary and concepts. They distinguish essential details and nuances of meaning, synthesize answers from fragmentary information, and determine key information to summarize a task from complex narratives and discussions.	Proficient students typically draw complex conclusions from lengthy passages and distinguish nuances of meanings. They interpret alternate expressions of ideas, analyze the organization of passages, and identify theme, tone, and author purpose. Errors do not interfere with comprehension.	Proficient students typically write fluently, using complete sentences with accurate vocabulary to interpret texts and graphical information, while distinguishing nuances of meaning. They incorporate idiomatic expressions and produce responses to open-ended questions and write summaries and comparisons that correctly use verb forms, capitalization, punctuation, and advanced grammar. Responses exhibit minor errors in grammar and content organization that do not interfere with communication.
5 Above Proficient	Above Proficient students typically produce complex sentences with sophisticated and precise vocabulary and correct grammar. They convey detailed academic content and expressive nuances of meaning and skillfully organize information for presentations.	Above Proficient students typically interpret more complex grammar and academic vocabulary to follow complex instructions. They use context clues to interpret new vocabulary and draw conclusions about characters in oral stories. They distinguish subtleties of tone and point of view, recall extensive details, grasp abstract and uncommon idiomatic expressions, and analyze the structure of oral passages.	Above Proficient students recognize uncommon synonyms, subtle gradations of meanings using context clues, and unfamiliar idioms. They use prediction to read fluently, make inferences from challenging texts, synthesize text, recognize literary techniques, and use self-monitoring techniques to check for understanding.	Above Proficient students typically write using precise, sophisticated, and varied vocabulary. They demonstrate fluent and varied expression, express subtle nuances of meaning, and expand responses to prompts using related background knowledge. Minor errors are possible, but generally negligible.

Appendix E Scoring Tables

Form C

Table E.1 Form C Kindergarten Scoring Table

Spea	king			Liste	ening			_	Read	ling			Wı	iting		
RS	SS	SEM	PL	RS	SS	SEM	PL		RS	SS	SEM	PL	RS	SS	SEM	PL
0	300	59		0	300	117			0	240	117		0	200	70	
1	344	31		1	300	117			1	240	117		1	200	70	
2	369	22		2	300	117			2	240	117		2	200	70	
3	385	17		3	300	117			3	240	117		3	200	70	
4	396	14	1	4	300	117			4	240	117		4	200	70	
5	404	12	T	5	300	117	1		5	240	117		5	200	70	1
6	410	11		6	368	49	1		6	240	117	1	6	227	66	1
7	416	10		7	391	26			7	259	98		7	260	57	
8	421	9		8	402	18			8	301	56		8	287	46	
9	425	9		9	410	15			9	322	35		9	309	36	
10	430	9		10	416	13			10	334	25		10	326	31	
11	434	8		11	422	12			11	344	19		11	342	28	
12	437	8		12	427	11			12	351	16		12	356	27	
13	441	8		13	433	11	2		13	358	15		13	369	26	
14	445	8	2	14	439	12			14	364	14	2	14	383	26	2
15	448	8		15	445	13			15	370	14	2	15	397	26	
16	452	8		16	453	14	3		16	376	14		16	411	27	
17	456	8		17	463	16			17	382	14		17	429	30	2
18	459	8		18	476	20	4		18	389	14		18	453	39	3
19	463	9		19	500	32	4		19	395	14	2	19	498	64	4
20	467	9		20	530	52	5		20	402	14	3	20	630	189	5
21	471	9						3	21	410	14					
22	476	10	3						22	419	15					
23	481	10							23	429	16					
24	487	11							24	441	18	4				
25	495	13							25	459	24					
26	505	15	4						26	550	115	5				
27	520	20	4													
28	580	80	5													

Spea	king			r	Liste	ning			 Read	ding			I	Writ	ing	
RS	SS	SEM	PL		RS	SS	SEM	PL	RS	SS	SEM	PL		RS	SS	SEM
0	300	58			0	300	117		0	240	120			0	200	64
1	343	30			1	300	117		1	240	120			1	200	64
2	367	21			2	300	117		2	240	120			2	200	64
3	382	16			3	300	117		3	240	120			3	200	64
4	392	14			4	300	117		4	240	120			4	200	64
5	400	12			5	300	117		5	240	120			5	200	64
6	406	10	1		6	368	49	1	6	240	120			6	218	59
7	411	9	1		7	391	26		7	240	120	1		7	247	51
8	415	9			8	402	18		8	257	103			8	270	42
9	419	8			9	410	15		9	301	59			9	289	35
10	422	8			10	416	13		10	321	39			10	304	29
11	425	8			11	422	12		11	334	26			11	317	26
12	428	7			12	427	11		12	343	20			12	328	23
13	431	7			13	433	11		13	350	17			13	337	22
14	433	7			14	439	12	2	14	357	16			14	346	20
15	436	7			15	445	13		15	363	15			15	354	19
16	438	7			16	453	14	r	16	369	14	2		16	362	19
17	441	7			17	463	16	5	17	374	14	2		17	369	18
18	443	7			18	476	20	4	18	380	14			18	376	17
19	445	7			19	500	32		19	386	13			19	382	17
20	447	7	2		20	530	52	5	20	391	13			20	388	17
21	450	7							21	397	13	3		21	395	17
22	452	7							22	403	13	5		22	401	17
23	454	7							23	410	13			23	407	17
24	456	7							24	416	13			24	413	17
25	459	7							25	423	13			25	420	18
26	461	7							26	431	14			26	427	19
27	464	7							27	440	15	4		27	436	20
28	466	7							28	451	17			28	446	23
29	469	7							29	469	24			29	459	27
30	472	8							30	550	105	5		30	478	35
31	475	8	3											31	516	58
32	479	8												32	630	172
33	482	9														
34	486	9														
35	491	10														
36	497	11														
37	504	12	4													
38	513	15														
39	528	20														
40	580	72	5													

PL

 Table E.2 Form C Grade 1 Scoring Table

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Spea	king			List	ening			Read	ling			Writ	ing	
RS	SS	SEM	PL	RS	SS	SEM	PL	RS	SS	SEM	PL	RS	SS	SEN
0	350	72		0	310	122		0	300	129		0	270	80
1	405	17		1	310	122		1	300	129		1	270	80
2	417	12		2	310	122		2	300	129		2	270	80
3	425	10	1	3	310	122		3	300	129		3	270	80
4	431	9	1	4	310	122		4	300	129		4	276	74
5	435	8		5	368	64	1	5	300	129		5	310	46
6	439	7		6	398	34	1	6	300	129	1	6	332	37
7	442	7		7	411	21		7	309	120	1	7	349	33
8	445	6		8	420	16		8	369	60		8	364	30
9	447	6		9	427	14		9	390	39		9	377	28
10	450	6		10	433	13		10	403	29		10	388	26
11	452	6		11	439	13		11	413	24		11	399	24
12	454	5		12	446	13		12	422	21		12	408	22
13	456	5		13	453	14	2	13	430	19		13	417	21
14	458	5		14	460	15		14	437	18		14	424	19
15	460	5	2	15	470	17	3	15	443	17		15	432	18
16	461	5		16	481	20	-	16	450	17	2	16	438	18
17	463	5		17	495	23	4	17	456	17	-	17	445	17
18	465	5		18	513	25		18	463	16		18	451	17
19	467	5		19	538	30	5	19	469	16		19	457	17
20	469	5		20	560	39		20	476	16		20	463	17
21	470	5						21	483	17	3	21	470	17
22	472	5						22	490	17	5	22	476	17
23	474	5						23	498	17		23	483	18
24	476	5						24	507	18		24	490	18
25	478	5						25	516	18	4	25	498	19
26	480	5						26	526	19		26	507	20
27	482	5						27	538	21		27	518	22
28	484	5						28	553	24		28	530	24
29	486	6	3					29	579	35	5	29	546	28
30	488	6						30	610	56		30	567	34
31	490	6										31	603	49
32	493	6										32	640	75
33	496	6												
34	499	7												
33 26	502 505	/												
27	510	<u>ð</u>												
3/ 20	510	ð 10												
30	523	10	4											
40	535	17												
41	600	82	5											
<u>i</u>														

PL

Table E.124 Form C Grade 2 Scoring

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Spea	king			Liste	ening			F	leac	ling
RS	SS	SEM	PL	RS	SS	SEM	PL	F	RS	SS
0	350	72		0	310	122			0	300
1	405	17		1	310	122			1	300
2	417	12		2	310	122			2	300
3	425	10	1	3	310	122			3	300
4	431	9	1	4	310	122			4	300
5	435	8		5	368	64			5	300
6	439	7		6	398	34	1		6	300
7	442	7		7	411	21			7	309
8	445	6		8	420	16			8	369
9	447	6		9	427	14			9	390
10	450	6		10	433	13		1	10	403
11	452	6		11	439	13		1	11	413
12	454	5		12	446	13		1	12	422
13	456	5		13	453	14	2	1	13	430
14	458	5		14	460	15	2	1	14	437
15	460	5	2	15	470	17		1	15	443
16	461	5		16	481	20	3	1	16	450
17	463	5		17	495	23		1	17	456
18	465	5		18	513	25	Δ	1	18	463
19	467	5		19	538	30	4	1	19	469
20	469	5		20	560	39	5	2	20	476
21	470	5						2	21	483
22	472	5						2	22	490
23	474	5						2	23	498
24	476	5						4	24	507
25	478	5						2	25	516
26	480	5						2	26	526
27	482	5						2	27	538
28	484	5						2	28	553
29	486	6	3					2	<u>29</u>	579
30	488	6	U					-	30	610
31	490	6								
32	493	6								
33	496	6								
34	499	7								
35	502	7								
36	505	8								
37	510	8								
38	515	10	4							
39	523	12								
40	535	17								
41	600	82	5							

Table E.125 Form C Grade 3 Scoring

Writing

SS

SEM

PL

RS

SEM

PL

Spea	king		
RS	SS	SEM	PL
0	360	37	
1	366	33	
2	391	23	
3	405	18	
4	416	15	1
5	424	14	1
6	430	13	
7	436	11	
8	441	11	
9	446	10	
10	450	10	
11	453	9	
12	457	9	
13	461	9	2
14	464	8	2
15	467	8	
16	470	8	
17	473	8	
18	476	8	
19	479	8	
20	482	8	
21	485	8	
22	488	8	
23	491	7	3
24	494	7	5
25	497	7	
26	500	7	
27	503	7	
28	506	8	
29	509	8	
30	513	8	
31	516	8	
32	520	8	
33	523	8	
34	527	9	4
35	532	9	4
36	536	10	
37	542	11	
38	549	12	
39	558	15	
40	575	23	5
41	635	83	5

Table E.126 Form C Grade 126 Scoring	Table	E.126	Form	С	Grade	126	Scoring
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Listening

RS	SS	SEM	PL	R
0	350	127		0
1	350	127		1
2	350	127		2
3	350	127		3
4	350	127	1	4
5	350	127	1	5
6	368	109		6
7	416	61		7
8	439	40		8
9	456	32		9
10	470	29	2	10
11	483	26	2	11
12	495	25		12
13	508	25	3	13
14	521	25		14
15	534	26		15
16	550	28	4	16
17	569	31		17
18	593	36		18
19	631	49	5	19
20	640	54		20
				21
				22
				22
				J

Read	ling			 Writ	ting		
RS	SS	SEM	PL	RS	SS	SEM	PI
0	360	117		0	290	122	
1	360	117		1	290	122	
2	360	117		2	290	122	
3	360	117		3	338	74	
4	360	117	1	4	372	43	1
5	360	117	1	5	392	32	
6	395	82		6	406	26	
7	427	50		7	418	23	
8	445	35		8	428	21	
9	458	28		9	437	20	
10	469	24		10	445	19	
11	478	22		11	453	18	
12	486	20	2	12	460	18	
13	494	19		13	467	18	2
14	502	18		14	475	18	
15	509	18		15	482	18	
16	516	17	3	16	489	18	
17	523	17	5	17	497	18	
18	529	17		18	504	18	
19	536	17		19	512	18	3
20	543	17		20	520	18	5
21	551	17		21	528	18	
22	559	18	4	22	536	19	
23	567	18		23	544	19	
24	576	19		24	553	19	4
25	586	21		25	562	20	
26	598	23		26	571	20	
27	612	26		27	582	21	
28	633	33	5	28	594	23	
29	669	51		29	609	26	
30	680	59		30	628	31	5
				31	661	45	
				32	680	56	

Spea	king			_	Liste	ening	
RS	SS	SEM	PL		RS	SS	SEM
0	360	37		ſ	0	350	127
1	366	33			1	350	127
2	391	23			2	350	127
3	405	18			3	350	127
4	416	15	1		4	350	127
5	424	14	1		5	350	127
6	430	13			6	368	109
7	436	11			7	416	61
8	441	11			8	439	40
9	446	10			9	456	32
10	450	10			10	470	29
11	453	9			11	483	26
12	457	9			12	495	25
13	461	9	2		13	508	25
14	464	8	2		14	521	25
15	467	8			15	534	26
16	470	8			16	550	28
17	473	8			17	569	31
18	476	8			18	593	36
19	479	8			19	631	49
20	482	8			20	640	54
21	485	8					
22	488	8					
23	491	7	3				
24	494	7	5				
25	497	7					
26	500	7					
27	503	7					
28	506	8					
29	509	8					
30	513	8					
31	516	8					
32	520	8					
33	523	8					
34	527	9	4				
35	532	9					
36	536	10					
37	542	11					
38	549	12					
39	558	15					
40	5/5	23	5				
41	635	83					

Table E.127 Form	C Grade	127 Scoring
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PL

Read	ling				Writing				
RS	SS	SEM	PL		RS	SS	SEM	PL	
0	360	117			0	290	122		
1	360	117			1	290	122		
2	360	117			2	290	122		
3	360	117			3	338	74		
4	360	117			4	372	43	1	
5	360	117	1		5	392	32		
6	395	82			6	406	26		
7	427	50			7	418	23		
8	445	35			8	428	21		
9	458	28			9	437	20		
10	469	24			10	445	19		
11	478	22			11	453	18		
12	486	20	2		12	460	18		
13	494	19	2		13	467	18	2	
14	502	18			14	475	18		
15	509	18			15	482	18		
16	516	17	2		16	489	18		
17	523	17	3		17	497	18		
18	529	17			18	504	18		
19	536	17			19	512	18		
20	543	17			20	520	18	3	
21	551	17			21	528	18		
22	559	18	4		22	536	19		
23	567	18			23	544	19		
24	576	19			24	553	19		
25	586	21			25	562	20	4	
26	598	23			26	571	20		
27	612	26			27	582	21		
28	633	33	5		28	594	23		
29	669	51			29	609	26		
30	680	59			30	628	31	5	
				-	31	661	45		
					32	680	56		

Spea	king		Listening					
RS	SS	SEM	PL		RS	SS	SEM	
0	365	51			0	360	115	
1	365	51			1	360	115	
2	403	31			2	360	115	
3	423	21	1		3	360	115	
4	435	16			4	360	115	
5	444	13			5	360	115	
6	450	11			6	360	115	
7	455	10			7	385	90	
8	459	9			8	422	53	
9	463	9			9	441	36	
10	467	8	2		10	455	30	
11	470	8			11	468	27	
12	473	7			12	479	27	
13	475	7			13	491	27	
14	478	7			14	504	27	
15	481	7			15	517	28	
16	483	7			16	530	28	
17	486	7			17	545	29	
18	488	7			18	561	30	
19	491	7			19	579	32	
20	493	7	3		20	601	35	
21	496	7			21	627	38	
22	498	7			22	665	48	
23	501	7			23	680	55	
24	503	7						
25	506	7						
26	509	7						
27	512	7						
28	515	7						
29	518	7						
30	521	8						
31	524	8						
32	528	8	4					
33	532	8						
34	536	9						
35	541	10						
36	547	11						
37	554	14						
38	567	21						
39	592	37	5					
40	645	89						

Table	E.128	Form	С	Grade	128	Scoring
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PL

Read	ling			 Writ	ing		
RS	SS	SEM	PL	RS	SS	SEM	PL
0	380	113		0	300	152	
1	380	113		1	300	152	
2	380	113		2	300	152	
3	380	113		3	382	70	1
4	380	113		4	413	39	
5	380	113	1	5	431	29	
6	414	79	1	6	444	24	
7	445	48		7	455	21	
8	462	35		8	464	20	
9	476	28		9	472	19	2
10	487	25		10	480	18	2
11	496	24		11	487	18	
12	506	22		12	494	18	
13	514	21	2	13	502	18	
14	522	20		14	509	18	
15	530	20		15	516	18	
16	538	19	2	16	524	18	3
17	545	19	3	17	531	18	
18	553	19		18	539	18	
19	561	18		19	547	18	
20	568	18		20	555	18	
21	576	18		21	563	18	
22	584	19	4	22	572	18	4
23	593	19		23	580	18	
24	602	19		24	589	18	
25	612	20		25	599	19	
26	623	20		26	609	20	
27	635	21	5	27	620	21	
28	651	24	5	28	633	22	5
29	676	35		29	648	25	5
30	690	43		30	669	31	
				31	702	44	
				32	710	47	

Spea	king			Liste	ening			Read	ling		
RS	SS	SEM	PL	RS	SS	SEM	PL	RS	SS	SEM	PL
0	365	51		0	360	115		0	380	113	
1	365	51		1	360	115		1	380	113	
2	403	31		2	360	115		2	380	113	
3	423	21	1	3	360	115		3	380	113	
4	435	16		4	360	115		4	380	113	
5	444	13		5	360	115	1	5	380	113	1
6	450	11		6	360	115		6	414	79	1
7	455	10		7	385	90		7	445	48	
8	459	9		8	422	53		8	462	35	
9	463	9		9	441	36		9	476	28	
10	467	8	2	10	455	30		10	487	25	
11	470	8		11	468	27	-	11	496	24	
12	473	7		12	479	27	2	12	506	22	•
13	475	7		13	491	27		13	514	21	2
14	478	7		14	504	27	2	14	522	20	
15	481	7		15	517	28	3	15	530	20	
10	483	/		10	530	28		10	538 545	19	3
1/	480	/		1/	545	29	4	1/	545 552	19	
10	400	7		10	570	30 20	4	10	561	19	
19	491	7		20	601	32		19 20	569	10	
20	495 706	7	3	20	627	33		20	500 576	10	
21	498	7		$\frac{21}{22}$	665	- 38 - 48	5	$\frac{21}{22}$	584	10	4
22	501	7		23	680	55		22	593	19	
24	503	7						24	602	19	
25	505	7						25	612	20	
26	509	7						26	623	20	
27	512	7						27	635	20 21	
28	515	7						28	651	24	5
29	518	7						29	676	35	
30	521	8						30	690	43	
31	524	8									
32	528	8	1								
33	532	8	4								
34	536	9									
35	541	10									
36	547	11									
37	554	14									
38	567	21	_								
39	592	37	5								
40	645	89									

Writing RS

3

SS

SEM

PL

Table E.129 Form C Grade 129 Scoring

Spea	king			Lister
RS	SS	SEM	PL	RS
0	365	51		0
1	365	51		1
2	403	31		2
3	423	21	1	3
4	435	16		4
5	444	13		5
6	450	11		6
7	455	10		7
8	459	9		8
9	463	9		9
10	467	8	2	10
11	470	8		11
12	473	7		12
13	475	7		13
14	478	7		14
15	481	7		15
16	483	7		16
17	486	7		17
18	488	7		18
19	491	7		19
20	493	7		20
21	496	7	3	21
22	498	7		22
23	501	7		23
24	503	7		
25	506	7		
26	509	7		
27	512	7		
28	515	7		
29	518	7		
30	521	8		
31	524	8		
32	528	8	Δ	
33	532	8	4	
34	536	9		
35	541	10		
36	547	11		
37	554	14		
38	567	21		
39	592	37	5	
40	645	89		

Table E.130 Form	C Grade 130	Scoring
Tuble Life of torm	0 01440 100	Scoring

tening			 F
SS	SEM	PL	ŀ
360	115		
360	115		
360	115		
360	115		
360	115		
360	115	1	
360	115		
385	90		
422	53		
441	36		
455	30		
468	27		
479	27	2	
491	27		1
504	27		1
517	28	3	
530	28		
545	29		
561	30	4	-
579	32		
601	35		2
627	38		2
665	48	5	2
680	55		4
			4

Re	ading		 Writing			
R	s ss	SEM	PL	RS	SS	SEM
0	380	113		0	300	152
1	380	113		1	300	152
2	380	113		2	300	152
3	380	113		3	382	70
4	380	113		4	413	39
5	380	113	1	5	431	29
6	414	79	1	6	444	24
7	445	48		7	455	21
8	462	35		8	464	20
9	476	28		9	472	19
10	487	25		10	480	18
11	496	24		11	487	18
12	506	22		12	494	18
13	514	21	2	13	502	18
14	522	20	2	14	509	18
15	530	20		15	516	18
16	538	19		16	524	18
17	545	19	3	17	531	18
18	553	19		18	539	18
19	561	18		19	547	18
20	568	18		20	555	18
21	576	18		21	563	18
22	584	19	4	22	572	18
23	593	19		23	580	18
24	602	19		24	589	18
25	612	20		25	599	19
26	623	20		26	609	20
27	635	21	5	27	620	21
28	651	24	3	28	633	22
29	676	35		29	648	25
30	690	43		30	669	31
				31	702	44
				32	710	47

PL

Speaking							
RS	SS	SEM	PL				
0	370	54					
1	409	22					
2	425	15					
3	434	12	1				
4	441	10					
5	446	9					
6	451	8					
7	455	8					
8	458	7					
9	461	7					
10	463	6					
11	466	6	2				
12	468	6	2				
13	471	6					
14	473	6					
15	475	6					
16	477	5					
17	479	5					
18	481	5					
19	483	5					
20	485	5					
21	488	6					
22	490	6					
23	492	6					
24	494	6	3				
25	497	6					
26	499	6					
27	502	6					
28	505	7					
29	508	7					
30	511	7					
31	514	7					
32	517	7					
33	521	7					
34	525	7					
35	529	8	4				
36	533	8					
37	539	10					
38	547	14					
39	562	22					
40	592	41	5				
41	650	78					

List	ening		
RS	SS	SEM	PL
0	370	121	
1	370	121	
2	370	121	
3	370	121	
4	370	121	
5	370	121	1
6	370	121	
7	391	100	
8	429	62	
9	452	44	
10	470	37	
11	485	33	2
12	499	31	2
13	513	31	
14	527	32	3
15	542	33	
16	559	34	
17	577	36	4
18	596	36	4
19	614	29	
20	634	32	
21	665	52	
22	724	78	5
23	730	82	

Read	ling		Writ	ing	
RS	SS	SEM	PL	RS	SS
0	390	105		0	31
1	390	105		1	31
2	390	105		2	31
3	390	105		3	35
4	390	105		4	39
5	390	105		5	40
6	392	103	1	6	42
7	436	59		7	43
8	457	39		8	44
9	471	31		9	45
10	483	26		10	46
11	492	24		11	46
12	501	22		12	47
13	509	20		13	48
14	517	19		14	49
15	524	19	2	15	50
16	531	18		16	51
17	539	18		17	51
18	546	18		18	52
19	553	18		19	53
20	561	19	3	20	54
21	569	19		21	55
22	578	20		22	56
23	587	21		23	56
24	597	22	4	24	57
25	608	24		25	58
26	622	26		26	59
27	640	31		27	60
28	665	40	5	28	62
29	709	60	3	29	63
30	715	64		30	66
				31	70
				32	72

SEM

PL

SS

Table E.131 Form C Grade 131 Scoring

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Spea			
RS	SS	SEM	PL
0	370	54	
1	409	22	
2	425	15	
3	434	12	1
4	441	10	
5	446	9	
6	451	8	
7	455	8	
8	458	7	
9	461	7	
10	463	6	
11	466	6	2
12	468	6	2
13	471	6	
14	473	6	
15	475	6	
16	477	5	
17	479	5	
18	481	5	
19	483	5	
20	485	5	
21	488	6	
22	490	6	
23	492	6	
24	494	6	3
25	497	6	
26	499	6	
27	502	6	
28	505	7	
29	508	7	
30	511	7	
31	514	7	
32	517	7	
33	521	7	
34	525	7	
35	529	8	4
36	533	8	
37	539	10	
38	547	14	
39	562	22	
40	592	41	5
41	650	78	

Liste	ening		
RS	SS	SEM	PL
0	370	121	
1	370	121	
2	370	121	
3	370	121	
4	370	121	
5	370	121	1
6	370	121	
7	391	100	
8	429	62	
9	452	44	
10	470	37	
11	485	33	2
12	499	31	2
13	513	31	
14	527	32	3
15	542	33	
16	559	34	
17	577	36	4
18	596	36	4
19	614	29	
20	634	32	
21	665	52	
22	724	78	5
23	730	82	

Read	Reading					ing
RS	SS	SEM	PL		RS	SS
0	390	105			0	310
1	390	105			1	310
2	390	105			2	310
3	390	105	1		3	356
4	390	105			4	390
5	390	105			5	409
6	392	103			6	423
7	436	59			7	434
8	457	39			8	443
9	471	31			9	452
10	483	26			10	460
11	492	24			11	468
12	501	22			12	476
13	509	20			13	485
14	517	19	2		14	493
15	524	19			15	501
16	531	18				16
17	539	18			17	518
18	546	18			18	526
19	553	18			19	535
20	561	19	3		20	543
21	569	19			21	551
22	578	20			22	560
23	587	21			23	569
24	597	22	4		24	578
25	608	24			25	587
26	622	26			26	597
27	640	31			27	609
28	665	40	5		28	623
29	709	60	3		29	639
30	715	64			30	662
					31	704
					32	720

SEM

41 30

20 20

26 29

 PL

Speaking					
RS	SS	SEM	PL		
0	370	54			
1	409	22			
2	425	15			
3	434	12	1		
4	441	10			
5	446	9			
6	451	8			
7	455	8			
8	458	7			
9	461	7			
10	463	6			
11	466	6	2		
12	468	6	2		
13	471	6			
14	473	6			
15	475	6			
16	477	5			
17	479	5			
18	481	5			
19	483	5			
20	485	5			
21	488	6			
22	490	6			
23	492	6			
24	494	6	3		
25	497	6			
26	499	6			
27	502	6			
28	505	7			
29	508	7			
30	511	7			
31	514	7			
32	517	7			
33	521	7			
34	525	7			
35	529	8	4		
36	533	8			
37	539	10			
38	547	14			
39	562	22			
40	592	41	5		
41	650	78			

Table 1	E.133 Form	C Grade	133 Sco	ring
				8

Listening

Liste	ning			Re
RS	SS	SEM	PL	R
0	370	121		0
1	370	121		1
2	370	121		2
3	370	121		3
4	370	121		4
5	370	121	1	5
6	370	121		6
7	391	100		7
8	429	62		8
9	452	44		9
10	470	37		10
11	485	33		11
12	499	31	2	12
13	513	31		13
14	527	32	2	14
15	542	33	3	15
16	559	34		16
17	577	36	4	17
18	596	36	4	18
19	614	29		19
20	634	32		20
21	665	52		21
22	724	78	5	22
23	730	82		23
				24
				25
				26
				27
				28
				29
				30

eac	ling			-	Writ	ing	
S	SS	SEM	PL		RS	SS	SEM
)	390	105			0	310	121
l	390	105			1	310	121
2	390	105			2	310	121
3	390	105			3	356	75
ł	390	105			4	390	41
5	390	105			5	409	30
5	392	103	1		6	423	25
7	436	59			7	434	23
3	457	39			8	443	21
)	471	31			9	452	20
0	483	26			10	460	20
1	492	24			11	468	20
2	501	22			12	476	20
3	509	20			13	485	20
4	517	19			14	493	20
5	524	19	2		15	501	20
6	531	18	2		16	510	20
7	539	18			17	518	20
8	546	18			18	526	19
9	553	18			19	535	19
0	561	19	2		20	543	19
1	569	19	3		21	551	19
2	578	20			22	560	19
3	587	21			23	569	20
4	597	22	4		24	578	20
5	608	24			25	587	21
6	622	26			26	597	22
7	640	31			27	609	23
8	665	40	5		28	623	26
9	709	60	3		29	639	29
0	715	64			30	662	37
					31	704	57
					32	720	68

PL

	Speaking					Liste	ening
	RS	SS	SEM	PL		RS	SS
	0	370	54			0	370
	1	409	22			1	370
	2	425	15	1		2	370
	3	434	12			3	370
	4	441	10			4	370
	5	446	9			5	370
	6	451	8			6	370
	7	455	8			7	391
	8	458	7			8	429
	9	461	7			9	452
	10	463	6			10	470
	11	466	6	2		11	485
	12	468	6	2		12	499
	13	471	6			13	513
	14	473	6			14	527
	15	475	6			15	542
	16	477	5			16	559
	17	479	5			17	577
	18	481	5			18	596
	19	483	5			19	614
	20	485	5			20	634
	21	488	6			21	665
	22	490	6			22	724
	23	492	6			23	730
	24	494	6	2			
	25	497	6	3			
	26	499	6				
	27	502	6				
	28	505	7				
	29	508	7				
	30	511	7				
	31	514	7				
	32	517	7				
	33	521	7				
	34	525	7				
ļ	35	529	8	4			
ļ	36	533	8	-+			
ļ	37	539	10				
ļ	38	547	14				
ļ	39	562	22				
ļ	40	592	41	5			
	41	650	78				

S	SS	SEM	PL	
)	370	121		
l	370	121		
2	370	121		
3	370	121		
ł	370	121		
5	370	121	1	
5	370	121		
7	391	100		
3	429	62		
)	452	44		
0	470	37		
1	485	33		
2	499	31	2	
3	513	31		
4	527	32		
5	542	33	3	
6	559	34		
7	577	36		
8	596	36	4	
9	614	29		
0	634	32		
1	665	52	_	
2	724	78	5	
3	730	82		

Reading					Writing						
RS	SS	SEM	PL		RS	SS	SEM	PL			
0	390	105			0	310	121				
1	390	105			1	310	121				
2	390	105			2	310	121				
3	390	105			3	356	75				
4	390	105			4	390	41	1			
5	390	105			5	409	30				
6	392	103	1		6	423	25				
7	436	59	1		7	434	23				
8	457	39			8	443	21				
9	471	31			9	452	20				
10	483	26			10	460	20				
11	492	24			11	468	20				
12	501	22			12	476	20	2			
13	509	20			13	485	20				
14	517	19			14	493	20				
15	524	19			15	501	20				
16	531	18	2		16	510	20				
17	539	18			17	518	20	3			
18	546	18			18	526	19				
19	553	18			19	535	19				
20	561	19	2		20	543	19				
21	569	19	3		21	551	19				
22	578	20			22	560	19				
23	587	21			23	569	20	4			
24	597	22	4		24	578	20				
25	608	24	4		25	587	21				
26	622	26			26	597	22				
27	640	31			27	609	23				
28	665	40	5		28	623	26	5			
29	709	60			29	639	29				
30	715	64			30	662	37				
					31	704	57				
					32	720	68				

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NCE	OV	OR	CO	LT	PR	NCE	OV	OR	СО	LT	PR
1	1-310	1-362	1-311	1-231	1-287	30	364-365	425-426	374-375	294-295	349-350
2	311-312	363-364	312-314	232-233	288-289	31	366	427	376-377	296-298	351-353
3	313-314	365-367	315-316	234-235	290-293	32	367-368	428-429	378-379	299-300	354-355
4	315-316	368-369	317-318	236-237	294-295	33	369-370	430-431	380	301-303	356-357
5	317-319	370-373	319-321	238-240	296-298	34	371-372	432	381	304-306	358-359
6	320-321	374	322-323	241-243	299-300	35	373-374	433-434	382-383	307-309	360-362
7	322-323	375-377	324-325	244-245	301-302	36	375	435	384	310-311	363-364
8	324	378-381	326-327	246-247	303-305	37	376-377	436	385-386	312-314	365-367
9	325-326	382-384	328-329	248-250	306-307	38	378-379	437-438	387	315-317	368-369
10	327	385-387	330-331	251-253	308-309	39	380-381	439	388-389	318-319	370-371
11	328-329	388-390	332-333	254-255	310	40	382	440-441	390-391	320-322	372-373
12	330-331	391	334-336	256-257	311-312	41	383-384	442	392	323-325	374-376
13	332-333	392-393	337-338	258-259	313-314	42	385-386	443-444	393-394	326-328	377-378
14	334-335	394-395	339-340	260-261	315-317	43	387-388	445	395	329-330	379-380
15	336-337	396-398	341-343	262	318-319	44	389-390	446	396-397	331-333	381-382
16	338-339	399-400	344-346	263-264	320-321	45	391-392	447-448	398	334-335	383-385
17	340	401-402	347	265-266	322-323	46	393-394	449	399	336-338	386-388
18	341-342	403-404	348-351	267-268	324-325	47	395	450	400-401	339-340	389-390
19	343-344	405-406	352-353	269-270	326-328	48	396-397	451-452	402	341-343	391-393
20	345-346	407-408	354-355	271-272	329-330	49	398-399	453-454	403-404	344-346	394-395
21	347-348	409-410	356-358	273-274	331	50	400-401	455	405	347-349	396-398
22	349-350	411-413	359-360	275-276	332-333	51	402-403	456	406-407	350-351	399-400
23	351-352	414-415	361-362	277-278	334-335	52	404-405	457-458	408	352-354	401-403
24	353	416	363-364	279-280	336-337	53	406-407	459	409-410	355-356	404-405
25	354-355	417-418	365-366	281-282	338-339	54	408	460	411	357-359	406-408
26	356-357	419	367-368	283-285	340-342	55	409-410	461-462	412-413	360-361	409-410
27	358-359	420-421	369-370	286-287	343-344	56	411-412	463	414	362-363	411-412
28	360-361	422	371	288-290	345-346	57	413-414	464-465	415-416	364-365	413-414
29	362-363	423-424	372-373	291-293	347-348	58	415-416	466	417	366-367	415-416

 Table E.14 Form C Kindergarten Normal Curve Equivalent Norming Table for Composites
NCE	OV	OR	СО	LT	PR
59	417-418	467	418-419	368-370	417-418
60	419	468-469	420	371-373	419-421
61	420-421	470	421-422	374-375	422-423
62	422-423	471-472	423	376-378	424-425
63	424-425	473-474	424-425	379-380	426-427
64	426-427	475	426-427	381-382	428-429
65	428-429	476-477	428-429	383-385	430-432
66	430-431	478-479	430	386-387	433-434
67	432-433	480	431-432	388-390	435-436
68	434-435	481-482	433-434	391-392	437-438
69	436-437	483	435-436	393-394	439-440
70	438-439	484-485	437-438	395-396	441-443
71	440-441	486-487	439	397-399	444-446
72	442-443	488-489	440-441	400-401	447-448
73	444-445	490-491	442-443	402-404	449-450
74	446-447	492-493	444	405-406	451-452
75	448-449	494-495	445-446	407-409	453-455
76	450-451	496-498	447-448	410-412	456-457
77	452-454	499-500	449	413-415	458-460
78	455-456	501-502	450-451	416-418	461-463
79	457-458	503-505	452	419-420	464-465
80	459-460	506-507	453-455	421-423	466-468
81	461-463	508-509	456-457	424-426	469-471
82	464-465	510	458	427-429	472-474
83	466-467	511-513	459-460	430-432	475-478
84	468-469	514-515	461-462	433-435	479-481
85	470-471	516-517	463-465	436-439	482-484
86	472-474	518-519	466-467	440-444	485-488
87	475-476	520-521	468-469	445-447	489-490

	Table E.14 Form	C Kindergarten	Normal Curve	Equivalent N	Norming Table	for Composites	(continued)
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NCE OV OR СО LT PR 448-451 88 477-478 522-523 470-472 491-493 479 524 473-475 452-455 89 494-497 90 480-481 525-527 476 456-459 498-500 460-464 91 482-484 528 477-478 501-504 92 485-486 529-530 479-480 465-469 505-510 93 487-489 531-532 481-484 470-474 511-515 475-481 94 490-492 533 485-488 516-517 493-495 534 489-493 482-491 518-522 95 96 496-500 535 494 492-499 523-527 97 501-503 536-537 495-498 500-505 528-533 504-505 538-540 499-503 506-511 98 534-546 99 506-999 541-999 504-999 512-999 547-999

NCE	OV	OR	СО	LT	PR	NCE	OV	OR	СО	LT	PR
1	1-342	1-372	1-323	1-272	1-331	30	401-402	438-439	387-388	360-361	412-413
2	343-344	373	324-326	273-276	332	31	403-404	440-441	389	362-363	414
3	345	374-376	327	277-279	333-334	32	405-406	442	390-391	364-365	415-416
4	346-347	377-379	328-330	280-282	335-337	33	407-408	443	392	366-368	417-418
5	348-349	380-382	331-332	283	338-341	34	409	444-445	393-394	369-371	419-420
6	350-351	383-385	333-334	284-286	342-344	35	410-411	446	395-396	372-373	421
7	352-353	386-388	335-338	287-289	345-347	36	412-413	447	397-398	374-376	422-423
8	354-355	389-392	339-342	290-292	348-351	37	414	448-449	399-400	377-378	424-425
9	356-358	393-395	343	293-295	352-354	38	415-416	450	401	379-380	426-427
10	359-361	396-400	344-347	296-300	355-357	39	417	451	402-403	381-382	428-429
11	362-364	401-404	348-350	301-303	358-361	40	418-419	452	404-405	383-384	430-431
12	365-366	405-408	351-353	304-306	362-366	41	420-421	453	406	385-386	432-433
13	367-368	409-410	354-356	307-309	367-369	42	422	454-455	407-408	387-389	434-435
14	369-371	411-412	357-358	310-313	370-372	43	423-424	456	409-410	390-391	436
15	372	413-414	359-360	314-316	373-376	44	425	457	411	392-393	437-438
16	373-375	415-416	361-362	317-321	377-378	45	426-427	458	412-413	394-396	439
17	376-377	417-418	363-364	322-323	379-381	46	428	459	414-415	397-398	440-441
18	378-379	419	365-366	324-326	382-383	47	429-430	460-461	416	399-400	442-443
19	380-381	420-422	367-369	327-330	384-386	48	431	462	417-418	401-402	444-445
20	382-383	423-424	370	331-333	387-389	49	432-433	463	419-420	403-404	446
21	384	425	371-372	334-336	390-393	50	434-435	464	421	405-406	447-448
22	385-387	426-427	373-374	337-339	394-396	51	436	465-466	422-423	407-408	449-450
23	388-389	428	375-376	340-342	397-398	52	437-438	467	424-425	409-410	451-452
24	390-391	429-430	377-378	343-346	399-401	53	439-440	468	426-427	411-413	453-454
25	392-393	431-432	379-380	347-349	402-403	54	441-442	469	428	414-415	455-456
26	394-395	433	381	350-351	404-405	55	443	470-471	429-430	416-417	457-458
27	396-397	434-435	382-383	352-354	406-407	56	444-445	472	431-432	418-420	459-460
28	398-399	436	384	355-357	408-409	57	446-447	473	433	421-422	461-462
29	400	437	385-386	358-359	410-411	58	448-449	474	434-435	423-424	463-464

 Table E.15 Form C Grade 1 Normal Curve Equivalent Norming Table for Composites

NCE	OV	OR	CO	LT	PR
59	450-451	475-476	436	425-427	465-466
60	452-453	477	437-438	428-429	467
61	454-455	478-479	439-440	430-432	468-470
62	456	480	441-442	433-434	471-472
63	457-459	481	443	435-437	473-474
64	460-461	482-483	444-445	438-440	475
65	462-463	484	446-447	441-443	476-477
66	464-465	485-486	448-449	444-447	478-479
67	466-467	487	450-451	448-450	480-482
68	468-470	488-489	452-453	451-453	483-485
69	471-472	490-491	454-455	454-456	486-487
70	473-474	492-493	456-457	457-460	488-490
71	475-476	494	458-459	461-464	491-493
72	477-479	495-496	460-461	465-468	494-497
73	480-481	497-498	462-463	469-473	498-500
74	482-484	499	464-465	474-477	501-505
75	485-487	500-501	466-467	478-482	506-509
76	488-490	502-503	468-470	483-487	510-513
77	491-493	504	471-472	488-492	514-518
78	494-496	505-506	473-475	493-497	519-524
79	497-499	507-508	476-477	498-503	525-531
80	500-502	509	478-480	504-509	532-543
81	503-504	510-511	481-484	510-513	544-552
82	505-507	512-513	485-486	514-517	553-556
83	508-510	514-515	487-488	518-521	557-559
84	511-513	516-517	489-492	522-526	560-563
85	514-515	518-519	493-494	527-530	564-565
86	516-518	520	495-497	531-534	566-568
87	519-520	521-522	498-499	535-537	569-571

NCE	OV	OR	CO	LT	PR
88	521-522	523	500-502	538-543	572-574
89	523-524	524-525	503-505	544-545	575
90	525-526	526-527	506-508	546-549	576-577
91	527-530	528-529	509-511	550-552	578
92	531	530	512	553-555	579
93	532-534	531-533	513-515	556-558	580-581
94	535-536	534-535	516-517	559-560	582-583
95	537-539	536	518-520	561-564	584-585
96	540-542	537-538	521-523	565-566	586
97	543	539-540	524-526	567-570	587
98	544	541-542	527-528	571-572	588
99	545-999	543-999	529-999	573-999	589-999

 Table E.15 Form C Grade 1 Normal Curve Equivalent Norming Table for Composites (continued)

NCE	OV	OR	CO	LT	PR	NCE	OV	OR	СО	LT	PR
1	1-392	1-420	1-323	1-329	1-380	30	450-451		387-388	427-428	461-462
2	393	421-425	324-327	330-336	381-382	31	452-453	471-472	389-390	429-431	463
3	394-398	426-427	328-330	337-341	383-386	32	454-455	473	391-392	432-433	464-465
4	399-400	428-430	331-332	342-344	387-391	33	456	474	393	434-435	466-467
5	401-402	431-433	333-334	345-349	392-395	34	457-458	475	394-395	436-437	468-469
6	403-404	434-436	335-336	350-352	396-402	35	459-460	476	396-397	438-440	470
7	405-406	437-439	337-340	353-355	403-407	36	461-462	477	398	441-443	471-472
8	407	440-441	341-342	356-359	408-411	37	463-464	478	399-400	444-446	473
9	408-410	442-443	343-344	360-363	412-415	38	465-466	479	401-402	447-448	474-475
10	411-412	444-446	345-347	364-366	416-418	39	467	480	403	449-450	476
11	413-414	447	348-350	367-370	419-421	40	468-469	481	404-405	451-453	477-478
12	415-416	448-449	351-353	371-374	422-424	41	470-471	482	406	454-455	479-480
13	417-418	450	354-356	375-378	425-426	42	472	483-484	407-408	456-457	481
14	419-420	451-452	357-358	379-381	427-429	43	473-474	485	409	458-459	482-483
15	421-422	453	359-361	382-385	430-432	44	475	486	410-411	460-462	484-485
16	423-425	454	362	386-390	433-434	45	476-477	487	412-413	463-464	486
17	426	455	363-365	391-393	435-436	46	478-479	488	414	465-466	487-488
18	427-428	456	366-367	394-397	437-438	47	480	489-490	415-416	467-469	489
19	429-430	457-458	368	398-400	439-441	48	481-482	491	417	470-472	490-491
20	431-433	459	369-370	401-402	442-443	49	483-484	492	418-419	473-474	492
21	434-435	460	371-372	403-405	444-445	50	485	493	420-421	475-477	493-494
22	436	461	373-374	406-407	446-447	51	486-487	494	422	478-479	495-496
23	437-438	462	375-376	408-409	448-449	52	488-489	495-496	423-424	480-481	497
24	439-441	463-464	377-378	410-412	450-451	53	490-491	497	425-426	482-484	498-499
25	442	465	379	413-414	452	54	492	498	427-428	485-486	500
26	443-444	466	380-381	415-417	453-454	55	493-494	499-500	429-430	487-488	501-502
27	445-446	467	382	418-420	455-456	56	495-496	501	431	489-491	503-504
28	447-448	468	383-384	421-423	457-458	57	497	502	432-433	492-493	505-506
29	449	469-470	385-386	424-426	459-460	58	498-499	503-504	434-435	494-495	507-508

 Table E.16 Form C Grades 2–3 Normal Curve Equivalent Norming Table for Composites

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NCE	OV	OR	СО	LT	PR
59	500-501	505	436-437	496-497	509
60	502	506	438-439	498-500	510-511
61	503-504	507-508	440-441	501-502	512-513
62	505-506	509	442-443	503-505	514-515
63	507-508	510-511	444	506-507	516-517
64	509-510	512	445-446	508-509	518-519
65	511	513-514	447-448	510-512	520
66	512-513	515-516	449-450	513-514	521-522
67	514-515	517-518	451-452	515-516	523-524
68	516	519-520	453	517-518	525-527
69	517-518	521-522	454-455	519-521	528-529
70	519-520	523-524	456-457	522	530-531
71	521-522	525-526	458-459	523-524	532-533
72	523-525	527-529	460-461	525-526	534-535
73	526-527	530-531	462-463	527-529	536-538
74	528-529	532-533	464-465	530-531	539-540
75	530	534-535	466-467	532-533	541-543
76	531-532	536-537	468-469	534-536	544-546
77	533	538-539	470-471	537-538	547-548
78	534-535	540-541	472-474	539-541	549-551
79	536-537	542-543	475-476	542-543	552-554
80	538-539	544-545	477-479	544-546	555-557
81	540-541	546-547	480-481	547-548	558-560
82	542	548-549	482-483	549-551	561-562
83	543-544	550-551	484-486	552-553	563-565
84	545-546	552	487-489	554-556	566-567
85	547-548	553-554	490-493	557-558	568-570
86	549-550	555-556	494-497	559-562	571-572
87	551	557	498-499	563-565	573-575

 Table E.16 Form C Grades 2–3 Normal Curve Equivalent Norming Table for Composites (continued)

NCE	OV	OR	СО	LT	PR
88	552-553	558-560	500-505	566-568	576-577
89	554	561	506-507	569-572	578-579
90	555-556	562-564	508-509	573-575	580-582
91	557	565-566	510-511	576-579	583-584
92	558-559	567	512-514	580-581	585-587
93	560-561	568	515-518	582-584	588
94	562-563	569	519-520	585-586	589-590
95	564-565	570-571	521-523	587-590	591
96	566-568	572	524-525	591-592	592-593
97	569-572	573	526-527	593-595	594-595
98	573	574-576	528-530	596-597	596-597
99	574-999	577-999	531-999	598-999	598-999

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NCE	OV	OR	CO	LT	PR	NCE	OV	OR	СО	LT	PR
1	1-419	1-423	1-368	1-384	1-400	30	482-483	487	437-439	474-476	490-491
2	420-422	424-426	369-370	385	401-403	31	484-485	488-489	440-441	477-478	492-493
3	423-424	427-429	371-372	386-390	404-407	32	486-488	490-491	442-443	479-481	494-495
4	425-426	430-432	373-374	391-392	408-413	33	489	492	444-445	482-483	496-497
5	427-429	433-437	375-378	393-396	414-423	34	490-491	493-494	446	484-486	498-499
6	430-431	438-439	379-380	397-401	424-432	35	492-493	495-496	447-448	487-488	500
7	432-434	440-441	381-383	402-407	433-436	36	494-495	497	449-450	489-490	501-502
8	435-436	442-443	384-387	408-411	437-443	37	496-497	498-499	451-452	491-492	503-504
9	437-439	444	388-390	412-413	444-446	38	498-499	500	453-454	493-495	505
10	440-441	445-446	391-393	414-416	447-448	39	500-501	501-502	455	496-497	506-507
11	442-444	447-449	394-395	417-420	449-450	40	502-503	503	456-457	498-499	508
12	445-446	450-451	396-398	421-424	451-453	41	504-505	504	458-460	500-502	509-510
13	447-448	452-455	399-401	425-426	454-455	42	506	505-506	461-462	503-504	511-512
14	449-450	456-457	402-403	427-429	456-457	43	507-508	507-508	463-464	505-506	513
15	451-452	458-459	404-406	430-433	458-460	44	509-510	509	465	507-509	514-515
16	453-454	460-462	407-409	434-436	461-463	45	511-512	510-511	466-467	510-511	516
17	455-456	463-464	410-411	437-438	464-466	46	513-514	512	468-470	512-514	517-518
18	457-458	465-466	412-414	439-441	467-468	47	515-516	513-514	471	515	519
19	459-460	467-469	415-416	442-445	469-470	48	517	515-516	472-473	516-518	520-521
20	461-462	470-471	417-418	446-448	471-472	49	518-519	517	474-475	519-520	522
21	463-464	472-473	419-421	449-451	473-474	50	520-521	518-519	476-477	521-522	523-524
22	465-467	474-475	422	452-453	475-476	51	522-523	520-521	478-479	523-524	525
23	468-469	476-477	423-425	454-457	477-478	52	524-525	522	480	525-526	526-527
24	470-471	478	426-427	458-459	479-480	53	526-527	523-524	481-482	527-529	528-529
25	472-473	479-480	428-429	460-462	481	54	528	525	483-484	530-531	530
26	474-475	481	430-431	463-465	482-484	55	529-530	526-527	485-486	532-533	531-532
27	476-477	482-483	432	466-468	485-486	56	531-532	528-529	487-488	534-535	533-534
28	478-480	484	433-434	469-471	487-488	57	533-534	530	489-490	536-537	535
29	481	485-486	435-436	472-473	489	58	535	531-532	491-492	538-539	536

 Table E.17 Form C Grades 4–5 Normal Curve Equivalent Norming Table for Composites

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NCE	OV	OR	CO	LT	PR
59	536-537	533	493-494	540-541	537-538
60	538-539	534-535	495	542-543	539-540
61	540-541	536-537	496-497	544-546	541
62	542	538-539	498-499	547-548	542-543
63	543-544	540-541	500	549-550	544-545
64	545-546	542-543	501-502	551-552	546-547
65	547	544-545	503-504	553-554	548
66	548-549	546-547	505-506	555-556	549-550
67	550-551	548-549	507-508	557-558	551-552
68	552-553	550-551	509	559-560	553-554
69	554-555	552-553	510-511	561-563	555-556
70	556-557	554-556	512-513	564	557-558
71	558	557-558	514-515	565-567	559-561
72	559-560	559-560	516	568-569	562-563
73	561-562	561-562	517-518	570-571	564-565
74	563-564	563-565	519-520	572-573	566-568
75	565	566-567	521	574-575	569-570
76	566-567	568-570	522-523	576-577	571-572
77	568-569	571-572	524-525	578-579	573-574
78	570-571	573-574	526-527	580-581	575-576
79	572-573	575-577	528-529	582-583	577-579
80	574-575	578-579	530-531	584-585	580-582
81	576-578	580-581	532	586-587	583-585
82	579-580	582-584	533-534	588-590	586-587
83	581-582	585-586	535-536	591-592	588-590
84	583-584	587-588	537	593-594	591-592
85	585-586	589-590	538-540	595-596	593-595
86	587-588	591-592	541-542	597-599	596-597
87	589-590	593-594	543-544	600-601	598-600

 Table E.17 Form C Grades 4–5 Normal Curve Equivalent Norming Table for Composites (continued)

NCE	OV	OR	CO	LT	PR
88	591-592	595-596	545-546	602-604	601-602
89	593-594	597-598	547-548	605-606	603
90	595-596	599-600	549-551	607-608	604-605
91	597-598	601	552	609-610	606-607
92	599-600	602-603	553-554	611-613	608-609
93	601	604	555-556	614-616	610
94	602	605-607	557-558	617	611
95	603-604	608-609	559	618-619	612-613
96	605	610-612	560-561	620	614-615
97	606	613-615	562	621	616-617
98	607-609	616-617	563-564	622	618
99	610-999	618-999	565-999	623-999	619-999

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NCE	OV	OR	CO	LT	PR	NCE	OV	OR	СО	LT	PR
1	1-433	1-424	1-398	1-401	1-408	30	495-496	491-493	472-473	495-496	496-497
2	434	425-427	399-401	402-406	409-415	31	497-498	494-495	474-475	497-499	498
3	435-438	428-432	402-405	407-410	416-420	32	499-500	496	476-478	500-501	499-500
4	439-440	433-434	406	411-414	421-426	33	501-502	497-498	479	502-504	501
5	441-442	435-438	407-410	415-419	427-432	34	503-504	499-500	480-482	505-506	502-503
6	443	439-443	411-413	420-422	433-437	35	505-506	501-502	483-484	507-508	504-505
7	444-445	444	414-417	423-428	438-440	36	507-509	503	485-486	509-511	506-507
8	446-447	445-447	418	429-432	441-444	37	510	504-506	487-488	512-513	508
9	448-449	448-450	419-420	433-434	445-447	38	511-512	507-508	489-491	514-515	509-510
10	450-453	451-453	421-424	435-438	448-450	39	513-514	509	492-493	516-517	511
11	454-455	454-455	425-426	439-441	451-453	40	515-516	510-511	494-495	518-519	512-513
12	456-458	456-457	427-428	442-445	454-455	41	517-518	512-513	496-497	520-521	514-515
13	459-460	458-459	429-431	446-448	456-458	42	519	514-515	498-499	522-524	516-517
14	461-462	460-461	432-435	449-451	459-461	43	520-521	516-517	500-502	525-526	518
15	463-464	462-463	436-437	452-454	462-465	44	522-523	518-519	503-504	527-528	519-520
16	465-468	464-465	438-439	455-458	466-467	45	524-525	520-521	505-506	529-530	521-522
17	469-470	466-467	440-442	459-462	468-469	46	526	522	507-508	531-533	523
18	471-472	468-469	443-444	463-465	470-471	47	527-528	523-524	509-511	534-535	524-525
19	473-474	470-471	445-447	466-468	472-474	48	529-531	525-526	512-513	536-537	526-527
20	475-476	472	448-450	469-470	475-476	49	532	527-528	514-515	538-539	528-529
21	477-478	473-474	451-452	471-472	477-478	50	533-534	529	516-518	540-541	530-531
22	479-480	475	453-454	473-475	479-480	51	535-536	530-531	519-520	542-543	532
23	481-482	476-477	455-458	476-478	481-482	52	537-538	532-533	521-522	544-545	533-534
24	483-484	478-479	459-460	479-481	483-484	53	539-540	534-535	523-524	546-547	535
25	485-486	480-482	461-462	482-484	485-487	54	541-542	536-537	525-526	548-549	536-537
26	487-488	483-484	463-464	485-487	488-489	55	543-544	538	527-528	550-551	538
27	489	485-487	465-466	488-490	490-491	56	545-546	539-541	529-530	552-553	539-540
28	490-492	488	467-468	491-492	492-493	57	547-548	542	531-532	554-555	541-542
29	493-494	489-490	469-471	493-494	494-495	58	549-550	543-544	533-534	556-557	543

 Table E.18 Form C Grades 6–8 Normal Curve Equivalent Norming Table for Composites

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NCE	OV	OR	CO	LT	PR
59	551-552	545-546	535-536	558-560	544-545
60	553	547-548	537-538	561	546-547
61	554-555	549-550	539-540	562-563	548
62	556-557	551-552	541-542	564-565	549-550
63	558-559	553-554	543-544	566-567	551-552
64	560-561	555-556	545-546	568-569	553-554
65	562-563	557-558	547-548	570-572	555
66	564-565	559-560	549-550	573-574	556-557
67	566-567	561-562	551-552	575-576	558-559
68	568-569	563-564	553-554	577-578	560
69	570-571	565-566	555-556	579-580	561-562
70	572-573	567-568	557-559	581-582	563-564
71	574-575	569-570	560-561	583-585	565-566
72	576-577	571-572	562-563	586-587	567-568
73	578	573-574	564-565	588-589	569-570
74	579-581	575-577	566-567	590	571-572
75	582-583	578-579	568-569	591-592	573-574
76	584-585	580-581	570-571	593-594	575-576
77	586-587	582-583	572-574	595-597	577-578
78	588-589	584-586	575-576	598-599	579-581
79	590-591	587-588	577-578	600-601	582-584
80	592-593	589-590	579-580	602-603	585-586
81	594	591-593	581-583	604-605	587-588
82	595-597	594-595	584-585	606-608	589-591
83	598	596-598	586-587	609-610	592-594
84	599-600	599-600	588-589	611-612	595-597
85	601-602	601-603	590-591	613-615	598-600
86	603-604	604-605	592-593	616-617	601-602
87	605-606	606-608	594	618-619	603-604

NCE	OV	OR	CO	LT	PR
88	607	609-610	595-597	620-621	605-607
89	608-609	611-612	598-599	622-624	608-609
90	610-612	613-614	600-602	625-626	610-611
91	613	615-616	603-604	627-629	612-613
92	614-615	617-619	605-606	630-631	614-616
93	616	620	607-608	632-634	617-618
94	617-618	621-622	609-611	635-636	619-620
95	619-621	623-624	612-614	637-639	621-623
96	622	625-627	615-618	640-642	624-626
97	623-625	628	619-620	643-644	627
98	626-627	629-630	621-623	645-646	628
99	628-999	631-999	624-999	647-999	629-999

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NCE	OV	OR	CO	LT	PR	NCE	OV	OR	СО	LT	PR
1	1-433	1-432	1-415	1-403	1-410	30	500-501	498	491-492	499-500	507
2	434-438	433	416-418	404-407	411-416	31	502-503	499-500	493-495	501-503	508-509
3	439-440	434-436	419-420	408-412	417-422	32	504-505	501	496-498	504-505	510-511
4	441-443	437-441	421-423	413-416	423-429	33	506-507	502-503	499-500	506-508	512-513
5	444-447	442-443	424-426	417-422	430-435	34	508-509	504	501-502	509-510	514-515
6	448-449	444-445	427-428	423-426	436-438	35	510-511	505-506	503-504	511-513	516
7	450-452	446-448	429-430	427-430	439-441	36	512-513	507-508	505-506	514-515	517-518
8	453-454	449-451	431-433	431-434	442-444	37	514-515	509	507-508	516-517	519
9	455-456	452-454	434-436	435-438	445-449	38	516-517	510-511	509-510	518-519	520-521
10	457-458	455-456	437-440	439-442	450-454	39	518-519	512-513	511-512	520-522	522-523
11	459-460	457-458	441-442	443-447	455-461	40	520	514	513-515	523-524	524
12	461-462	459-461	443-445	448-450	462-464	41	521-522	515-516	516-517	525-526	525-526
13	463-464	462-464	446-448	451-454	465-468	42	523-524	517-518	518-519	527-528	527
14	465-467	465-466	449-450	455-457	469-471	43	525-526	519-520	520-521	529-530	528
15	468-469	467-468	451-452	458-459	472-476	44	527-528	521	522-524	531-532	529-530
16	470-472	469-471	453-456	460-462	477-479	45	529	522-523	525-526	533-534	531
17	473-474	472-473	457-458	463-465	480-482	46	530-531	524	527-528	535-536	532-533
18	475-476	474-475	459-460	466-469	483-484	47	532-533	525-526	529-530	537-538	534-535
19	477-478	476-477	461-463	470-472	485-487	48	534-535	527-528	531-532	539-540	536
20	479-481	478-479	464-466	473-475	488-489	49	536	529-530	533-534	541-542	537-538
21	482	480-481	467-469	476-478	490-491	50	537-538	531	535-537	543-544	539
22	483-485	482-483	470-472	479-481	492-493	51	539-540	532-533	538-539	545-546	540
23	486-487	484-486	473-474	482-484	494	52	541-542	534-535	540-542	547-549	541-542
24	488-489	487-488	475-477	485-486	495-496	53	543	536-537	543-544	550-551	543
25	490-491	489-490	478-479	487-488	497-498	54	544-545	538	545-546	552	544-545
26	492-493	491-492	480-481	489-490	499-500	55	546-547	539-541	547-548	553-554	546
27	494-495	493	482-484	491-493	501-502	56	548-549	542	549-550	555-557	547-548
28	496-497	494-495	485-488	494-495	503-504	57	550-551	543-544	551-552	558-559	549
29	498-499	496-497	489-490	496-498	505-506	58	552-553	545-546	553-554	560-561	550-551

 Table E.19 Form C Grades 9–12 Normal Curve Equivalent Norming Table for Composites

NCE	OV	OR	CO	LT	PR
59	554-555	547	555-556	562	552
60	556-557	548-549	557-559	563-565	553-554
61	558-559	550-551	560-561	566-567	555
62	560-561	552-553	562-563	568-569	556-557
63	562	554-555	564-566	570-571	558-559
64	563-564	556-557	567-568	572-573	560
65	565-566	558-559	569-570	574-575	561-562
66	567-568	560-561	571-572	576-577	563-564
67	569	562-563	573-574	578-579	565-566
68	570-571	564-565	575-576	580-581	567-568
69	572-573	566-567	577-578	582-583	569-570
70	574-575	568-569	579-580	584-585	571
71	576	570-571	581-583	586-587	572-573
72	577-578	572-573	584-585	588-589	574-576
73	579-580	574-576	586-588	590-592	577-578
74	581-582	577-578	589-590	593-594	579-581
75	583-584	579-581	591-592	595-596	582-583
76	585-586	582-583	593-594	597-598	584-585
77	587-588	584-585	595-596	599-600	586-588
78	589-590	586-588	597-599	601-602	589-590
79	591-592	589-591	600-602	603-604	591-592
80	593	592-593	603-604	605-606	593-595
81	594-595	594-595	605-606	607-608	596-598
82	596-597	596-597	607-608	609-611	599-600
83	598-600	598-599	609-611	612-613	601-602
84	601-602	600-602	612-613	614-616	603
85	603-604	603-604	614-616	617-618	604-606
86	605-607	605-607	617-618	619-620	607-608
87	608-609	608-610	619-620	621-624	609-610

 Table E.19 Form C Grades 9–12 Normal Curve Equivalent Norming Table for Composites (continued)

NCE	OV	OR	CO	LT	PR
88	610-612	611-612	621-622	625-626	611-612
89	613	613-615	623-624	627-628	613-615
90	614	616-619	625-627	629-630	616
91	615-617	620-622	628-629	631-633	617-618
92	618-619	623-625	630-632	634-635	619-620
93	620-622	626-628	633-634	636	621-622
94	623	629	635-636	637-638	623-624
95	624-626	630-634	637-639	639-640	625
96	627	635-636	640-642	641-646	626-627
97	628-629	637	643-645	647-649	628
98	630-632	638-640	646-647	650-652	629
99	633-999	641-999	648-999	653-999	630-999

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PR	OV	OR	CO	LT	PR	PR	OV	OR	CO	LT	PR
1	1-316	1-368	1-317	1-236	1-295	30	380	439	389	318-319	370
2	317-325	369-382	318-327	237-248	296-305	31	381	440	390	320	371-372
3	326-330	383-390	328-334	249-255	306-311	32	382	441		321-322	373
4	331-335	391-395	335-339	256-260	312-316	33	383		391	323	374
5	336-338	396-400	340-345	261-264	317-321	34	384-385	442	392	324-325	375-376
6	339-341	401-403	346-350	265-267	322-325	35	386	443	393	326-327	377
7	342-344	404-406	351-353	268-270	326-328	36	387	444	394	328	378
8	345-347	407-409	354-357	271-274	329-331	37	388	445	395	329-330	379-380
9	348-349	410-413	358-360	275-276	332-333	38	389	446	396	331	381
10	350-352	414-415	361-362	277-278	334-335	39	390			332	382
11	353-354	416-417	363-364	279-281	336-338	40	391	447	397	333-334	383-384
12	355-356	418	365-366	282-283	339-340	41	392	448	398	335	385
13	357-358	419-420	367-368	284-285	341-342	42	393		399	336-337	386-387
14	359	421	369-370	286-288	343-344	43	394	449		338	388
15	360-361	422-423	371-372	289-291	345-346	44	395	450	400	339	389
16	362-363	424	373	292-293	347-348	45	396	451	401	340-341	390-391
17	364	425	374-375	294-295	349-350	46	397	452	402	342	392
18	365-366	426-427	376	296-297	351-352	47	398		403	343-344	393
19	367	428	377-378	298-299	353	48	399	453		345	394
20	368	429	379	300-301	354-355	49	400	454	404	346-347	395-396
21	369	430	380	302-303	356	50	401	455	405	348	397
22	370-371	431-432	381	304-305	357-358	51	402		406	349	398
23	372	433	382	306	359-360	52	403	456	407	350-351	399-400
24	373-374	434	383	307-309	361-362	53	404	457		352	401
25	375	435	384	310	363-364	54	405	458	408	353	402
26	376		385	311-312	365	55	406		409	354-355	403-404
27	377	436	386	313	366	56	407	459	410	356	405
28	378	437	387	314-316	367-368	57	408	460	411	357	406
29	379	438	388	317	369	58				358-359	407-408

 Table E.20 Form C Kindergarten Percentile Ranking Norming Table for Composites

PR	OV	OR	СО	LT	PR
59	409	461	412	360	409
60	410	462	413	361	410
61	411	463	414	362-363	411
62	412	464	415	364	412
63	413			365	413-414
64	414-415	465	416	366	415
65	416	466	417	367	416
66	417	467	418	368-369	417
67	418		419	370	418-419
68	419	468	420	371-372	420
69	420	469	421	373	421
70	421	470	422	374-375	422-423
71	422	471		376	424
72	423	472	423-424	377-378	425
73	424-425	473	425	379	426
74	426	474	426	380-381	427-428
75	427	475	427	382	429-430
76	428	476-477	428	383-384	431
77	429-430	478	429	385-386	432-433
78	431	479	430-431	387-388	434
79	432-433	480	432	389-390	435-436
80	434	481	433	391	437
81	435-436	482	434-435	392-393	438-439
82	437	483-484	436	394	440-441
83	438-439	485	437-438	395-396	442-443
84	440-441	486-487	439	397-399	444-445
85	442	488-489	440	400-401	446-447
86	443-444	490-491	441-442	402-403	448-449
87	445-447	492-493	443-444	404-406	450-452

 Table E.20 Form C Kindergarten Percentile Ranking Table for Composites (continued)

PR	OV	OR	CO	LT	PR	
88	448-449	494-495	445-446	407-409	453-454	
89	450-451	496-498	447-448	410-412	455-457	
90	452-454	499-500	449-450	413-415	458-460	
91	455-457	501-503	451	416-419	461-464	
92	458-460	504-506	452-454	420-423	465-468	
93	461-463	507-509	455-458	424-427	469-472	
94	464-467	510-513	459-460	428-432	473-479	
95	468-471	514-518	461-465	433-440	480-485	
96	472-477	519-522	466-471	441-449	486-492	
97	478-483	523-528	472-478	450-462	493-503	
98	484-496	529-534	479-493	463-493	504-523	
99	497-999	535-999	494-999	494-999	524-999	

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PR	OV	OR	СО	LT	PR	PR	OV	OR	СО	LT	PR
1	1-347	1-379	1-330	1-281	1-336	30	417	451	403	381-382	429
2	348-356	380-393	331-342	282-293	337-352	31	418		404	383	430
3	357-365	394-406	343-351	294-304	353-363	32	419	452	405	384	431
4	366-371	407-412	352-358	305-312	364-371	33	420	453		385	432
5	372-374	413-416	359-362	313-320	372-378	34	421		406	386-387	433
6	375-378	417-419	363-365	321-324	379-382	35	422	454	407	388	434
7	379-381	420-422	366-369	325-330	383-386	36		455	408	389	435
8	382-384	423-425	370-372	331-335	387-392	37	423	456	409	390	436
9	385-386	426-427	373-374	336-339	393-395	38	424		410	391-392	437
10	387-389	428-429	375-376	340-343	396-398	39	425	457	411	393	438
11	390-391	430	377-378	344-346	399-401	40	426	458	412	394	439
12	392-394	431-432	379-380	347-349	402-403	41	427		413	395-396	
13	395	433	381-382	350-352	404-405	42	428	459	414	397	440
14	396-397	434-435	383	353-355	406-408	43	429		415	398	441
15	398-399	436	384-385	356-357	409	44		460	416	399	442
16	400	437	386	358-359	410-411	45	430	461	417	400	443
17	401-402	438-439	387	360	412	46	431		418	401	444
18	403	440	388-389	361-362	413-414	47	432	462	419	402	445
19	404-405	441	390	363-364	415	48	433	463		403-404	446
20	406	442	391	365-366	416	49			420	405	447
21	407	443	392	367	417-418	50	434	464	421	406	448
22	408-409	444	393	368-370	419	51	435	465	422	407	
23	410	445	394-395	371	420	52	436		423	408	449-450
24	411	446	396	372-373	421	53	437	466	424	409	451
25	412	447	397	374-375	422	54	438	467		410	452
26	413	448	398-399	376	423-424	55	439		425	411	453
27	414		400	377-378	425	56	440	468	426	412-413	454
28	415	449	401	379	426-427	57	441	469	427	414	455
29	416	450	402	380	428	58	442		428	415	456

 Table E.21 Form C Grade 1 Percentile Ranking Norming Table for Composites

PR	OV	OR	СО	LT	PR
59		470	429	416	457
60	443	471	430	417-418	458
61	444		431	419	459
62	445	472	432	420	460
63	446-447	473	433	421	461-462
64	448		434	422-423	463
65	449	474	435	424	464
66	450	475	436	425-426	465
67	451	476	437	427	466
68	452	477	438	428	467
69	453		439	429-430	468
70	454	478	440	431-432	469
71	455	479	441	433	470-471
72	456-457	480	442	434-435	472
73	458	481	443	436-437	473
74	459-460	482	444	438-439	474
75	461	483	445	440-441	475
76	462	484	446-447	442	476-477
77	463	485	448	443-445	478
78	464-465	486	449-450	446-447	479-480
79	466-467	487	451	448-449	481-482
80	468-469	488	452-453	450-452	483-484
81	470	489-490	454	453-454	485-486
82	471-472	491	455-456	455-456	487-488
83	473-474	492-493	457	457-460	489-490
84	475-476	494	458-459	461-463	491-493
85	477-478	495-496	460-461	464-467	494-496
86	479-481	497	462-463	468-471	497-499
87	482-484	498-499	464-465	472-476	500-503

 Table E.21 Form C Grade 1 Percentile Ranking Table for Composites (continued)

PR	OV	OR	СО	LT	PR
88	485-486	500-501	466-467	477-481	504-508
89	487-490	502-503	468-470	482-486	509-513
90	491-493	504	471-473	487-492	514-519
91	494-497	505-507	474-476	493-500	520-526
92	498-501	508-509	477-480	501-507	527-540
93	502-505	510-512	481-484	508-515	541-554
94	506-510	513-515	485-489	516-521	555-560
95	511-515	516-519	490-495	522-531	561-565
96	516-522	520-523	496-500	532-542	566-573
97	523-529	524-529	501-510	543-551	574-578
98	530-540	530-537	511-520	552-564	579-585
99	541-999	538-999	521-999	565-999	586-999

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PR	OV	OR	CO	LT	PR	PR	OV	OR	CO	LT	PR
1	1-400	1-429	1-332	1-344	1-389	30	467	480	403	449-450	476
2	401-408	430-441	333-343	345-359	390-412	31	468	481	404	451	477
3	409-414	442-448	344-351	360-372	413-422	32	469			452	478
4	415-420	449-452	352-357	373-381	423-429	33	470	482	405	453-454	479
5	421-424	453-454	358-362	382-389	430-434	34	471	483	406-407	455	480
6	425-428	455-456	363-366	390-395	435-438	35	472			456	481
7	429-431	457-458	367-369	396-401	439-441	36	473	484	408	457-458	
8	432-434	459	370-371	402-404	442-444	37	474	485	409	459	482
9	435-436	460-461	372-374	405-406	445-447	38			410	460	483
10	437-439	462-463	375-377	407-409	448-449	39	475	486	411	461-462	484
11	440-441	464	378	410-412	450-451	40	476	487	412	463	485
12	442-443	465	379-380	413-415	452-453	41	477		413	464	486
13	444	466	381	416-418	454	42	478	488	414	465	487
14	445-446	467	382-383	419-421	455-456	43	479			466-467	488
15	447-448	468	384	422-423	457-458	44	480	489	415	468	489
16	449	469-470	385-386	424-426	459-460	45	481	490	416	469	
17	450		387	427-428	461	46			417	470-471	490
18	451-452	471	388-389	429-430	462	47	482	491	418	472	491
19	453-454	472	390-391	431	463-464	48	483	492	419	473	492
20	455	473	392	432-433	465	49	484			474-475	493
21	456		393	434-435	466-467	50	485	493	420	476	
22	457-458	474	394	436	468	51	486		421	477-478	494
23	459	475	395	437-438	469	52	487	494	422	479	495
24	460	476	396-397	439-440	470	53	488	495	423	480	496
25	461		398	441-442	471	54	489		424	481	497
26	462	477	399	443	472	55	490	496	425	482	498
27	463-464	478	400	444-445	473	56	491	497	426	483	499
28	465	479	401	446-447	474	57			427	484-485	500
29	466		402	448	475	58	492	498	428	486	

 Table E.22 Form C Grades 2–3 Percentile Ranking Norming Table for Composites

PR	OV	OR	СО	LT	PR
59	493	499	429	487	501
60	494	500	430	488	502
61	495		431	489-490	503
62	496	501	432	491	504
63	497	502	433	492	505
64	498	503	434	493-494	506
65	499		435	495	507
66	500	504	436	496	508
67	501	505	437	497	509
68	502	506	438	498-499	510-511
69	503		439-440	500-501	512
70	504	507-508	441	502	513
71	505		442	503-504	514
72	506	509	443	505	515
73	507	510	444	506	516
74	508	511-512	445	507-508	517-518
75	509-510		446	509	519
76	511	513-514	447	510-511	520
77	512	515	448-449	512	521
78	513	516	450	513-514	522-523
79	514	517-518	451	515-516	524
80	515-516	519	452-453	517	525-526
81	517	520-521	454	518-519	527-528
82	518	522	455-456	520-521	529-530
83	519-520	523-524	457	522	531
84	521-522	525-526	458-459	523-524	532-533
85	523-524	527-528	460-461	525-526	534-535
86	525-526	529-530	462-463	527-528	536-537
87	527-528	531-533	464-465	529-530	538-539

 Table E.22 Form C Grades 2–3 Percentile Ranking Table for Composites (continued)

PR	OV	OR	СО	LT	PR
88	529-530	534-535	466-467	531-533	540-542
89	531-532	536-537	468-469	534-535	543-546
90	533	538-539	470-472	536-539	547-549
91	534-536	540-542	473-475	540-542	550-552
92	537-538	543-545	476-478	543-545	553-557
93	539-541	546-548	479-482	546-549	558-561
94	542-544	549-551	483-487	550-554	562-565
95	545-549	552-554	488-494	555-559	566-571
96	550-552	555-559	495-504	560-567	572-576
97	553-557	560-565	505-511	568-578	577-583
98	558-566	566-571	512-523	579-590	584-591
99	567-999	572-999	524-999	591-999	592-999

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PR	OV	OR	CO	LT	PR	PR	OV	OR	CO	LT	PR
1	1-426	1-430	1-373	1-392	1-412	30	500-501	502	455	496	506
2	427-437	431-443	374-388	393-411	413-443	31	502		456	497-498	507
3	438-445	444-450	389-396	412-421	444-450	32	503	503	457	499	508
4	446-449	451-457	397-403	422-429	451-457	33	504	504	458-459	500-501	509
5	450-453	458-461	404-408	430-435	458-462	34	505	505	460	502	510
6	454-457	462-465	409-413	436-440	463-467	35	506	506	461	503	511
7	458-460	466-469	414-417	441-445	468-470	36	507	507	462	504	512
8	461-463	470-473	418-420	446-450	471-473	37	508		463	505-506	513
9	464-466	474-475	421-422	451-453	474-476	38	509	508	464	507	514
10	467-469	476-477	423-425	454-457	477-478	39	510	509	465	508	515
11	470-471	478	426-427	458-460	479-480	40	511	510	466	509-510	
12	472-474	479-480	428-429	461-463	481-482	41	512	511	467	511	516
13	475-476	481-482	430-431	464-466	483-484	42	513	512	468-469	512	517
14	477-478	483	432-433	467-468	485-486	43	514		470	513-514	518
15	479-480	484-485	434	469-471	487-488	44	515	513	471	515	519
16	481	486	435-436	472-473	489	45	516	514		516	
17	482-483	487	437-438	474-475	490-491	46	517	515	472	517	520
18	484-485	488	439-440	476-477	492-493	47	518	516	473	518	521
19	486	489-490	441-442	478-479	494	48	519	517	474	519	522
20	487-488	491	443	480-481	495	49	520	518	475	520	523
21	489	492	444	482-483	496-497	50	521	519	476	521-522	524
22	490-491	493	445-446	484-485	498	51	522	520	477	523	
23	492	494-495	447	486	499	52	523		478	524	525
24	493	496	448	487-488	500	53	524	521	479	525	526
25	494	497	449	489-490	501	54	525	522	480	526	527
26	495-496	498	450-451	491	502	55	526	523	481	527	528
27	497	499	452	492	503	56		524	482	528-529	529
28	498	500	453	493-494	504	57	527		483	530	
29	499	501	454	495	505	58	528	525	484	531	530

 Table E.23 Form C Grades 4–5 Percentile Ranking Norming Table for Composites

PR	OV	OR	СО	LT	PR
59	529	526	485	532	531
60	530	527	486	533	532
61	531	528	487	534	533
62	532	529	488	535	534
63	533	530	489	536-537	535
64	534	531	490	538	536
65	535	532	491-492	539	
66	536	533	493	540	537
67	537		494	541	538
68	538	534	495	542-543	539
69	539	535-536	496	544	540
70	540	537	497	545	541
71	541	538	498	546	542
72	542	539	499	547-548	543
73	543	540	500	549	544
74	544	541-542	501	550	545
75	545-546	543	502	551-552	546-547
76	547	544-545	503	553	548
77	548	546	504-505	554-555	549
78	549	547	506	556	550-551
79	550-551	548-549	507	557	552
80	552	550	508-509	558-559	553
81	553-554	551-552	510	560-561	554-555
82	555	553-554	511-512	562-563	556-557
83	556-557	555-556	513	564-565	558-559
84	558	557	514-515	566	560
85	559-560	558-559	516	567-569	561-562
86	561	560-562	517-518	570	563-564
87	562-563	563-564	519	571-573	565-567

LT	PR	PR	OV	OR	СО	LT	PR
532	531	88	564-565	565-567	520-521	574-575	568-569
533	532	89	566-567	568-569	522-523	576-577	570-572
534	533	90	568-570	570-572	524-525	578-579	573-574
535	534	91	571-572	573-575	526-527	580-582	575-577
536-537	535	92	573-575	576-579	528-530	583-585	578-581
538	536	93	576-579	580-582	531-533	586-588	582-586

580-583

584-587

588-591

592-598

599-604

605-999

583-586

587-590

591-595

596-601

602-610

611-999

534-536

537-540

541-545

546-552

553-560

561-999

94

95

96

97

98

99

587-590

591-596

597-601

602-607

608-613

614-999

589-592

593-597

598-603

604-610

611-619

620-999

Table E.23 Form C Grades 4–5 Percentile Ranking Table for Composites (continued)

PR	OV	OR	СО	LT	PR	PR	OV	OR	CO	LT	PR
1	1-440	1-433	1-406	1-412	1-425	30	514	509	492	517	511
2	441-448	434-448	407-419	413-433	426-445	31	515	510	493-494	518	512
3	449-456	449-456	420-427	434-443	446-453	32	516	511	495	519	513
4	457-461	457-460	428-434	444-450	454-461	33	517	512	496	520	514
5	462-467	461-465	435-439	451-457	462-467	34	518	513	497-498	521-522	515
6	468-471	466-468	440-443	458-464	468-471	35	519	514-515	499	523	516
7	472-475	469-471	444-447	465-468	472-474	36	520	516	500	524	517
8	476-477	472-473	448-451	469-471	475-477	37	521	517	501	525-526	518
9	478-480	474-475	452-454	472-475	478-480	38	522	518	502-503	527	519
10	481-482	476-477	455-458	476-479	481-482	39	523	519	504	528	520
11	483-484	478-480	459-461	480-482	483-485	40	524		505	529	521
12	485-486	481-482	462-463	483-484	486-487	41	525	520-521	506	530	522
13	487-488	483-485	464	485-487	488-489	42		522	507	531-532	523
14	489-490	486-487	465-466	488-490	490-491	43	526		508-509	533	
15	491-492	488-489	467-468	491-492	492-493	44	527	523	510	534	524
16	493-494	490	469-471	493-494	494-495	45	528	524	511	535	525
17	495-496	491-492	472-473	495-496	496	46	529-530	525	512	536	526
18	497	493-494	474	497-498	497-498	47	531	526	513-514	537	527
19	498-499	495	475-476	499-500	499	48	532	527	515	538-539	528
20	500	496-497	477-478	501	500	49	533	528	516	540	529
21	501-502	498	479	502-503	501	50	534	529	517	541	530
22	503	499	480-481	504-505	502	51	535	530	518	542	531
23	504-505	500-501	482	506-507	503-504	52	536	531	519-520	543	532
24	506	502	483-484	508	505	53	537		521	544	533
25	507-508	503	485	509-510	506	54	538	532	522	545	534
26	509	504	486-487	511	507	55	539	533-534	523	546	
27	510	505	488	512-513	508	56	540	535		547	535
28	511	506-507	489-490	514	509	57	541	536	524-525	548	536
29	512-513	508	491	515-516	510	58	542	537	526	549	537

 Table E.24 Form C Grades 6–8 Percentile Ranking Norming Table for Composites

PR	OV	OR	СО	LT	PR
59	543	538	527	550	538
60	544	539	528	551	539
61	545	540	529-530	552-553	540
62	546	541	531	554	541
63	547	542	532	555	
64	548-549	543	533	556	542
65	550	544	534	557	543
66	551	545	535	558	544
67	552	546	536	559-560	545
68	553	547	537	561	546
69	554	548	538	562	547
70	555	549	539-540	563	548
71	556	550-551	541	564	549
72	557-558	552	542	565	550
73	559	553	543	566-567	551-552
74	560	554-555	544-545	568	553
75	561	556	546	569-570	554
76	562	557	547	571	555
77	563-564	558	548-549	572	556
78	565	559-560	550	573-574	557
79	566	561-562	551-552	575	558-559
80	567-568	563	553	576-578	560
81	569	564-565	554-555	579	561
82	570-571	566	556-557	580-581	562
83	572-573	567-568	558-559	582	563-564
84	574-575	569-570	560	583-584	565-566
85	576	571-572	561-563	585-586	567-568
86	577-578	573-574	564-565	587-588	569-570
87	579-580	575-576	566-567	589-590	571

 Table E.24 Form C Grades 6–8 Percentile Ranking Table for Composites (continued)

PR	OV	OR	CO	LT	PR
88	581-582	577-579	568-569	591-592	572-573
89	583-585	580-581	570-571	593-594	574-576
90	586-588	582-583	572-574	595-597	577-578
91	589-590	584-587	575-577	598-600	579-582
92	591-593	588-590	578-580	601-603	583-585
93	594-595	591-594	581-583	604-606	586-589
94	596-599	595-599	584-587	607-610	590-594
95	600-602	600-604	588-592	611-615	595-600
96	603-607	605-609	593-596	616-620	601-605
97	608-613	610-616	597-604	621-628	606-613
98	614-621	617-624	605-615	629-640	614-624
99	622-999	625-999	616-999	641-999	625-999

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PR	OV	OR	СО	LT	PR	PR	OV	OR	СО	LT	PR
1	1-442	1-440	1-422	1-415	1-426	30	518	512	511-512	521	522
2	443-454	441-452	423-434	416-435	427-445	31	519	513	513	522	523
3	455-460	453-459	435-443	436-448	446-463	32	520	514	514-515	523	524
4	461-467	460-466	444-450	449-456	464-471	33	521	515	516	524-525	525
5	468-472	467-471	451-455	457-462	472-478	34	522	516	517	526	526
6	473-475	472-475	456-459	463-467	479-483	35	523	517	518	527	527
7	476-479	476-478	460-463	468-473	484-487	36	524	518	519-520	528	
8	480-482	479-480	464-468	474-477	488-490	37	525	519	521	529	528
9	483-485	481-483	469-471	478-481	491-492	38	526	520	522	530-531	529
10	486-488	484-486	472-474	482-484	493-495	39	527	521	523-524	532	530
11	489	487-488	475-477	485-486	496-497	40	528	522	525	533	531
12	490-492	489-490	478-480	487-488	498-499	41	529	523	526	534	
13	493-494	491-492	481-482	489-491	500-501	42	530	524	527	535	532
14	495-496	493-494	483-485	492-494	502	43	531		528	536	533
15	497	495	486-488	495-496	503-504	44	532	525-526	529	537	534
16	498-499	496-497	489-490	497-498	505-506	45	533		530	538	535
17	500-501	498	491-492	499-500	507	46	534	527	531	539	536
18	502-503	499	493-494	501-502	508-509	47	535	528	532-533	540	
19	504	500	495-496	503-504	510	48	536	529	534	541	537
20	505	501-502	497-498	505-506	511	49	537	530	535	542	538
21	506-507	503	499	507-508	512-513	50	538	531	536	543-544	539
22	508	504	500-501	509	514	51	539	532	537	545	540
23	509	505	502	510-511	515	52	540	533	538-539	546	
24	510-511	506	503-504	512-513	516	53		534	540	547	541
25	512	507	505	514	517	54	541	535	541	548	542
26	513	508	506	515	518	55	542	536	542-543	549	543
27	514-515	509	507-508	516-517	519	56	543	537	544	550	
28	516	510	509	518	520	57	544	538	545	551	544
29	517	511	510	519-520	521	58	545	539	546	552	545

 Table E.25 Form C Grades 9–12 Percentile Ranking Norming Table for Composites

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PR	OV	OR	СО	LT	PR
59	546	540	547	553-554	546
60	547	541	548	555	547
61	548	542	549	556	
62	549	543	550	557	548
63	550	544	551-552	558	549
64	551-552	545	553	559	550
65			554	560	551
66	553	546	555	561-562	552
67	554-555	547	556-557	563	
68	556	548-549	558	564	553
69	557		559	565	554
70	558	550	560-561	566	555
71	559-560	551	562	567-568	556
72	561	552-553	563-564	569	557
73	562	554	565	570	558
74	563	555	566	571-572	559
75	564	556-557	567-568	573	560
76	565	558	569-570	574-575	561-562
77	566-567	559	571	576	563
78	568	560-561	572-573	577	564
79	569	562-563	574	578-579	565
80	570	564	575-576	580	566-567
81	571-572	565-566	577	581-582	568
82	573	567	578-579	583	569-570
83	574-575	568-569	580	584-585	571
84	576	570-571	581-582	586-587	572-573
85	577-578	572-573	583-585	588-589	574-575
86	579	574-575	586-587	590-591	576-577
87	580-581	576-577	588-589	592-593	578-580

 Table E.25 Form C Grades 9–12 Percentile Ranking Table for Composites (continued)

PR	OV	OR	CO	LT	PR
88	582-583	578-580	590-591	594-595	581-582
89	584-585	581-583	592-594	596-598	583-585
90	586-588	584-586	595-597	599-600	586-588
91	589-591	587-589	598-601	601-603	589-591
92	592-593	590-592	602-604	604-606	592-595
93	594-596	593-596	605-607	607-609	596-599
94	597-601	597-599	608-612	610-614	600-602
95	602-605	600-605	613-617	615-618	603-606
96	606-611	606-611	618-621	619-625	607-611
97	612-617	612-621	622-628	626-633	612-618
98	618-626	622-634	629-640	634-641	619-625
99	627-999	635-999	641-999	642-999	626-999

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Form D

	Table E.2	6 Form 1	D Kindergart	ten Scoring Table
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Spea		Liste	ning		
RS	SS	SEM	PL	RS	SS
0	300	87		0	300
1	365	22		1	300
2	382	15		2	300
3	393	12		3	300
4	400	11		4	300
5	407	10	1	5	308
6	412	10		6	379
7	417	9		7	394
8	421	9		8	403
9	425	8		9	410
10	429	8		10	416
11	433	8		11	422
12	436	8		12	427
13	440	8		13	433
14	443	8		14	439
15	446	8	2	15	446
16	449	8		16	455
17	453	8		17	465
18	456	8		18	478
19	460	8		19	499
20	463	8		20	530
21	467	9			
22	471	9			
23	476	9	3		
24	481	10			
25	487	11			
26	494	12			
27	503	14	4		
28	518	20	4		
29	580	82	5		

ening		
SS	SEM	PL
300	116	
300	116	
300	116	
300	116	
300	116	
308	108	1
379	37	1
394	22	
403	16	
410	14	
416	13	
422	12	
427	12	
433	12	2
439	13	
446	14	
455	15	3
465	17	
478	20	4
499	26	4
530	47	5
	sing SS 300 300 300 300 300 300 300 300 300 300 300 300 300 300 300 308 379 394 403 410 416 422 427 433 439 446 455 465 478 499 530	SS SEM 300 116 300 116 300 116 300 116 300 116 300 116 300 116 300 116 300 116 300 116 300 116 300 116 300 116 300 116 300 116 300 116 300 116 300 116 300 116 301 14 410 14 416 13 422 12 427 12 433 12 439 13 446 14 455 15 465 17 478 20 499 26 530 47

Read	ling		
RS	SS	SEM	PL
0	240	121	
1	240	121	
2	240	121	
3	240	121	
4	240	121	
5	240	121	
6	240	121	1
7	240	121	
8	275	86	
9	311	50	
10	329	32	
11	340	23	
12	348	18	
13	355	16	
14	362	15	
15	368	14	2
16	374	14	
17	380	14	
18	386	14	
19	392	14	
20	399	14	3
21	406	14	
22	414	15	
23	424	18	
24	439	24	4
25	470	49	
26	550	129	5

	0		
RS	SS	SEM	PL
0	200	68	
1	200	68	
2	200	68	
3	200	68	
4	200	68	
5	200	68	1
6	223	63	1
7	255	54	
8	282	45	
9	304	38	
10	322	33	
11	338	29	
12	353	27	
13	366	25	
14	379	24	2
15	392	24	
16	406	26	
17	422	29	2
18	444	37	3
19	488	55	4
20	630	203	5

Spea	king			List	ening
RS	SS	SEM	PL	RS	SS
0	300	85		0	300
1	363	22		1	300
2	380	15		2	300
3	389	12		3	300
4	397	11		4	300
5	402	10		5	308
6	407	9	1	6	379
7	412	8	1	7	394
8	415	8		8	403
9	419	8		9	410
10	422	7		10	416
11	425	7		11	422
12	428	7		12	427
13	431	7		13	433
14	433	7		14	439
15	436	7		15	446
16	438	7		16	455
17	441	7		17	465
18	443	6		18	4/8
19	445	6	2	19	499
20	448	6	2	20	530
21	450	6			
22	452	6			
23	455	6			
24	457	7			
25	460	7			
26	462	7			
27	464	7			
28	467	7			
29	470	7			
30	472	7			
31	475	7	3		
32	478	7			
33	482	8			
34	485	8			
35	489	9			
36	493	9			
37	499	10			
38	505	11	4		
39	514	14			
40	527	19			
41	580	72	5		

SS	SEM	PL	RS
300	116		0
300	116		1
300	116		2
300	116		3
300	116		4
308	108		5
379	37	1	6
394	22		7
403	16		8
410	14		9
416	13		10
422	12		11
427	12		12
433	12		13
439	13	2	14
446	14		15
455	15	2	16
465	17	3	17
478	20	4	18
499	26	4	19
530	47	5	20
			21
			22
			23
			24
			25
			26
			27
			28
			29

Read	Reading Writing							
RS	SS	SEM	PL		RS	SS	SEM	Pl
0	240	122			0	200	63	
1	240	122			1	200	63	
2	240	122			2	200	63	
3	240	122			3	200	63	
4	240	122			4	200	63	
5	240	122			5	200	63	
6	240	122			6	216	58	
7	240	122	1		7	245	49	1
8	240	122			8	268	41	1
9	274	88			9	286	34	
10	310	52			10	302	29	
11	328	34			11	314	26	
12	339	24			12	325	24	
13	347	19			13	335	21	
14	354	17			14	343	20	
15	361	15			15	351	19	
16	366	14			16	358	18	
17	372	14	2		17	365	17	
18	377	14			18	371	16	
19	383	13			19	377	16	
20	388	13			20	382	16	
21	394	13			21	388	16	
22	399	13	2		22	394	16	2
23	405	13	3		23	400	16	
24	412	14			24	406	17	
25	419	14			25	412	17	
26	427	16			26	419	18	
27	438	19	4		27	428	20	
28	453	25			28	438	23	
29	485	47	5		29	451	27	3
30	550	112	3		30	470	34	
					31	504	51	4
					32	630	177	5

Speaking						Liste	ening
	RS	SS	SEM	PL		RS	SS
	0	350	72			0	310
	1	406	16			1	310
	2	418	11			2	310
	3	424	9	1		3	310
	4	430	8	1		4	310
	5	434	7			5	359
	6	437	7			6	398
	7	440	7			7	412
	8	443	6			8	421
	9	446	6			9	429
	10	448	6			10	436
	11	450	6			11	443
	12	452	6			12	450
	13	454	5		_	13	458
	14	456	5			14	466
	15	458	5	2		15	475
	16	460	5			16	485
	17	462	5			17	498
	18	464	5		_	18	517
	19	466	5			19	560
	20	468	5				
	21	470	5				
	22	4/1	3				
	23	473	5				
	24	475	5				
	25	477	5				
	26	479	5				
	27	481	6				
	28	483	6				
	29	485	6	3			
	30	488	6				
	31	490	6				
	32	493	6				
	33	495	7				
	34	498	7				
	35	502	7				
	36	506	8				
	37	510	9				
	38	516	10	4			
	39	524	13				
	40	538	19	5			
	41	600	81	5	[

Table	E.161	Form	D	Grade	2	Scoring
			_		_	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~

5	SS	SEM	PL	R
	310	124		(
	310	124		1
	310	124		2
	310	124		3
	310	124		2
	359	75	1	5
	398	36		e
	412	22		7
	421	17		8
	429	15		9
)	436	14		1
	443	14		1
2	450	14	2	1
;	458	15		1
ŀ	466	15		1
5	475	16	3	1
5	485	17		1
7	498	19	4	1
3	517	23	4	1
)	560	57	5	1
				2
				2
				-

Reading					Writ	ting		
RS	SS	SEM	PL		RS	SS	SEM	PL
0	300	142			0	270	71	
1	300	142			1	270	71	
2	300	142			2	270	71	
3	300	142			3	270	71	
4	300	142			4	270	71	
5	300	142			5	292	57	
6	300	142	1		6	319	45	
7	300	142			7	340	39	1
8	355	87			8	357	34	
9	390	52			9	372	30	
10	407	35			10	384	27	
11	419	27			11	395	25	
12	429	22			12	405	23	
13	437	19			13	414	21	
14	443	18			14	422	20	
15	450	16	2		15	429	19	
16	456	16	2		16	436	18	
17	462	15			17	443	18	
18	468	15			18	449	17	2
19	474	15			19	455	17	2
20	480	15	2		20	462	17	
21	486	15	3		21	468	17	
22	493	15			22	474	17	
23	500	16			23	481	17	
24	508	16			24	487	17	3
25	516	17	4		25	494	18	5
26	526	18			26	502	19	
27	537	21			27	511	20	
28	553	25		1	28	521	22	4
29	580	36	5		29	535	26	
30	610	55			30	554	33	
				•	31	590	49	5
					32	640	77	

Spea	king		
RS	SS	SEM	PL
0	350	72	
1	406	16	
2	418	11	
3	424	9	1
4	430	8	1
5	434	7	
6	437	7	
7	440	7	
8	443	6	
9	446	6	
10	448	6	
11	450	6	
12	452	6	
13	454	5	
14	456	5	
15	458	5	
16	460	5	2
17	462	5	
18	464	5	
19	466	5	
20	468	5	
21	470	5	
22	471	5	
23	473	5	
24	475	5	
25	477	5	
26	479	5	
27	481	6	
28	483	6	
29	485	6	
30	488	6	3
31	490	6	
32	493	6	
33	495	7	
34	498	7	
35	502	7	
36	506	8	
37	510	9	
38	516	10	4
39	524	13	4
40	538	19	
41	600	81	5

Table	E.162	Form	D Gra	de 3	Scoring
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Liste	ning			I
RS	SS	SEM	PL	]
0	310	124		
1	310	124		
2	310	124		
3	310	124		
4	310	124		
5	359	75	1	
6	398	36	1	
7	412	22		
8	421	17		
9	429	15		
10	436	14		
11	443	14		
12	450	14		
13	458	15	2	
14	466	15		
15	475	16		
16	485	17	3	
17	498	19		
18	517	23	4	
19	560	57	5	

Reading					Writ	ing		
RS	SS	SEM	PL		RS	SS	SEM	P
0	300	142			0	270	71	
1	300	142			1	270	71	
2	300	142			2	270	71	
3	300	142			3	270	71	
4	300	142			4	270	71	
5	300	142			5	292	57	
6	300	142	1		6	319	45	
7	300	142			7	340	39	1
8	355	87			8	357	34	
9	390	52			9	372	30	
10	407	35			10	384	27	
11	419	27			11	395	25	
12	429	22			12	405	23	
13	437	19			13	414	21	
14	443	18			14	422	20	
15	450	16	2		15	429	19	
16	456	16	2		16	436	18	
17	462	15			17	443	18	
18	468	15			18	449	17	
19	474	15			19	455	17	2
20	480	15			20	462	17	
21	486	15	3		21	468	17	
22	493	15			22	474	17	
23	500	16			23	481	17	
24	508	16			24	487	17	
25	516	17	4		25	494	18	
26	526	18	4		26	502	19	3
27	537	21			27	511	20	
28	553	25			28	521	22	
29	580	36	5		29	535	26	1
30	610	55			30	554	33	4
					31	590	49	5
					32	640	77	5

Spea	king		
RS	SS	SEM	PL
0	360	36	
1	376	26	
2	395	19	
3	406	16	
4	415	15	
5	423	13	1
6	429	12	
7	435	11	
8	440	11	
9	444	10	
10	448	10	
11	452	9	
12	456	9	
13	460	8	
14	463	8	2
15	467	8	
16	470	8	
17	473	7	
18	476	7	
19	479	7	
20	482	7	
21	485	7	
22	488	7	
23	491	7	3
24	494	7	
25	497	7	
26	500	7	
27	504	7	
28	507	7	
29	510	7	
30	513	7	
31	517	8	
32	521	8	
33	524	8	
34	528	8	4
35	532	8	
36	537	9	
37	542	10	
38	549	11	
39	558	15	
40	575	25	F
41	635	85	3

Table E.105 Form D Grade 105 Scoring	Table E	2.163 Forn	n D Grade	163 Scoring
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Listening

RS	SS	SEM	PL	
0	350	125		
1	350	125		
2	350	125		
3	350	125		
4	350	125	1	
5	350	125	1	
6	379	96		
7	420	55		
8	441	36		
9	456	29		
10	469	25	0	
11	481	24	2	
12	492	23		
13	503	22	3	
14	514	21		
15	526	21		
16	539	23	4	
17	556	26	4	
18	579	33		
19	613	43	5	
20	640	58	3	

Read		 Writ	ing		
RS	SS	SEM	PL	RS	SS
0	360	115		0	290
1	360	115		1	290
2	360	115		2	290
3	360	115		3	338
4	360	115	1	4	375
5	360	115	1	5	397
6	397	78		6	412
7	428	47		7	424
8	445	35		8	434
9	458	28		9	443
10	469	24		10	451
11	478	22		11	459
12	487	20	2	12	467
13	495	19		13	474
14	502	18		14	481
15	509	18		15	488
16	516	18	2	16	495
17	524	18	3	17	502
18	531	18		18	509
19	539	18		19	516
20	547	19		20	523
21	555	19		21	531
22	565	20	4	22	538
23	575	20		23	546
24	585	20		24	554
25	596	20		25	562
26	608	20		26	572
27	622	23	5	27	582
28	641	29	5	28	594
29	676	47		29	608
30	680	50		30	628
				31	662
				22	(00

SEM

PL

1	Spea	king			List
	RS	SS	SEM	PL	RS
	0	360	36		0
	1	376	26		1
	2	395	19		2
	3	406	16		3
	4	415	15		4
	5	423	13	1	5
	6	429	12		6
	7	435	11		7
	8	440	11		8
	9	444	10		9
	10	448	10		10
	11	452	9		11
	12	456	9		12
	13	460	8		13
	14	463	8	2	14
	15	467	8		15
	16	470	8		16
	17	473	7		17
	18	476	7		18
	19	479	7		19
	20	482	7		20
	21	485	7		
	22	488	7		
	23	491	7	3	
	24	494	7	5	
	25	497	7		
	26	500	7		
	27	504	7		
	28	507	7		
	29	510	7		
ļ	30	513	7		
ļ	31	517	8		
	32	521	8		
ļ	33	524	8		
ļ	34	528	8	4	
	35	532	8	T	
ļ	36	537	9		
ļ	37	542	10		
	38	549	11		
ļ	39	558	15		
ļ	40	575	25	5	
	41	635	85		1

	Table E.164	Form I	D Grade	164	Scoring
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Liste	ening			Rea
RS	SS	SEM	PL	RS
0	350	125		0
1	350	125		1
2	350	125		2
3	350	125		3
4	350	125	1	4
5	350	125	1	5
6	379	96		6
7	420	55		7
8	441	36		8
9	456	29		9
10	469	25	2	10
11	481	24	2	11
12	492	23		12
13	503	22	2	13
14	514	21	3	14
15	526	21		15
16	539	23		16
17	556	26	4	17
18	579	33		18
19	613	43	5	19
20	640	58	3	20
				21
				22
				23
				24

Read	Reading			 Writ	ing	
RS	SS	SEM	PL	RS	SS	SEM
0	360	115		0	290	131
1	360	115		1	290	131
2	360	115		2	290	131
3	360	115		3	338	83
4	360	115		4	375	46
5	360	115	1	5	397	34
6	397	78		6	412	27
7	428	47		7	424	24
8	445	35		8	434	22
9	458	28		9	443	20
10	469	24		10	451	19
11	478	22		11	459	18
12	487	20	2	12	467	18
13	495	19	2	13	474	17
14	502	18		14	481	17
15	509	18	2	15	488	17
16	516	18		16	495	17
17	524	18	5	17	502	17
18	531	18		18	509	17
19	539	18		19	516	17
20	547	19		20	523	17
21	555	19		21	531	17
22	565	20	4	22	538	17
23	575	20		23	546	18
24	585	20		24	554	18
25	596	20		25	562	19
26	608	20		26	572	20
27	622	23	5	27	582	21
28	641	29	5	28	594	23
29	676	47		29	608	26
30	680	50		30	628	32
				31	662	47
				32	680	57

PL

Spea	king			Listenin	g
RS	SS	SEM	PL	RS S	5
0	365	43		0 36	0
1	386	30		1 36	0
2	408	21		2 36	0
3	421	17	1	3 36	0
4	431	14	1	4 36	0
5	438	12		5 36	0
6	445	11		6 36	0
7	450	10		7 41	1
8	455	9		8 43	6
9	459	9		9 45	2
10	463	8	2	10 46	5
11	466	8	2	11 47	7
12	469	8		12 48	8
13	473	7		13 49	9
14	476	7		14 51	0
15	478	7		15 52	1
16	481	7		16 53	2
17	484	7		17 54	4
18	487	7		18 55	6
19	489	7		19 57	0
20	492	7		20 58	7
21	495	7	3	21 60	7
22	497	7		22 64	0
23	500	7		23 68	0
24	502	7			
25	505	7			
26	507	7			
27	510	7			
28	513	7			
29	515	7			
30	518	7			
31	521	7			
32	524	7			
33	527	7	4		
34	530	7	-		
35	534	8			
36	538	8			
37	542	9			
38	549	12			
39	557	15			
40	574	25	5		
41	645	96	5		

RS	SS	SEM	PL
0	360	118	
1	360	118	
2	360	118	
3	360	118	
4	360	118	1
5	360	118	1
6	360	118	
7	411	67	
8	436	42	
9	452	32	
10	465	28	
11	477	26	2
12	488	25	
13	499	24	
14	510	24	3
15	521	23	
16	532	23	
17	544	24	4
18	556	24	4
19	570	25	
20	587	27	
21	607	31	_
22	640	43	5
23	680	68	

Read	ling		 Writ	ing		
RS	SS	SEM	PL	RS	SS	SEM
0	380	114		0	300	148
1	380	114		1	300	148
2	380	114		2	300	148
3	380	114		3	385	63
4	380	114		4	414	36
5	380	114	1	5	430	27
6	425	69	1	6	443	22
7	450	44		7	452	20
8	467	33		8	460	18
9	480	27		9	467	17
10	490	24		10	474	16
11	499	21		11	480	15
12	508	20		12	487	15
13	516	19	2	13	493	15
14	523	18		14	499	15
15	531	18		15	505	15
16	538	18	2	16	511	15
17	545	18	3	17	518	15
18	553	18		18	524	15
19	561	18		19	532	15
20	569	18		20	539	16
21	577	18		21	547	16
22	585	18	4	22	555	16
23	595	19		23	564	17
24	605	20		24	572	17
25	616	21		25	582	17
26	629	23		26	591	18
27	647	27	5	27	602	19
28	675	38		28	613	20
29	690	47		29	627	22
				30	645	27
				31	673	38
				32	710	62

Spea	king			
RS	SS	SEM	PL	
0	365	43		ľ
1	386	30		
2	408	21		
3	421	17	1	
4	431	14	1	
5	438	12		
6	445	11		
7	450	10		
8	455	9		
9	459	9		
10	463	8		
11	466	8	2	
12	469	8		
13	473	7		
14	476	7		
15	478	7		
16	481	7		
17	484	7		
18	487	7		
19	489	7		
20	492	7		
21	495	7	3	
22	497	7	-	
23	500	7		
24	502	7		L
25	505	7		
26	507	7		
27	510	7		
28	513	7		
29	515	7		
30	518	7		
31	521	7		
32	524	7		
33	527	7	1	
34	530	7	4	
35	534	8		
36	538	8		
37	542	9		
38	549	12		
39	557	15		
40	574	25	5	
41	645	96	5	

Listening						
RS	SS	SEM	PL			
0	360	118				
1	360	118				
2	360	118				
3	360	118				
4	360	118	1			
5	360	118	1			
6	360	118				
7	411	67				
8	436	42				
9	452	32				
10	465	28				
11	477	26	2			
12	488	25				
13	499	24				
14	510	24	2			
15	521	23	3			
16	532	23				
17	544	24				
18	556	24	4			
19	570	25	4			
20	587	27				
21	607	31				
22	640	43	5			
23	680	68				

Read	ling			 Writ	ing	
RS	SS	SEM	PL	RS	SS	SEM
0	380	114		0	300	148
1	380	114		1	300	148
2	380	114		2	300	148
3	380	114		3	385	63
4	380	114		4	414	36
5	380	114	1	5	430	27
6	425	69	1	6	443	22
7	450	44		7	452	20
8	467	33		8	460	18
9	480	27		9	467	17
10	490	24		10	474	16
11	499	21		11	480	15
12	508	20		12	487	15
13	516	19	2	13	493	15
14	523	18		14	499	15
15	531	18		15	505	15
16	538	18	2	16	511	15
17	545	18	3	17	518	15
18	553	18		18	524	15
19	561	18		19	532	15
20	569	18		20	539	16
21	577	18		21	547	16
22	585	18	4	22	555	16
23	595	19		23	564	17
24	605	20		24	572	17
25	616	21		25	582	17
26	629	23		26	591	18
27	647	27	5	27	602	19
28	675	38		28	613	20
29	690	47		29	627	22
				30	645	27
				31	673	38
				32	710	62

Spea	king			Liste	ening
RS	SS	SEM	PL	RS	SS
0	365	43		0	360
1	386	30		1	360
2	408	21		2	360
3	421	17	1	3	360
4	431	14	1	4	360
5	438	12		5	360
6	445	11		6	360
7	450	10		7	411
8	455	9		8	436
9	459	9		9	452
10	463	8		10	465
11	466	8	2	11	477
12	469	8		12	488
13	473	7		13	499
14	476	7		14	510
15	478	7		15	521
16	481	7		16	532
17	484	7		17	544
18	487	7		18	556
19	489	7		19	570
20	492	7		20	587
21	495	7	2	21	607
22	497	7	3	22	640
23	500	7		23	680
24	502	7			
25	505	7			
26	507	7			
27	510	7			
28	513	7			
29	515	7			
30	518	7			
31	521	7			
32	524	7			
33	527	7			
34	530	7	4		
35	534	8			
36	538	8			
37	542	9			
38	549	12			
39	557	15			
40	574	25	5		
41	645	96	5		

Table E.167 Form	D Grade 16'	7 Scoring
	D Graue IV	, scoring

RS	SS	SEM	PL	
0	360	118		
1	360	118		
2	360	118		
3	360	118		
4	360	118		
5	360	118	1	
6	360	118		
7	411	67		
8	436	42		
9	452	32		
10	465	28		
11	477	26	2	
12	488	25	2	
13	499	24		
14	510	24	2	
15	521	23	3	
16	532	23		
17	544	24		
18	556	24	4	
19	570	25	4	
20	587	27		
21	607	31		
22	640	43	5	
23	680	68		

Reading				Writ	ing	
RS	SS	SEM	PL	RS	SS	SEM
0	380	114		0	300	148
1	380	114		1	300	148
2	380	114		2	300	148
3	380	114		3	385	63
4	380	114		4	414	36
5	380	114	1	5	430	27
6	425	69	1	6	443	22
7	450	44		7	452	20
8	467	33		8	460	18
9	480	27		9	467	17
10	490	24		10	474	16
11	499	21		11	480	15
12	508	20		12	487	15
13	516	19	2	13	493	15
14	523	18	2	14	499	15
15	531	18		15	505	15
16	538	18		16	511	15
17	545	18	3	17	518	15
18	553	18		18	524	15
19	561	18		19	532	15
20	569	18		20	539	16
21	577	18		21	547	16
22	585	18	4	22	555	16
23	595	19		23	564	17
24	605	20		24	572	17
25	616	21		25	582	17
26	629	23		26	591	18
27	647	27	5	27	602	19
28	675	38		28	613	20
29	690	47		29	627	22
				30	645	27
				31	673	38
				32	710	62

Speaking					Liste	ning
RS	SS	SEM	PL		RS	SS
0	370	44			0	370
1	404	22			1	370
2	422	16	1		2	370
3	433	13	1		3	370
4	441	11			4	370
5	448	10			5	370
6	453	9			6	370
7	457	8			7	415
8	461	8			8	444
9	464	7	2		9	462
10	467	7	-		10	477
11	470	7			11	491
12	473	7			12	505
13	476	6			13	519
14	478	6			14	533
15	481	6			15	546
16	483	6			16	559
17	486	6			17	570
18	488	6			18	581
19	490	6			19	592
20	493	6			20	605
21	495	6	3		21	624
22	497	6			22	661
23	500	6			23	730
24	502	6				
25	505	6				
26	507	6				
27	510	6				
28	512	6				
29	515	6				
30	518	6				
31	521	7				
32	524	7				
33	527	7	4			
34	531	7	-			
35	535	7				
36	539	8				
37	544	9				
38	550	11				
39	560	15				
40	581	29	5			
41	650	97				

RS	SS	SEM	PL
0	370	120	
1	370	120	
2	370	120	
3	370	120	
4	370	120	1
5	370	120	1
6	370	120	
7	415	75	
8	444	46	
9	462	34	
10	477	31	
11	491	32	2
12	505	32	
13	519	31	2
14	533	29	3
15	546	26	
16	559	23	
17	570	21	
18	581	20	4
19	592	19	
20	605	22	
21	624	32	
22	661	54	_
23	730	104	5

Reading					Writ	ting	
RS	SS	SEM	PL		RS	SS	SEM
0	390	111			0	310	125
1	390	111			1	310	125
2	390	111			2	310	125
3	390	111			3	362	73
4	390	111			4	396	45
5	390	111	1		5	417	34
6	424	77	1		6	432	29
7	453	48			7	444	26
8	470	34			8	455	23
9	483	26			9	464	22
10	492	23			10	473	20
11	501	20			11	481	20
12	508	19			12	488	19
13	515	17			13	496	19
14	522	16	2		14	503	18
15	528	16	2		15	511	18
16	534	16			16	518	18
17	540	15			17	526	18
18	545	15			18	533	19
19	551	15			19	541	19
20	558	15	2		20	550	19
21	564	16	3		21	558	20
22	571	16			22	567	20
23	578	16			23	576	21
24	586	17			24	585	21
25	594	18	4		25	595	22
26	604	19	4		26	606	22
27	617	22			27	618	23
28	633	26			28	631	25
29	660	38	5		29	647	27
30	715	80			30	667	33
				•	31	701	47
					32	720	57

1	Spea	king			I
	RS	SS	SEM	PL	F
	0	370	44		
	1	404	22		
	2	422	16	1	
	3	433	13	1	
	4	441	11		
	5	448	10		
	6	453	9		
	7	457	8		
	8	461	8		
	9	464	7	2	
	10	467	7	2	1
	11	470	7		1
	12	473	7		]
	13	476	6		1
	14	478	6		1
	15	481	6		1
	16	483	6		
	17	486	6		
	18	488	6		
	19	490	6		
	20	493	6		4
	21	495	6	3	4
	22	497	6	5	4
	23	500	6		2
	24	502	6		
	25	505	6		
	26	507	6		
	27	510	6		
	28	512	6		
	29	515	6		
	30	518	6		
	31	521	7		
	32	524	7		
	33	527	7		
	34	531	7	4	
	35	535	7		
	36	539	8		
	37	544	9		
	38	550	11		
	39	560	15	_	
	40	581	29	5	
	41	650	97		

	<b>T</b>		1.0	<b>·</b>
Table E.169	Form	D Grad	le 169	Scoring

Liste	ening			]
RS	SS	SEM	PL	
0	370	120		
1	370	120		
2	370	120		
3	370	120		
4	370	120	1	
5	370	120	1	
6	370	120		
7	415	75		
8	444	46		
9	462	34		
10	477	31		
11	491	32	2	
12	505	32		
13	519	31		
14	533	29	3	
15	546	26		
16	559	23		
17	570	21		
18	581	20	4	
19	592	19	4	
20	605	22		
21	624	32		
22	661	54	_	
23	730	104	3	

Reading				Writ	ing	
RS	SS	SEM	PL	RS	SS	SEM
0	390	111		0	310	125
1	390	111		1	310	125
2	390	111		2	310	125
3	390	111		3	362	73
4	390	111		4	396	45
5	390	111	1	5	417	34
6	424	77	1	6	432	29
7	453	48		7	444	26
8	470	34		8	455	23
9	483	26		9	464	22
10	492	23		10	473	20
11	501	20		11	481	20
12	508	19		12	488	19
13	515	17		13	496	19
14	522	16		14	503	18
15	528	16	2	15	511	18
16	534	16		16	518	18
17	540	15		17	526	18
18	545	15		18	533	19
19	551	15		19	541	19
20	558	15		20	550	19
21	564	16	3	21	558	20
22	571	16	-	22	567	20
23	578	16		23	576	21
24	586	17		24	585	21
25	594	18	4	25	595	22
26	604	19	4	26	606	22
27	617	22		27	618	23
28	633	26		28	631	25
29	660	38	5	29	647	27
30	715	80		30	667	33
				31	701	47
				32	720	57

Spea	king			L
RS	SS	SEM	PL	R
0	370	44		(
1	404	22		
2	422	16	1	
3	433	13	1	1
4	441	11		4
5	448	10		
6	453	9		
7	457	8		
8	461	8		
9	464	7		9
10	467	7	2	1
11	470	7		1
12	473	7		1
13	476	6		1
14	478	6		1
15	481	6		1
16	483	6		1
17	486	6		1
18	488	6		1
19	490	6		1
20	493	6		2
21	495	6		2
22	497	6	3	2
23	500	6		2
24	502	6		
25	505	6		
26	507	6		
27	510	6		
28	512	6		
29	515	6		
30	518	6		
31	521	7		
32	524	7		
33	527	7		
34	531	7	4	
35	535	7		
36	539	8		
37	544	9		
38	550	11		
39	560	15		
40	581	29	5	
41	650	97		

Table E.170	Form D	) Grade	170	Scoring
	IUIMD	Grade	1,0	Scoring

Liste	ning			
RS	SS	SEM	PL	
0	370	120		
1	370	120		
2	370	120		
3	370	120		
4	370	120		
5	370	120	1	
6	370	120		
7	415	75		
8	444	46		
9	462	34		
10	477	31		
11	491	32	2	
12	505	32	2	
13	519	31		
14	533	29	3	
15	546	26		
16	559	23		
17	570	21		
18	581	20	4	
19	592	19	4	
20	605	22		
21	624	32		
22	661	54	-	
23	730	104	2	

Reading					Writing		
RS	SS	SEM	PL		RS	SS	
0	390	111			0	310	
1	390	111			1	310	
2	390	111			2	310	
3	390	111			3	362	
4	390	111			4	396	
5	390	111			5	417	
6	424	77	1		6	432	
7	453	48			7	444	
8	470	34			8	455	
9	483	26			9	464	
10	492	23			10	473	
11	501	20			11	481	
12	508	19			12	488	
13	515	17			13	496	
14	522	16			14	503	
15	528	16	2		15	511	
16	534	16	2		16	518	
17	540	15			17	526	
18	545	15			18	533	
19	551	15			19	541	
20	558	15			20	550	
21	564	16	3		21	558	
22	571	16			22	567	
23	578	16			23	576	
24	586	17			24	585	
25	594	18			25	595	
26	604	19	4		26	606	
27	617	22			27	618	
28	633	26			28	631	
29	660	38	5		29	647	
30	715	80	5		30	667	
					31	701	

SEM

PL

Spea	king			Liste	ening
RS	SS	SEM	PL	RS	SS
0	370	44		0	370
1	404	22		1	370
2	422	16	1	2	370
3	433	13	1	3	370
4	441	11		4	370
5	448	10		5	370
6	453	9		6	370
7	457	8		7	415
8	461	8		8	444
9	464	7		9	462
10	467	7	2	10	477
11	470	7		11	491
12	473	7		12	505
13	476	6		13	519
14	478	6		14	533
15	481	6		15	546
16	483	6		16	559
17	486	6		17	570
18	488	6		18	581
19	490	6		19	592
20	493	6		20	605
21	495	6		21	624
22	497	6	3	22	661
23	500	6		23	730
24	502	6			
25	505	6			
26	507	6			
27	510	6			
28	512	6			
29	515	6			
30	518	6			
31	521	7			
32	524	7			
33	527	7			
34	531	7	4		
35	535	7			
36	539	8			
37	544	9			
38	550	11			
39	560	15			
40	581	29	5		
41	650	97			

Table E.17	1 Form	D Grade	171	Scoring

	8			_
RS	SS	SEM	PL	
0	370	120		
1	370	120		
2	370	120		
3	370	120		
4	370	120		
5	370	120	1	
6	370	120		
7	415	75		
8	444	46		
9	462	34		
0	477	31		
1	491	32	2	
12	505	32	2	
13	519	31		
14	533	29	2	
15	546	26	3	
16	559	23		
17	570	21		
8	581	20		
9	592	19	4	
20	605	22		
21	624	32		
22	661	54	_	
23	730	104	5	

Read	ling			i i	Writing		
RS	SS	SEM	PL		RS	SS	
0	390	111			0	310	
1	390	111			1	310	
2	390	111			2	310	
3	390	111			3	362	
4	390	111			4	396	
5	390	111			5	417	
6	424	77	1		6	432	
7	453	48			7	444	
8	470	34			8	455	
9	483	26			9	464	
10	492	23			10	473	
11	501	20			11	481	
12	508	19			12	488	
13	515	17			13	496	
14	522	16			14	503	
15	528	16	2		15	511	
16	534	16	2		16	518	
17	540	15			17	526	
18	545	15			18	533	
19	551	15			19	541	
20	558	15			20	550	
21	564	16	3		21	558	
22	571	16	-		22	567	
23	578	16			23	576	
24	586	17			24	585	
25	594	18			25	595	
26	604	19	4		26	606	
27	617	22			27	618	
28	633	26			28	631	
29	660	38	5		29	647	
30	715	80	3		30	667	
					31	701	
					32	720	

SEM

 PL
NCE	OV	OR	CO	LT	PR	NCE	OV	OR	СО	LT	PR
1	1-310	1-362	1-311	1-231	1-287	30	364-365	425-426	374-375	294-295	349-350
2	311-312	363-364	312-314	232-233	288-289	31	366	427	376-377	296-298	351-353
3	313-314	365-367	315-316	234-235	290-293	32	367-368	428-429	378-379	299-300	354-355
4	315-316	368-369	317-318	236-237	294-295	33	369-370	430-431	380	301-303	356-357
5	317-319	370-373	319-321	238-240	296-298	34	371-372	432	381	304-306	358-359
6	320-321	374	322-323	241-243	299-300	35	373-374	433-434	382-383	307-309	360-362
7	322-323	375-377	324-325	244-245	301-302	36	375	435	384	310-311	363-364
8	324	378-381	326-327	246-247	303-305	37	376-377	436	385-386	312-314	365-367
9	325-326	382-384	328-329	248-250	306-307	38	378-379	437-438	387	315-317	368-369
10	327	385-387	330-331	251-253	308-309	39	380-381	439	388-389	318-319	370-371
11	328-329	388-390	332-333	254-255	310	40	382	440-441	390-391	320-322	372-373
12	330-331	391	334-336	256-257	311-312	41	383-384	442	392	323-325	374-376
13	332-333	392-393	337-338	258-259	313-314	42	385-386	443-444	393-394	326-328	377-378
14	334-335	394-395	339-340	260-261	315-317	43	387-388	445	395	329-330	379-380
15	336-337	396-398	341-343	262	318-319	44	389-390	446	396-397	331-333	381-382
16	338-339	399-400	344-346	263-264	320-321	45	391-392	447-448	398	334-335	383-385
17	340	401-402	347	265-266	322-323	46	393-394	449	399	336-338	386-388
18	341-342	403-404	348-351	267-268	324-325	47	395	450	400-401	339-340	389-390
19	343-344	405-406	352-353	269-270	326-328	48	396-397	451-452	402	341-343	391-393
20	345-346	407-408	354-355	271-272	329-330	49	398-399	453-454	403-404	344-346	394-395
21	347-348	409-410	356-358	273-274	331	50	400-401	455	405	347-349	396-398
22	349-350	411-413	359-360	275-276	332-333	51	402-403	456	406-407	350-351	399-400
23	351-352	414-415	361-362	277-278	334-335	52	404-405	457-458	408	352-354	401-403
24	353	416	363-364	279-280	336-337	53	406-407	459	409-410	355-356	404-405
25	354-355	417-418	365-366	281-282	338-339	54	408	460	411	357-359	406-408
26	356-357	419	367-368	283-285	340-342	55	409-410	461-462	412-413	360-361	409-410
27	358-359	420-421	369-370	286-287	343-344	56	411-412	463	414	362-363	411-412
28	360-361	422	371	288-290	345-346	57	413-414	464-465	415-416	364-365	413-414
29	362-363	423-424	372-373	291-293	347-348	58	415-416	466	417	366-367	415-416

 Table E.39 Form D Kindergarten Normal Curve Equivalent Norming Table for Composites

NCE	OV	OR	CO	LT	PR
59	417-418	467	418-419	368-370	417-418
60	419	468-469	420	371-373	419-421
61	420-421	470	421-422	374-375	422-423
62	422-423	471-472	423	376-378	424-425
63	424-425	473-474	424-425	379-380	426-427
64	426-427	475	426-427	381-382	428-429
65	428-429	476-477	428-429	383-385	430-432
66	430-431	478-479	430	386-387	433-434
67	432-433	480	431-432	388-390	435-436
68	434-435	481-482	433-434	391-392	437-438
69	436-437	483	435-436	393-394	439-440
70	438-439	484-485	437-438	395-396	441-443
71	440-441	486-487	439	397-399	444-446
72	442-443	488-489	440-441	400-401	447-448
73	444-445	490-491	442-443	402-404	449-450
74	446-447	492-493	444	405-406	451-452
75	448-449	494-495	445-446	407-409	453-455
76	450-451	496-498	447-448	410-412	456-457
77	452-454	499-500	449	413-415	458-460
78	455-456	501-502	450-451	416-418	461-463
79	457-458	503-505	452	419-420	464-465
80	459-460	506-507	453-455	421-423	466-468
81	461-463	508-509	456-457	424-426	469-471
82	464-465	510	458	427-429	472-474
83	466-467	511-513	459-460	430-432	475-478
84	468-469	514-515	461-462	433-435	479-481
85	470-471	516-517	463-465	436-439	482-484
86	472-474	518-519	466-467	440-444	485-488
87	475-476	520-521	468-469	445-447	489-490

Table E.39 Form D Kindergarten Normal Curve Equivalent Norm	ing Table for Composites (continued)
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NCE OV OR СО LT PR 448-451 88 477-478 522-523 470-472 491-493 479 524 473-475 452-455 89 494-497 90 480-481 525-527 476 456-459 498-500 460-464 91 482-484 528 477-478 501-504 92 485-486 529-530 479-480 465-469 505-510 93 487-489 531-532 481-484 470-474 511-515 475-481 94 490-492 533 485-488 516-517 493-495 534 489-493 482-491 518-522 95 96 496-500 535 494 492-499 523-527 97 501-503 536-537 495-498 500-505 528-533 504-505 538-540 499-503 506-511 98 534-546 99 506-999 541-999 504-999 512-999 547-999

NCE	OV	OR	СО	LT	PR	NCE	OV	OR	СО	LT	PR
1	1-342	1-372	1-323	1-272	1-331	30	401-402	438-439	387-388	360-361	412-413
2	343-344	373	324-326	273-276	332	31	403-404	440-441	389	362-363	414
3	345	374-376	327	277-279	333-334	32	405-406	442	390-391	364-365	415-416
4	346-347	377-379	328-330	280-282	335-337	33	407-408	443	392	366-368	417-418
5	348-349	380-382	331-332	283	338-341	34	409	444-445	393-394	369-371	419-420
6	350-351	383-385	333-334	284-286	342-344	35	410-411	446	395-396	372-373	421
7	352-353	386-388	335-338	287-289	345-347	36	412-413	447	397-398	374-376	422-423
8	354-355	389-392	339-342	290-292	348-351	37	414	448-449	399-400	377-378	424-425
9	356-358	393-395	343	293-295	352-354	38	415-416	450	401	379-380	426-427
10	359-361	396-400	344-347	296-300	355-357	39	417	451	402-403	381-382	428-429
11	362-364	401-404	348-350	301-303	358-361	40	418-419	452	404-405	383-384	430-431
12	365-366	405-408	351-353	304-306	362-366	41	420-421	453	406	385-386	432-433
13	367-368	409-410	354-356	307-309	367-369	42	422	454-455	407-408	387-389	434-435
14	369-371	411-412	357-358	310-313	370-372	43	423-424	456	409-410	390-391	436
15	372	413-414	359-360	314-316	373-376	44	425	457	411	392-393	437-438
16	373-375	415-416	361-362	317-321	377-378	45	426-427	458	412-413	394-396	439
17	376-377	417-418	363-364	322-323	379-381	46	428	459	414-415	397-398	440-441
18	378-379	419	365-366	324-326	382-383	47	429-430	460-461	416	399-400	442-443
19	380-381	420-422	367-369	327-330	384-386	48	431	462	417-418	401-402	444-445
20	382-383	423-424	370	331-333	387-389	49	432-433	463	419-420	403-404	446
21	384	425	371-372	334-336	390-393	50	434-435	464	421	405-406	447-448
22	385-387	426-427	373-374	337-339	394-396	51	436	465-466	422-423	407-408	449-450
23	388-389	428	375-376	340-342	397-398	52	437-438	467	424-425	409-410	451-452
24	390-391	429-430	377-378	343-346	399-401	53	439-440	468	426-427	411-413	453-454
25	392-393	431-432	379-380	347-349	402-403	54	441-442	469	428	414-415	455-456
26	394-395	433	381	350-351	404-405	55	443	470-471	429-430	416-417	457-458
27	396-397	434-435	382-383	352-354	406-407	56	444-445	472	431-432	418-420	459-460
28	398-399	436	384	355-357	408-409	57	446-447	473	433	421-422	461-462
29	400	437	385-386	358-359	410-411	58	448-449	474	434-435	423-424	463-464

 Table E.40 Form D Grade 1 Normal Curve Equivalent Norming Table for Composites

NCE	OV	OR	CO	LT	PR
59	450-451	475-476	436	425-427	465-466
60	452-453	477	437-438	428-429	467
61	454-455	478-479	439-440	430-432	468-470
62	456	480	441-442	433-434	471-472
63	457-459	481	443	435-437	473-474
64	460-461	482-483	444-445	438-440	475
65	462-463	484	446-447	441-443	476-477
66	464-465	485-486	448-449	444-447	478-479
67	466-467	487	450-451	448-450	480-482
68	468-470	488-489	452-453	451-453	483-485
69	471-472	490-491	454-455	454-456	486-487
70	473-474	492-493	456-457	457-460	488-490
71	475-476	494	458-459	461-464	491-493
72	477-479	495-496	460-461	465-468	494-497
73	480-481	497-498	462-463	469-473	498-500
74	482-484	499	464-465	474-477	501-505
75	485-487	500-501	466-467	478-482	506-509
76	488-490	502-503	468-470	483-487	510-513
77	491-493	504	471-472	488-492	514-518
78	494-496	505-506	473-475	493-497	519-524
79	497-499	507-508	476-477	498-503	525-531
80	500-502	509	478-480	504-509	532-543
81	503-504	510-511	481-484	510-513	544-552
82	505-507	512-513	485-486	514-517	553-556
83	508-510	514-515	487-488	518-521	557-559
84	511-513	516-517	489-492	522-526	560-563
85	514-515	518-519	493-494	527-530	564-565
86	516-518	520	495-497	531-534	566-568
87	519-520	521-522	498-499	535-537	569-571

NCE	OV	OR	СО	LT	PR
88	521-522	523	500-502	538-543	572-574
89	523-524	524-525	503-505	544-545	575
90	525-526	526-527	506-508	546-549	576-577
91	527-530	528-529	509-511	550-552	578
92	531	530	512	553-555	579
93	532-534	531-533	513-515	556-558	580-581
94	535-536	534-535	516-517	559-560	582-583
95	537-539	536	518-520	561-564	584-585
96	540-542	537-538	521-523	565-566	586
97	543	539-540	524-526	567-570	587
98	544	541-542	527-528	571-572	588
99	545-999	543-999	529-999	573-999	589-999

 Table E.40 Form D Grade 1 Normal Curve Equivalent Norming Table for Composites (continued)

NCE	OV	OR	CO	LT	PR	NCE	OV	OR	СО	LT	PR
1	1-392	1-420	1-323	1-329	1-380	30	450-451		387-388	427-428	461-462
2	393	421-425	324-327	330-336	381-382	31	452-453	471-472	389-390	429-431	463
3	394-398	426-427	328-330	337-341	383-386	32	454-455	473	391-392	432-433	464-465
4	399-400	428-430	331-332	342-344	387-391	33	456	474	393	434-435	466-467
5	401-402	431-433	333-334	345-349	392-395	34	457-458	475	394-395	436-437	468-469
6	403-404	434-436	335-336	350-352	396-402	35	459-460	476	396-397	438-440	470
7	405-406	437-439	337-340	353-355	403-407	36	461-462	477	398	441-443	471-472
8	407	440-441	341-342	356-359	408-411	37	463-464	478	399-400	444-446	473
9	408-410	442-443	343-344	360-363	412-415	38	465-466	479	401-402	447-448	474-475
10	411-412	444-446	345-347	364-366	416-418	39	467	480	403	449-450	476
11	413-414	447	348-350	367-370	419-421	40	468-469	481	404-405	451-453	477-478
12	415-416	448-449	351-353	371-374	422-424	41	470-471	482	406	454-455	479-480
13	417-418	450	354-356	375-378	425-426	42	472	483-484	407-408	456-457	481
14	419-420	451-452	357-358	379-381	427-429	43	473-474	485	409	458-459	482-483
15	421-422	453	359-361	382-385	430-432	44	475	486	410-411	460-462	484-485
16	423-425	454	362	386-390	433-434	45	476-477	487	412-413	463-464	486
17	426	455	363-365	391-393	435-436	46	478-479	488	414	465-466	487-488
18	427-428	456	366-367	394-397	437-438	47	480	489-490	415-416	467-469	489
19	429-430	457-458	368	398-400	439-441	48	481-482	491	417	470-472	490-491
20	431-433	459	369-370	401-402	442-443	49	483-484	492	418-419	473-474	492
21	434-435	460	371-372	403-405	444-445	50	485	493	420-421	475-477	493-494
22	436	461	373-374	406-407	446-447	51	486-487	494	422	478-479	495-496
23	437-438	462	375-376	408-409	448-449	52	488-489	495-496	423-424	480-481	497
24	439-441	463-464	377-378	410-412	450-451	53	490-491	497	425-426	482-484	498-499
25	442	465	379	413-414	452	54	492	498	427-428	485-486	500
26	443-444	466	380-381	415-417	453-454	55	493-494	499-500	429-430	487-488	501-502
27	445-446	467	382	418-420	455-456	56	495-496	501	431	489-491	503-504
28	447-448	468	383-384	421-423	457-458	57	497	502	432-433	492-493	505-506
29	449	469-470	385-386	424-426	459-460	58	498-499	503-504	434-435	494-495	507-508

 Table E.41 Form D Grades 2–3 Normal Curve Equivalent Norming Table for Composites

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NCE	OV	OR	CO	LT	PR
59	500-501	505	436-437	496-497	509
60	502	506	438-439	498-500	510-511
61	503-504	507-508	440-441	501-502	512-513
62	505-506	509	442-443	503-505	514-515
63	507-508	510-511	444	506-507	516-517
64	509-510	512	445-446	508-509	518-519
65	511	513-514	447-448	510-512	520
66	512-513	515-516	449-450	513-514	521-522
67	514-515	517-518	451-452	515-516	523-524
68	516	519-520	453	517-518	525-527
69	517-518	521-522	454-455	519-521	528-529
70	519-520	523-524	456-457	522	530-531
71	521-522	525-526	458-459	523-524	532-533
72	523-525	527-529	460-461	525-526	534-535
73	526-527	530-531	462-463	527-529	536-538
74	528-529	532-533	464-465	530-531	539-540
75	530	534-535	466-467	532-533	541-543
76	531-532	536-537	468-469	534-536	544-546
77	533	538-539	470-471	537-538	547-548
78	534-535	540-541	472-474	539-541	549-551
79	536-537	542-543	475-476	542-543	552-554
80	538-539	544-545	477-479	544-546	555-557
81	540-541	546-547	480-481	547-548	558-560
82	542	548-549	482-483	549-551	561-562
83	543-544	550-551	484-486	552-553	563-565
84	545-546	552	487-489	554-556	566-567
85	547-548	553-554	490-493	557-558	568-570
86	549-550	555-556	494-497	559-562	571-572
87	551	557	498-499	563-565	573-575

 Table E.41 Form D Grades 2–3 Normal Curve Equivalent Norming Table for Composites (continued)

NCE	OV	OR	СО	LT	PR
88	552-553	558-560	500-505	566-568	576-577
89	554	561	506-507	569-572	578-579
90	555-556	562-564	508-509	573-575	580-582
91	557	565-566	510-511	576-579	583-584
92	558-559	567	512-514	580-581	585-587
93	560-561	568	515-518	582-584	588
94	562-563	569	519-520	585-586	589-590
95	564-565	570-571	521-523	587-590	591
96	566-568	572	524-525	591-592	592-593
97	569-572	573	526-527	593-595	594-595
98	573	574-576	528-530	596-597	596-597
99	574-999	577-999	531-999	598-999	598-999

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NCE	OV	OR	CO	LT	PR	NCE	OV	OR	СО	LT	PR
1	1-419	1-423	1-368	1-384	1-400	30	482-483	487	437-439	474-476	490-491
2	420-422	424-426	369-370	385	401-403	31	484-485	488-489	440-441	477-478	492-493
3	423-424	427-429	371-372	386-390	404-407	32	486-488	490-491	442-443	479-481	494-495
4	425-426	430-432	373-374	391-392	408-413	33	489	492	444-445	482-483	496-497
5	427-429	433-437	375-378	393-396	414-423	34	490-491	493-494	446	484-486	498-499
6	430-431	438-439	379-380	397-401	424-432	35	492-493	495-496	447-448	487-488	500
7	432-434	440-441	381-383	402-407	433-436	36	494-495	497	449-450	489-490	501-502
8	435-436	442-443	384-387	408-411	437-443	37	496-497	498-499	451-452	491-492	503-504
9	437-439	444	388-390	412-413	444-446	38	498-499	500	453-454	493-495	505
10	440-441	445-446	391-393	414-416	447-448	39	500-501	501-502	455	496-497	506-507
11	442-444	447-449	394-395	417-420	449-450	40	502-503	503	456-457	498-499	508
12	445-446	450-451	396-398	421-424	451-453	41	504-505	504	458-460	500-502	509-510
13	447-448	452-455	399-401	425-426	454-455	42	506	505-506	461-462	503-504	511-512
14	449-450	456-457	402-403	427-429	456-457	43	507-508	507-508	463-464	505-506	513
15	451-452	458-459	404-406	430-433	458-460	44	509-510	509	465	507-509	514-515
16	453-454	460-462	407-409	434-436	461-463	45	511-512	510-511	466-467	510-511	516
17	455-456	463-464	410-411	437-438	464-466	46	513-514	512	468-470	512-514	517-518
18	457-458	465-466	412-414	439-441	467-468	47	515-516	513-514	471	515	519
19	459-460	467-469	415-416	442-445	469-470	48	517	515-516	472-473	516-518	520-521
20	461-462	470-471	417-418	446-448	471-472	49	518-519	517	474-475	519-520	522
21	463-464	472-473	419-421	449-451	473-474	50	520-521	518-519	476-477	521-522	523-524
22	465-467	474-475	422	452-453	475-476	51	522-523	520-521	478-479	523-524	525
23	468-469	476-477	423-425	454-457	477-478	52	524-525	522	480	525-526	526-527
24	470-471	478	426-427	458-459	479-480	53	526-527	523-524	481-482	527-529	528-529
25	472-473	479-480	428-429	460-462	481	54	528	525	483-484	530-531	530
26	474-475	481	430-431	463-465	482-484	55	529-530	526-527	485-486	532-533	531-532
27	476-477	482-483	432	466-468	485-486	56	531-532	528-529	487-488	534-535	533-534
28	478-480	484	433-434	469-471	487-488	57	533-534	530	489-490	536-537	535
29	481	485-486	435-436	472-473	489	58	535	531-532	491-492	538-539	536

 Table E.42 Form D Grades 4–5 Normal Curve Equivalent Norming Table for Composites

NCE	OV	OR	CO	LT	PR
59	536-537	533	493-494	540-541	537-538
60	538-539	534-535	495	542-543	539-540
61	540-541	536-537	496-497	544-546	541
62	542	538-539	498-499	547-548	542-543
63	543-544	540-541	500	549-550	544-545
64	545-546	542-543	501-502	551-552	546-547
65	547	544-545	503-504	553-554	548
66	548-549	546-547	505-506	555-556	549-550
67	550-551	548-549	507-508	557-558	551-552
68	552-553	550-551	509	559-560	553-554
69	554-555	552-553	510-511	561-563	555-556
70	556-557	554-556	512-513	564	557-558
71	558	557-558	514-515	565-567	559-561
72	559-560	559-560	516	568-569	562-563
73	561-562	561-562	517-518	570-571	564-565
74	563-564	563-565	519-520	572-573	566-568
75	565	566-567	521	574-575	569-570
76	566-567	568-570	522-523	576-577	571-572
77	568-569	571-572	524-525	578-579	573-574
78	570-571	573-574	526-527	580-581	575-576
79	572-573	575-577	528-529	582-583	577-579
80	574-575	578-579	530-531	584-585	580-582
81	576-578	580-581	532	586-587	583-585
82	579-580	582-584	533-534	588-590	586-587
83	581-582	585-586	535-536	591-592	588-590
84	583-584	587-588	537	593-594	591-592
85	585-586	589-590	538-540	595-596	593-595
86	587-588	591-592	541-542	597-599	596-597
87	589-590	593-594	543-544	600-601	598-600

 Table E.42 Form D Grades 4–5 Normal Curve Equivalent Norming Table for Composites (continued)

NCE	OV	OR	CO	LT	PR
88	591-592	595-596	545-546	602-604	601-602
89	593-594	597-598	547-548	605-606	603
90	595-596	599-600	549-551	607-608	604-605
91	597-598	601	552	609-610	606-607
92	599-600	602-603	553-554	611-613	608-609
93	601	604	555-556	614-616	610
94	602	605-607	557-558	617	611
95	603-604	608-609	559	618-619	612-613
96	605	610-612	560-561	620	614-615
97	606	613-615	562	621	616-617
98	607-609	616-617	563-564	622	618
99	610-999	618-999	565-999	623-999	619-999

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NCE	OV	OR	CO	LT	PR	NCE	OV	OR	СО	LT	PR
1	1-433	1-424	1-398	1-401	1-408	30	495-496	491-493	472-473	495-496	496-497
2	434	425-427	399-401	402-406	409-415	31	497-498	494-495	474-475	497-499	498
3	435-438	428-432	402-405	407-410	416-420	32	499-500	496	476-478	500-501	499-500
4	439-440	433-434	406	411-414	421-426	33	501-502	497-498	479	502-504	501
5	441-442	435-438	407-410	415-419	427-432	34	503-504	499-500	480-482	505-506	502-503
6	443	439-443	411-413	420-422	433-437	35	505-506	501-502	483-484	507-508	504-505
7	444-445	444	414-417	423-428	438-440	36	507-509	503	485-486	509-511	506-507
8	446-447	445-447	418	429-432	441-444	37	510	504-506	487-488	512-513	508
9	448-449	448-450	419-420	433-434	445-447	38	511-512	507-508	489-491	514-515	509-510
10	450-453	451-453	421-424	435-438	448-450	39	513-514	509	492-493	516-517	511
11	454-455	454-455	425-426	439-441	451-453	40	515-516	510-511	494-495	518-519	512-513
12	456-458	456-457	427-428	442-445	454-455	41	517-518	512-513	496-497	520-521	514-515
13	459-460	458-459	429-431	446-448	456-458	42	519	514-515	498-499	522-524	516-517
14	461-462	460-461	432-435	449-451	459-461	43	520-521	516-517	500-502	525-526	518
15	463-464	462-463	436-437	452-454	462-465	44	522-523	518-519	503-504	527-528	519-520
16	465-468	464-465	438-439	455-458	466-467	45	524-525	520-521	505-506	529-530	521-522
17	469-470	466-467	440-442	459-462	468-469	46	526	522	507-508	531-533	523
18	471-472	468-469	443-444	463-465	470-471	47	527-528	523-524	509-511	534-535	524-525
19	473-474	470-471	445-447	466-468	472-474	48	529-531	525-526	512-513	536-537	526-527
20	475-476	472	448-450	469-470	475-476	49	532	527-528	514-515	538-539	528-529
21	477-478	473-474	451-452	471-472	477-478	50	533-534	529	516-518	540-541	530-531
22	479-480	475	453-454	473-475	479-480	51	535-536	530-531	519-520	542-543	532
23	481-482	476-477	455-458	476-478	481-482	52	537-538	532-533	521-522	544-545	533-534
24	483-484	478-479	459-460	479-481	483-484	53	539-540	534-535	523-524	546-547	535
25	485-486	480-482	461-462	482-484	485-487	54	541-542	536-537	525-526	548-549	536-537
26	487-488	483-484	463-464	485-487	488-489	55	543-544	538	527-528	550-551	538
27	489	485-487	465-466	488-490	490-491	56	545-546	539-541	529-530	552-553	539-540
28	490-492	488	467-468	491-492	492-493	57	547-548	542	531-532	554-555	541-542
29	493-494	489-490	469-471	493-494	494-495	58	549-550	543-544	533-534	556-557	543

 Table E.43 Form D Grades 6–8 Normal Curve Equivalent Norming Table for Composites

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NCE	OV	OR	CO	LT	PR
59	551-552	545-546	535-536	558-560	544-545
60	553	547-548	537-538	561	546-547
61	554-555	549-550	539-540	562-563	548
62	556-557	551-552	541-542	564-565	549-550
63	558-559	553-554	543-544	566-567	551-552
64	560-561	555-556	545-546	568-569	553-554
65	562-563	557-558	547-548	570-572	555
66	564-565	559-560	549-550	573-574	556-557
67	566-567	561-562	551-552	575-576	558-559
68	568-569	563-564	553-554	577-578	560
69	570-571	565-566	555-556	579-580	561-562
70	572-573	567-568	557-559	581-582	563-564
71	574-575	569-570	560-561	583-585	565-566
72	576-577	571-572	562-563	586-587	567-568
73	578	573-574	564-565	588-589	569-570
74	579-581	575-577	566-567	590	571-572
75	582-583	578-579	568-569	591-592	573-574
76	584-585	580-581	570-571	593-594	575-576
77	586-587	582-583	572-574	595-597	577-578
78	588-589	584-586	575-576	598-599	579-581
79	590-591	587-588	577-578	600-601	582-584
80	592-593	589-590	579-580	602-603	585-586
81	594	591-593	581-583	604-605	587-588
82	595-597	594-595	584-585	606-608	589-591
83	598	596-598	586-587	609-610	592-594
84	599-600	599-600	588-589	611-612	595-597
85	601-602	601-603	590-591	613-615	598-600
86	603-604	604-605	592-593	616-617	601-602
87	605-606	606-608	594	618-619	603-604

Table E.43 Form D Grades 6–8 Normal Curve E	uvivalent Norming Table for Composites (continued)
Table Life I of m D Grades o O Horman Curve L	quivalent i tor ming rable for Composites (continued)

NCE	OV	OR	CO	LT	PR	
88	607	609-610	595-597	620-621	605-607	
89	608-609	611-612	598-599	622-624	608-609	
90	610-612	613-614	600-602	625-626	610-611	
91	613	615-616	603-604	627-629	612-613	
92	614-615	617-619	605-606	630-631	614-616	
93	616	620	607-608	632-634	617-618	
94	617-618	621-622	609-611	635-636	619-620	
95	619-621	623-624	612-614	637-639	621-623	
96	622	625-627	615-618	640-642	624-626	
97	623-625	628	619-620	643-644	627	
98	626-627	629-630	621-623	645-646	628	
99	628-999	631-999	624-999	647-999	629-999	

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NCE	OV	OR	СО	LT	PR	NCE	OV	OR	СО	LT	PR
1	1-433	1-432	1-415	1-403	1-410	30	500-501	498	491-492	499-500	507
2	434-438	433	416-418	404-407	411-416	31	502-503	499-500	493-495	501-503	508-509
3	439-440	434-436	419-420	408-412	417-422	32	504-505	501	496-498	504-505	510-511
4	441-443	437-441	421-423	413-416	423-429	33	506-507	502-503	499-500	506-508	512-513
5	444-447	442-443	424-426	417-422	430-435	34	508-509	504	501-502	509-510	514-515
6	448-449	444-445	427-428	423-426	436-438	35	510-511	505-506	503-504	511-513	516
7	450-452	446-448	429-430	427-430	439-441	36	512-513	507-508	505-506	514-515	517-518
8	453-454	449-451	431-433	431-434	442-444	37	514-515	509	507-508	516-517	519
9	455-456	452-454	434-436	435-438	445-449	38	516-517	510-511	509-510	518-519	520-521
10	457-458	455-456	437-440	439-442	450-454	39	518-519	512-513	511-512	520-522	522-523
11	459-460	457-458	441-442	443-447	455-461	40	520	514	513-515	523-524	524
12	461-462	459-461	443-445	448-450	462-464	41	521-522	515-516	516-517	525-526	525-526
13	463-464	462-464	446-448	451-454	465-468	42	523-524	517-518	518-519	527-528	527
14	465-467	465-466	449-450	455-457	469-471	43	525-526	519-520	520-521	529-530	528
15	468-469	467-468	451-452	458-459	472-476	44	527-528	521	522-524	531-532	529-530
16	470-472	469-471	453-456	460-462	477-479	45	529	522-523	525-526	533-534	531
17	473-474	472-473	457-458	463-465	480-482	46	530-531	524	527-528	535-536	532-533
18	475-476	474-475	459-460	466-469	483-484	47	532-533	525-526	529-530	537-538	534-535
19	477-478	476-477	461-463	470-472	485-487	48	534-535	527-528	531-532	539-540	536
20	479-481	478-479	464-466	473-475	488-489	49	536	529-530	533-534	541-542	537-538
21	482	480-481	467-469	476-478	490-491	50	537-538	531	535-537	543-544	539
22	483-485	482-483	470-472	479-481	492-493	51	539-540	532-533	538-539	545-546	540
23	486-487	484-486	473-474	482-484	494	52	541-542	534-535	540-542	547-549	541-542
24	488-489	487-488	475-477	485-486	495-496	53	543	536-537	543-544	550-551	543
25	490-491	489-490	478-479	487-488	497-498	54	544-545	538	545-546	552	544-545
26	492-493	491-492	480-481	489-490	499-500	55	546-547	539-541	547-548	553-554	546
27	494-495	493	482-484	491-493	501-502	56	548-549	542	549-550	555-557	547-548
28	496-497	494-495	485-488	494-495	503-504	57	550-551	543-544	551-552	558-559	549
29	498-499	496-497	489-490	496-498	505-506	58	552-553	545-546	553-554	560-561	550-551

 Table E.44 Form D Grades 9–12 Normal Curve Equivalent Norming Table for Composites

NCE	OV	OR	CO	LT	PR
59	554-555	547	555-556	562	552
60	556-557	548-549	557-559	563-565	553-554
61	558-559	550-551	560-561	566-567	555
62	560-561	552-553	562-563	568-569	556-557
63	562	554-555	564-566	570-571	558-559
64	563-564	556-557	567-568	572-573	560
65	565-566	558-559	569-570	574-575	561-562
66	567-568	560-561	571-572	576-577	563-564
67	569	562-563	573-574	578-579	565-566
68	570-571	564-565	575-576	580-581	567-568
69	572-573	566-567	577-578	582-583	569-570
70	574-575	568-569	579-580	584-585	571
71	576	570-571	581-583	586-587	572-573
72	577-578	572-573	584-585	588-589	574-576
73	579-580	574-576	586-588	590-592	577-578
74	581-582	577-578	589-590	593-594	579-581
75	583-584	579-581	591-592	595-596	582-583
76	585-586	582-583	593-594	597-598	584-585
77	587-588	584-585	595-596	599-600	586-588
78	589-590	586-588	597-599	601-602	589-590
79	591-592	589-591	600-602	603-604	591-592
80	593	592-593	603-604	605-606	593-595
81	594-595	594-595	605-606	607-608	596-598
82	596-597	596-597	607-608	609-611	599-600
83	598-600	598-599	609-611	612-613	601-602
84	601-602	600-602	612-613	614-616	603
85	603-604	603-604	614-616	617-618	604-606
86	605-607	605-607	617-618	619-620	607-608
87	608-609	608-610	619-620	621-624	609-610

 Table E.44 Form D Grades 9–12 Normal Curve Equivalent Norming Table for Composites (continued)

NCE	OV	OR	CO	LT	PR
88	610-612	611-612	621-622	625-626	611-612
89	613	613-615	623-624	627-628	613-615
90	614	616-619	625-627	629-630	616
91	615-617	620-622	628-629	631-633	617-618
92	618-619	623-625	630-632	634-635	619-620
93	620-622	626-628	633-634	636	621-622
94	623	629	635-636	637-638	623-624
95	624-626	630-634	637-639	639-640	625
96	627	635-636	640-642	641-646	626-627
97	628-629	637	643-645	647-649	628
98	630-632	638-640	646-647	650-652	629
99	633-999	641-999	648-999	653-999	630-999

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PR	OV	OR	CO	LT	PR	PR	OV	OR	CO	LT	PR
1	1-316	1-368	1-317	1-236	1-295	30	380	439	389	318-319	370
2	317-325	369-382	318-327	237-248	296-305	31	381	440	390	320	371-372
3	326-330	383-390	328-334	249-255	306-311	32	382	441		321-322	373
4	331-335	391-395	335-339	256-260	312-316	33	383		391	323	374
5	336-338	396-400	340-345	261-264	317-321	34	384-385	442	392	324-325	375-376
6	339-341	401-403	346-350	265-267	322-325	35	386	443	393	326-327	377
7	342-344	404-406	351-353	268-270	326-328	36	387	444	394	328	378
8	345-347	407-409	354-357	271-274	329-331	37	388	445	395	329-330	379-380
9	348-349	410-413	358-360	275-276	332-333	38	389	446	396	331	381
10	350-352	414-415	361-362	277-278	334-335	39	390			332	382
11	353-354	416-417	363-364	279-281	336-338	40	391	447	397	333-334	383-384
12	355-356	418	365-366	282-283	339-340	41	392	448	398	335	385
13	357-358	419-420	367-368	284-285	341-342	42	393		399	336-337	386-387
14	359	421	369-370	286-288	343-344	43	394	449		338	388
15	360-361	422-423	371-372	289-291	345-346	44	395	450	400	339	389
16	362-363	424	373	292-293	347-348	45	396	451	401	340-341	390-391
17	364	425	374-375	294-295	349-350	46	397	452	402	342	392
18	365-366	426-427	376	296-297	351-352	47	398		403	343-344	393
19	367	428	377-378	298-299	353	48	399	453		345	394
20	368	429	379	300-301	354-355	49	400	454	404	346-347	395-396
21	369	430	380	302-303	356	50	401	455	405	348	397
22	370-371	431-432	381	304-305	357-358	51	402		406	349	398
23	372	433	382	306	359-360	52	403	456	407	350-351	399-400
24	373-374	434	383	307-309	361-362	53	404	457		352	401
25	375	435	384	310	363-364	54	405	458	408	353	402
26	376		385	311-312	365	55	406		409	354-355	403-404
27	377	436	386	313	366	56	407	459	410	356	405
28	378	437	387	314-316	367-368	57	408	460	411	357	406
29	379	438	388	317	369	58				358-359	407-408

 Table E.45 Form D Kindergarten Percentile Ranking Norming Table for Composites

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PR	OV	OR	СО	LT	PR
59	409	461	412	360	409
60	410	462	413	361	410
61	411	463	414	362-363	411
62	412	464	415	364	412
63	413			365	413-414
64	414-415	465	416	366	415
65	416	466	417	367	416
66	417	467	418	368-369	417
67	418		419	370	418-419
68	419	468	420	371-372	420
69	420	469	421	373	421
70	421	470	422	374-375	422-423
71	422	471		376	424
72	423	472	423-424	377-378	425
73	424-425	473	425	379	426
74	426	474	426	380-381	427-428
75	427	475	427	382	429-430
76	428	476-477	428	383-384	431
77	429-430	478	429	385-386	432-433
78	431	479	430-431	387-388	434
79	432-433	480	432	389-390	435-436
80	434	481	433	391	437
81	435-436	482	434-435	392-393	438-439
82	437	483-484	436	394	440-441
83	438-439	485	437-438	395-396	442-443
84	440-441	486-487	439	397-399	444-445
85	442	488-489	440	400-401	446-447
86	443-444	490-491	441-442	402-403	448-449
87	445-447	492-493	443-444	404-406	450-452

Table E.45 Form D Kindergarten Percentile	Ranking Table for Composites (continued)
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PR	OV	OR	СО	LT	PR
88	448-449	494-495	445-446	407-409	453-454
89	450-451	496-498	447-448	410-412	455-457
90	452-454	499-500	449-450	413-415	458-460
91	455-457	501-503	451	416-419	461-464
92	458-460	504-506	452-454	420-423	465-468
93	461-463	507-509	455-458	424-427	469-472
94	464-467	510-513	459-460	428-432	473-479
95	468-471	514-518	461-465	433-440	480-485
96	472-477	519-522	466-471	441-449	486-492
97	478-483	523-528	472-478	450-462	493-503
98	484-496	529-534	479-493	463-493	504-523
99	497-999	535-999	494-999	494-999	524-999

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PR	OV	OR	СО	LT	PR	PR	OV	OR	СО	LT	PR
1	1-347	1-379	1-330	1-281	1-336	30	417	451	403	381-382	429
2	348-356	380-393	331-342	282-293	337-352	31	418		404	383	430
3	357-365	394-406	343-351	294-304	353-363	32	419	452	405	384	431
4	366-371	407-412	352-358	305-312	364-371	33	420	453		385	432
5	372-374	413-416	359-362	313-320	372-378	34	421		406	386-387	433
6	375-378	417-419	363-365	321-324	379-382	35	422	454	407	388	434
7	379-381	420-422	366-369	325-330	383-386	36		455	408	389	435
8	382-384	423-425	370-372	331-335	387-392	37	423	456	409	390	436
9	385-386	426-427	373-374	336-339	393-395	38	424		410	391-392	437
10	387-389	428-429	375-376	340-343	396-398	39	425	457	411	393	438
11	390-391	430	377-378	344-346	399-401	40	426	458	412	394	439
12	392-394	431-432	379-380	347-349	402-403	41	427		413	395-396	
13	395	433	381-382	350-352	404-405	42	428	459	414	397	440
14	396-397	434-435	383	353-355	406-408	43	429		415	398	441
15	398-399	436	384-385	356-357	409	44		460	416	399	442
16	400	437	386	358-359	410-411	45	430	461	417	400	443
17	401-402	438-439	387	360	412	46	431		418	401	444
18	403	440	388-389	361-362	413-414	47	432	462	419	402	445
19	404-405	441	390	363-364	415	48	433	463		403-404	446
20	406	442	391	365-366	416	49			420	405	447
21	407	443	392	367	417-418	50	434	464	421	406	448
22	408-409	444	393	368-370	419	51	435	465	422	407	
23	410	445	394-395	371	420	52	436		423	408	449-450
24	411	446	396	372-373	421	53	437	466	424	409	451
25	412	447	397	374-375	422	54	438	467		410	452
26	413	448	398-399	376	423-424	55	439		425	411	453
27	414		400	377-378	425	56	440	468	426	412-413	454
28	415	449	401	379	426-427	57	441	469	427	414	455
29	416	450	402	380	428	58	442		428	415	456

 Table E.46 Form D Grade 1 Percentile Ranking Norming Table for Composites

PR	OV	OR	СО	LT	PR
59		470	429	416	457
60	443	471	430	417-418	458
61	444		431	419	459
62	445	472	432	420	460
63	446-447	473	433	421	461-462
64	448		434	422-423	463
65	449	474	435	424	464
66	450	475	436	425-426	465
67	451	476	437	427	466
68	452	477	438	428	467
69	453		439	429-430	468
70	454	478	440	431-432	469
71	455	479	441	433	470-471
72	456-457	480	442	434-435	472
73	458	481	443	436-437	473
74	459-460	482	444	438-439	474
75	461	483	445	440-441	475
76	462	484	446-447	442	476-477
77	463	485	448	443-445	478
78	464-465	486	449-450	446-447	479-480
79	466-467	487	451	448-449	481-482
80	468-469	488	452-453	450-452	483-484
81	470	489-490	454	453-454	485-486
82	471-472	491	455-456	455-456	487-488
83	473-474	492-493	457	457-460	489-490
84	475-476	494	458-459	461-463	491-493
85	477-478	495-496	460-461	464-467	494-496
86	479-481	497	462-463	468-471	497-499
87	482-484	498-499	464-465	472-476	500-503

Table E.46 Form D Grade 1 Percentile Ranking Table for Composites (continued)

PR

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OV

485-486

487-490

491-493

494-497

498-501

502-505

506-510

511-515

516-522

523-529

530-540

541-999

OR

500-501

502-503

504

505-507

508-509

510-512

513-515

516-519

520-523

524-529

530-537

538-999

CO

466-467

468-470

471-473

474-476

477-480

481-484

485-489

490-495

496-500

501-510

511-520

521-999

LT

477-481

482-486

487-492

493-500

501-507

508-515

516-521

522-531

532-542

543-551

552-564

565-999

PR

504-508

509-513

514-519

520-526

527-540

541-554

555-560

561-565

566-573

574-578

579-585

586-999

PR	OV	OR	СО	LT	PR	PR	OV	OR	CO	LT	PR
1	1-400	1-429	1-332	1-344	1-389	30	467	480	403	449-450	476
2	401-408	430-441	333-343	345-359	390-412	31	468	481	404	451	477
3	409-414	442-448	344-351	360-372	413-422	32	469			452	478
4	415-420	449-452	352-357	373-381	423-429	33	470	482	405	453-454	479
5	421-424	453-454	358-362	382-389	430-434	34	471	483	406-407	455	480
6	425-428	455-456	363-366	390-395	435-438	35	472			456	481
7	429-431	457-458	367-369	396-401	439-441	36	473	484	408	457-458	
8	432-434	459	370-371	402-404	442-444	37	474	485	409	459	482
9	435-436	460-461	372-374	405-406	445-447	38			410	460	483
10	437-439	462-463	375-377	407-409	448-449	39	475	486	411	461-462	484
11	440-441	464	378	410-412	450-451	40	476	487	412	463	485
12	442-443	465	379-380	413-415	452-453	41	477		413	464	486
13	444	466	381	416-418	454	42	478	488	414	465	487
14	445-446	467	382-383	419-421	455-456	43	479			466-467	488
15	447-448	468	384	422-423	457-458	44	480	489	415	468	489
16	449	469-470	385-386	424-426	459-460	45	481	490	416	469	
17	450		387	427-428	461	46			417	470-471	490
18	451-452	471	388-389	429-430	462	47	482	491	418	472	491
19	453-454	472	390-391	431	463-464	48	483	492	419	473	492
20	455	473	392	432-433	465	49	484			474-475	493
21	456		393	434-435	466-467	50	485	493	420	476	
22	457-458	474	394	436	468	51	486		421	477-478	494
23	459	475	395	437-438	469	52	487	494	422	479	495
24	460	476	396-397	439-440	470	53	488	495	423	480	496
25	461		398	441-442	471	54	489		424	481	497
26	462	477	399	443	472	55	490	496	425	482	498
27	463-464	478	400	444-445	473	56	491	497	426	483	499
28	465	479	401	446-447	474	57			427	484-485	500
29	466		402	448	475	58	492	498	428	486	

 Table E.47 Form D Grades 2–3 Percentile Ranking Norming Table for Composites

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PR	OV	OR	СО	LT	PR
59	493	499	429	487	501
60	494	500	430	488	502
61	495		431	489-490	503
62	496	501	432	491	504
63	497	502	433	492	505
64	498	503	434	493-494	506
65	499		435	495	507
66	500	504	436	496	508
67	501	505	437	497	509
68	502	506	438	498-499	510-511
69	503		439-440	500-501	512
70	504	507-508	441	502	513
71	505		442	503-504	514
72	506	509	443	505	515
73	507	510	444	506	516
74	508	511-512	445	507-508	517-518
75	509-510		446	509	519
76	511	513-514	447	510-511	520
77	512	515	448-449	512	521
78	513	516	450	513-514	522-523
79	514	517-518	451	515-516	524
80	515-516	519	452-453	517	525-526
81	517	520-521	454	518-519	527-528
82	518	522	455-456	520-521	529-530
83	519-520	523-524	457	522	531
84	521-522	525-526	458-459	523-524	532-533
85	523-524	527-528	460-461	525-526	534-535
86	525-526	529-530	462-463	527-528	536-537
87	527-528	531-533	464-465	529-530	538-539

Table E.47 Form D Grades 2–3 Percentile Ranking Table for Composites (continue	ed)
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PR	OV	OR	CO	LT	PR
88	529-530	534-535	466-467	531-533	540-542
89	531-532	536-537	468-469	534-535	543-546
90	533	538-539	470-472	536-539	547-549
91	534-536	540-542	473-475	540-542	550-552
92	537-538	543-545	476-478	543-545	553-557
93	539-541	546-548	479-482	546-549	558-561
94	542-544	549-551	483-487	550-554	562-565
95	545-549	552-554	488-494	555-559	566-571
96	550-552	555-559	495-504	560-567	572-576
97	553-557	560-565	505-511	568-578	577-583
98	558-566	566-571	512-523	579-590	584-591
99	567-999	572-999	524-999	591-999	592-999

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PR	OV	OR	CO	LT	PR	PR	OV	OR	CO	LT	PR
1	1-426	1-430	1-373	1-392	1-412	30	500-501	502	455	496	506
2	427-437	431-443	374-388	393-411	413-443	31	502		456	497-498	507
3	438-445	444-450	389-396	412-421	444-450	32	503	503	457	499	508
4	446-449	451-457	397-403	422-429	451-457	33	504	504	458-459	500-501	509
5	450-453	458-461	404-408	430-435	458-462	34	505	505	460	502	510
6	454-457	462-465	409-413	436-440	463-467	35	506	506	461	503	511
7	458-460	466-469	414-417	441-445	468-470	36	507	507	462	504	512
8	461-463	470-473	418-420	446-450	471-473	37	508		463	505-506	513
9	464-466	474-475	421-422	451-453	474-476	38	509	508	464	507	514
10	467-469	476-477	423-425	454-457	477-478	39	510	509	465	508	515
11	470-471	478	426-427	458-460	479-480	40	511	510	466	509-510	
12	472-474	479-480	428-429	461-463	481-482	41	512	511	467	511	516
13	475-476	481-482	430-431	464-466	483-484	42	513	512	468-469	512	517
14	477-478	483	432-433	467-468	485-486	43	514		470	513-514	518
15	479-480	484-485	434	469-471	487-488	44	515	513	471	515	519
16	481	486	435-436	472-473	489	45	516	514		516	
17	482-483	487	437-438	474-475	490-491	46	517	515	472	517	520
18	484-485	488	439-440	476-477	492-493	47	518	516	473	518	521
19	486	489-490	441-442	478-479	494	48	519	517	474	519	522
20	487-488	491	443	480-481	495	49	520	518	475	520	523
21	489	492	444	482-483	496-497	50	521	519	476	521-522	524
22	490-491	493	445-446	484-485	498	51	522	520	477	523	
23	492	494-495	447	486	499	52	523		478	524	525
24	493	496	448	487-488	500	53	524	521	479	525	526
25	494	497	449	489-490	501	54	525	522	480	526	527
26	495-496	498	450-451	491	502	55	526	523	481	527	528
27	497	499	452	492	503	56		524	482	528-529	529
28	498	500	453	493-494	504	57	527		483	530	
29	499	501	454	495	505	58	528	525	484	531	530

 Table E.48 Form D Grades 4–5 Percentile Ranking Norming Table for Composites

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PR	OV	OR	СО	LT	PR
59	529	526	485	532	531
60	530	527	486	533	532
61	531	528	487	534	533
62	532	529	488	535	534
63	533	530	489	536-537	535
64	534	531	490	538	536
65	535	532	491-492	539	
66	536	533	493	540	537
67	537		494	541	538
68	538	534	495	542-543	539
69	539	535-536	496	544	540
70	540	537	497	545	541
71	541	538	498	546	542
72	542	539	499	547-548	543
73	543	540	500	549	544
74	544	541-542	501	550	545
75	545-546	543	502	551-552	546-547
76	547	544-545	503	553	548
77	548	546	504-505	554-555	549
78	549	547	506	556	550-551
79	550-551	548-549	507	557	552
80	552	550	508-509	558-559	553
81	553-554	551-552	510	560-561	554-555
82	555	553-554	511-512	562-563	556-557
83	556-557	555-556	513	564-565	558-559
84	558	557	514-515	566	560
85	559-560	558-559	516	567-569	561-562
86	561	560-562	517-518	570	563-564
87	562-563	563-564	519	571-573	565-567

PR	OV	OR	СО	LT	PR
88	564-565	565-567	520-521	574-575	568-569
89	566-567	568-569	522-523	576-577	570-572
90	568-570	570-572	524-525	578-579	573-574
91	571-572	573-575	526-527	580-582	575-577
92	573-575	576-579	528-530	583-585	578-581
93	576-579	580-582	531-533	586-588	582-586
94	580-583	583-586	534-536	589-592	587-590
95	584-587	587-590	537-540	593-597	591-596
96	588-591	591-595	541-545	598-603	597-601
97	592-598	596-601	546-552	604-610	602-607
98	599-604	602-610	553-560	611-619	608-613
99	605-999	611-999	561-999	620-999	614-999

 Table E.48 Form D Grades 4–5 Percentile Ranking Table for Composites (continued)

PR	OV	OR	CO	LT	PR	PR	OV	OR	СО	LT	PR
1	1-440	1-433	1-406	1-412	1-425	30	514	509	492	517	511
2	441-448	434-448	407-419	413-433	426-445	31	515	510	493-494	518	512
3	449-456	449-456	420-427	434-443	446-453	32	516	511	495	519	513
4	457-461	457-460	428-434	444-450	454-461	33	517	512	496	520	514
5	462-467	461-465	435-439	451-457	462-467	34	518	513	497-498	521-522	515
6	468-471	466-468	440-443	458-464	468-471	35	519	514-515	499	523	516
7	472-475	469-471	444-447	465-468	472-474	36	520	516	500	524	517
8	476-477	472-473	448-451	469-471	475-477	37	521	517	501	525-526	518
9	478-480	474-475	452-454	472-475	478-480	38	522	518	502-503	527	519
10	481-482	476-477	455-458	476-479	481-482	39	523	519	504	528	520
11	483-484	478-480	459-461	480-482	483-485	40	524		505	529	521
12	485-486	481-482	462-463	483-484	486-487	41	525	520-521	506	530	522
13	487-488	483-485	464	485-487	488-489	42		522	507	531-532	523
14	489-490	486-487	465-466	488-490	490-491	43	526		508-509	533	
15	491-492	488-489	467-468	491-492	492-493	44	527	523	510	534	524
16	493-494	490	469-471	493-494	494-495	45	528	524	511	535	525
17	495-496	491-492	472-473	495-496	496	46	529-530	525	512	536	526
18	497	493-494	474	497-498	497-498	47	531	526	513-514	537	527
19	498-499	495	475-476	499-500	499	48	532	527	515	538-539	528
20	500	496-497	477-478	501	500	49	533	528	516	540	529
21	501-502	498	479	502-503	501	50	534	529	517	541	530
22	503	499	480-481	504-505	502	51	535	530	518	542	531
23	504-505	500-501	482	506-507	503-504	52	536	531	519-520	543	532
24	506	502	483-484	508	505	53	537		521	544	533
25	507-508	503	485	509-510	506	54	538	532	522	545	534
26	509	504	486-487	511	507	55	539	533-534	523	546	
27	510	505	488	512-513	508	56	540	535		547	535
28	511	506-507	489-490	514	509	57	541	536	524-525	548	536
29	512-513	508	491	515-516	510	58	542	537	526	549	537

 Table E.49 Form D Grades 6–8 Percentile Ranking Norming Table for Composites

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PR	OV	OR	СО	LT	PR
59	543	538	527	550	538
60	544	539	528	551	539
61	545	540	529-530	552-553	540
62	546	541	531	554	541
63	547	542	532	555	
64	548-549	543	533	556	542
65	550	544	534	557	543
66	551	545	535	558	544
67	552	546	536	559-560	545
68	553	547	537	561	546
69	554	548	538	562	547
70	555	549	539-540	563	548
71	556	550-551	541	564	549
72	557-558	552	542	565	550
73	559	553	543	566-567	551-552
74	560	554-555	544-545	568	553
75	561	556	546	569-570	554
76	562	557	547	571	555
77	563-564	558	548-549	572	556
78	565	559-560	550	573-574	557
79	566	561-562	551-552	575	558-559
80	567-568	563	553	576-578	560
81	569	564-565	554-555	579	561
82	570-571	566	556-557	580-581	562
83	572-573	567-568	558-559	582	563-564
84	574-575	569-570	560	583-584	565-566
85	576	571-572	561-563	585-586	567-568
86	577-578	573-574	564-565	587-588	569-570
87	579-580	575-576	566-567	589-590	571

 Table E.49 Form D Grades 6–8 Percentile Ranking Table for Composites (continued)

PR	OV	OR	CO	LT	PR
88	581-582	577-579	568-569	591-592	572-573
89	583-585	580-581	570-571	593-594	574-576
90	586-588	582-583	572-574	595-597	577-578
91	589-590	584-587	575-577	598-600	579-582
92	591-593	588-590	578-580	601-603	583-585
93	594-595	591-594	581-583	604-606	586-589
94	596-599	595-599	584-587	607-610	590-594
95	600-602	600-604	588-592	611-615	595-600
96	603-607	605-609	593-596	616-620	601-605
97	608-613	610-616	597-604	621-628	606-613
98	614-621	617-624	605-615	629-640	614-624
99	622-999	625-999	616-999	641-999	625-999

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PR	OV	OR	СО	LT	PR	PR	OV	OR	СО	LT	PR
1	1-442	1-440	1-422	1-415	1-426	30	518	512	511-512	521	522
2	443-454	441-452	423-434	416-435	427-445	31	519	513	513	522	523
3	455-460	453-459	435-443	436-448	446-463	32	520	514	514-515	523	524
4	461-467	460-466	444-450	449-456	464-471	33	521	515	516	524-525	525
5	468-472	467-471	451-455	457-462	472-478	34	522	516	517	526	526
6	473-475	472-475	456-459	463-467	479-483	35	523	517	518	527	527
7	476-479	476-478	460-463	468-473	484-487	36	524	518	519-520	528	
8	480-482	479-480	464-468	474-477	488-490	37	525	519	521	529	528
9	483-485	481-483	469-471	478-481	491-492	38	526	520	522	530-531	529
10	486-488	484-486	472-474	482-484	493-495	39	527	521	523-524	532	530
11	489	487-488	475-477	485-486	496-497	40	528	522	525	533	531
12	490-492	489-490	478-480	487-488	498-499	41	529	523	526	534	
13	493-494	491-492	481-482	489-491	500-501	42	530	524	527	535	532
14	495-496	493-494	483-485	492-494	502	43	531		528	536	533
15	497	495	486-488	495-496	503-504	44	532	525-526	529	537	534
16	498-499	496-497	489-490	497-498	505-506	45	533		530	538	535
17	500-501	498	491-492	499-500	507	46	534	527	531	539	536
18	502-503	499	493-494	501-502	508-509	47	535	528	532-533	540	
19	504	500	495-496	503-504	510	48	536	529	534	541	537
20	505	501-502	497-498	505-506	511	49	537	530	535	542	538
21	506-507	503	499	507-508	512-513	50	538	531	536	543-544	539
22	508	504	500-501	509	514	51	539	532	537	545	540
23	509	505	502	510-511	515	52	540	533	538-539	546	
24	510-511	506	503-504	512-513	516	53		534	540	547	541
25	512	507	505	514	517	54	541	535	541	548	542
26	513	508	506	515	518	55	542	536	542-543	549	543
27	514-515	509	507-508	516-517	519	56	543	537	544	550	
28	516	510	509	518	520	57	544	538	545	551	544
29	517	511	510	519-520	521	58	545	539	546	552	545

 Table E.50 Form D Grades 9–12 Percentile Ranking Norming Table for Composites

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PR	OV	OR	СО	LT	PR
59	546	540	547	553-554	546
60	547	541	548	555	547
61	548	542	549	556	
62	549	543	550	557	548
63	550	544	551-552	558	549
64	551-552	545	553	559	550
65			554	560	551
66	553	546	555	561-562	552
67	554-555	547	556-557	563	
68	556	548-549	558	564	553
69	557		559	565	554
70	558	550	560-561	566	555
71	559-560	551	562	567-568	556
72	561	552-553	563-564	569	557
73	562	554	565	570	558
74	563	555	566	571-572	559
75	564	556-557	567-568	573	560
76	565	558	569-570	574-575	561-562
77	566-567	559	571	576	563
78	568	560-561	572-573	577	564
79	569	562-563	574	578-579	565
80	570	564	575-576	580	566-567
81	571-572	565-566	577	581-582	568
82	573	567	578-579	583	569-570
83	574-575	568-569	580	584-585	571
84	576	570-571	581-582	586-587	572-573
85	577-578	572-573	583-585	588-589	574-575
86	579	574-575	586-587	590-591	576-577
87	580-581	576-577	588-589	592-593	578-580

 Table E.50 Form D Grades 9–12 Percentile Ranking Table for Composites (continued)

OV	OR	СО	LT	PR
582-583	578-580	590-591	594-595	581-582
584-585	581-583	592-594	596-598	583-585
586-588	584-586	595-597	599-600	586-588
589-591	587-589	598-601	601-603	589-591
592-593	590-592	602-604	604-606	592-595
594-596	593-596	605-607	607-609	596-599
597-601	597-599	608-612	610-614	600-602
602-605	600-605	613-617	615-618	603-606
606-611	606-611	618-621	619-625	607-611
612-617	612-621	622-628	626-633	612-618
618-626	622-634	629-640	634-641	619-625
627-999	635-999	641-999	642-999	626-999
	OV 582-583 584-585 586-588 589-591 592-593 594-596 597-601 602-605 606-611 612-617 618-626 627-999	OV         OR           582-583         578-580           584-585         581-583           586-588         584-586           589-591         587-589           592-593         590-592           594-596         593-596           597-601         597-599           602-605         600-605           606-611         606-611           612-617         612-621           618-626         622-634           627-999         635-999	OVORCO582-583578-580590-591584-585581-583592-594586-588584-586595-597589-591587-589598-601592-593590-592602-604594-596593-596605-607597-601597-599608-612602-605600-605613-617606-611606-611618-621612-617612-621622-628618-626622-634629-640627-999635-999641-999	OVORCOLT582-583578-580590-591594-595584-585581-583592-594596-598586-588584-586595-597599-600589-591587-589598-601601-603592-593590-592602-604604-606594-596593-596605-607607-609597-601597-599608-612610-614602-605600-605613-617615-618606-611606-611618-621619-625612-617612-621622-628626-633618-626622-634629-640634-641627-999635-999641-999642-999

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# Appendix F Item Difficulty Tables

# Form C

	Grade Span							
Item	K	1	2-3	4-5	6-8	9-12		
1	0.82	0.93	0.93	0.96	0.97	0.94		
2	0.86	0.92	0.62	0.99	0.94	0.98		
3			0.98	0.91		0.88		
4	0.94	0.97	0.71	0.89	0.69	0.86		
5	0.93	0.97	0.84	0.89	0.66	0.30		
6	0.82	0.94	0.74	0.61	0.58	0.60		
7	0.79	0.87	0.71	0.80	0.43	0.31		
8	0.65	0.81	0.88	0.88	0.82	0.89		
9	0.55	0.71	0.91	0.91	0.85	0.93		
10	0.59	0.74	0.87	0.58	0.66	0.78		
11	0.57	0.74	0.83	0.62	0.67	0.78		
12	0.59	0.76	0.78	0.68	0.65	0.78		
13	0.66	0.81	0.78	0.61	0.78	0.86		
14		0.82	0.84	0.71	0.66	0.80		
15		0.77	0.85	0.73	0.68	0.80		
16		0.76	0.82	0.76	0.73	0.79		
17		0.68	0.79	0.85	0.77	0.86		
18	0.50	0.64	0.73	0.73	0.65	0.77		

 Table F.1 Form C Speaking Item Difficulty

		(	Grade Sp	an	
Item	K-1	2-3	4-5	6-8	9-12
1	0.80	0.95	0.47	0.90	0.83
2	0.67	0.81	0.70	0.75	0.68
3	0.59	0.69	0.65	0.76	0.49
4	0.72	0.89	0.93	0.78	0.55
5	0.62	0.91	0.71	0.91	0.40
6	0.89	0.95	0.82	0.81	0.72
7	0.75	0.76	0.78	0.92	0.58
8	0.79	0.91	0.81	0.58	0.45
9	0.88	0.87	0.58	0.77	0.64
10	0.80	0.53	0.68	0.84	0.68
11	0.74	0.75	0.83	0.60	0.52
12	0.79	0.92	0.65	0.70	0.74
13	0.72	0.87	0.66	0.55	0.84
14	0.70	0.75	0.49	0.47	0.72
15	0.73	0.73	0.64	0.49	0.84
16	0.63	0.43	0.81	0.59	0.72
17	0.83	0.36	0.75	0.77	0.73
18	0.60	0.74	0.42	0.47	0.58
19	0.63	0.91	0.51	0.44	0.65
20	0.37	0.70	0.47	0.49	0.44
21				0.58	0.19
22				0.81	0.85
23				0.74	0.58

Table F.2 Form C Listening Item Difficulty

	Grade Span							
Item	K	1	2-3	4-5	6-8	9-12		
1	0.47	0.56	0.68	0.77	0.72	0.79		
2	0.87	0.93	0.66	0.81	0.78	0.69		
3	0.76	0.82	0.83	0.67	0.52	0.49		
4	0.68	0.82	0.56	0.44	0.52	0.41		
5	0.69	0.80	0.66	0.58	0.62	0.77		
6	0.63	0.81	0.75	0.61	0.48	0.56		
7	0.61	0.80	0.76	0.50	0.72	0.51		
8	0.66	0.83	0.65	0.47	0.40	0.69		
9	0.57	0.78	0.58	0.62	0.57	0.41		
10	0.51	0.72	0.76	0.77	0.69	0.47		
11	0.56	0.75	0.77	0.51	0.52	0.71		
12	0.55	0.75	0.74	0.56	0.82	0.77		
13	0.77	0.85	0.48	0.68	0.88	0.70		
14	0.59	0.75	0.74	0.56	0.73	0.57		
15	0.57	0.73	0.69	0.53	0.29	0.51		
16	0.65	0.77	0.73	0.55	0.42	0.44		
17	0.53	0.69	0.59	0.34	0.48	0.62		
18	0.75	0.86	0.41	0.52	0.53	0.50		
19	0.41	0.58	0.65	0.68	0.61	0.42		
20	0.20	0.31	0.58	0.49	0.46	0.53		
21	0.27	0.43	0.60	0.56	0.53	0.52		
22	0.41	0.55	0.47	0.77	0.44	0.46		
23		0.59	0.40	0.50	0.41	0.72		
24		0.54	0.42	0.37	0.65	0.82		
25		0.45	0.48	0.47	0.53	0.48		
26		0.43	0.60	0.64	0.66	0.46		
27	0.55	0.72	0.62	0.67	0.26	0.54		
28	0.53	0.67	0.66	0.30	0.46	0.49		
29	0.45	0.61	0.58	0.24	0.32	0.77		
30	0.44	0.59	0.66	0.41	0.61	0.77		

Table F.3 Form C Reading Item Difficulty

	Grade Span							
Item	K	1	2-3	4-5	6-8	9-12		
1	0.92	0.98	0.67	67 0.88 0.74		0.88		
2	0.92	0.99	0.57	0.78	0.79	0.74		
3	0.67	0.84	0.61	0.80	0.73	0.67		
4	0.79	0.94	0.55	0.73	0.65	0.42		
5	0.63	0.83	0.57	0.91	0.63	0.71		
6	0.45	0.83	0.57	0.79	0.67	0.91		
7	0.31	0.65	0.72	0.67	0.59	0.87		
8	0.44	0.80	0.54	0.88	0.63	0.50		
9	0.47	0.86	0.41	0.90	0.59	0.49		
10	0.22	0.58	0.63	0.59	0.55	0.43		
11		0.62	0.79	0.53	0.55	0.47		
12		0.67	0.78	0.63	0.38	0.65		
13		0.63	0.75	0.48	0.41	0.54		
14		0.56	0.77	0.52	0.46	0.62		
15	0.46	0.60	0.67	0.52	0.50	0.61		
16	0.48	0.56	0.60	0.47	0.39	0.54		
17	0.54	0.81	0.70	0.65	0.65	0.76		
18	0.69	0.87						
19	0.56	0.82						
20	0.47	0.68						

 Table F.4 Form C Writing Item Difficulty

# Form D

	Grade Span							
Item	K	1	2-3	4-5	6-8	9-12		
1	0.86	0.94	0.97	1.00	0.97	0.95		
2	0.66 0.80 0.82		0.82	0.90	0.98	0.93		
3	0.80 0.92 (		0.95	0.97	0.92	0.99		
4	0.94	0.98	0.86	0.86	0.85	0.99		
5	0.92	0.97	0.52	0.55	0.79	0.40		
6	0.90	0.95	0.94	0.77	0.62	0.73		
7	0.82 0.93		0.67	0.54	0.60	0.27		
8	0.63	0.79	0.83	0.91	0.78	0.91		
9	0.52	0.70	0.76	0.94	0.82	0.92		
10	0.62	0.79	0.90	0.67	0.71	0.77		
11	0.63	0.80	0.91	0.69	0.70	0.78		
12	0.56	0.72	0.80	0.70	0.74	0.76		
13	0.56	0.73	0.80	0.73	0.75	0.66		
14	0.55	0.77	0.81	0.66	0.60	0.68		
15		0.69	0.81	0.65	0.60	0.69		
16		0.67	0.82	0.68	0.70	0.70		
17		0.69	0.79	0.73	0.65	0.70		
18		0.70	0.79	0.79	0.72	0.84		

Table F.5 Form D Speaking Item Difficulty

		(	Grade Sp	an	
Item	K-1	2-3	4-5	6-8	9-12
1	0.82	0.85	0.85	0.72	0.85
2	0.73	0.52	0.70	0.81	0.84
3	0.49	0.86	0.65	0.36	0.78
4	0.73	0.93	0.89	0.62	0.59
5	0.58	0.86	0.75	0.84	0.72
6	0.85	0.94	0.88	0.51	0.61
7	0.81	0.93	0.90	0.92	0.92
8	0.56	0.91	0.82	0.73	0.77
9	0.90	0.95	0.84	0.57	0.92
10	0.84	0.72	0.27	0.72	0.63
11	0.75	0.71	0.57	0.52	0.52
12	0.71	0.59	0.76	0.63	0.76
13	0.73	0.84	0.61	0.42	0.55
14	0.70	0.77	0.64	0.85	0.41
15	0.68	0.71	0.73	0.79	0.38
16	0.67	0.84	0.52	0.69	0.36
17	0.74	0.65	0.42	0.67	0.53
18	0.65	0.69	0.63	0.55	0.56
19	0.67	0.71	0.71	0.71	0.49
20	0.55		0.63	0.51	0.38
21				0.71	0.71
22				0.86	0.56
23				0.88	0.57

Table F.6 Form D Listening Item Difficulty

	Grade Span							
Item	K	1	2-3	4-5	6-8	9-12		
1	0.47	0.66	0.68	0.73	0.86	0.69		
2	0.81	0.91	0.79	0.88	0.66	0.71		
3	0.73	0.82	0.72	0.71	0.81	0.74		
4	0.59	0.75	0.67	0.65	0.75	0.78		
5	0.62	0.73	0.62	0.80	0.61	0.63		
6	0.66	0.83	0.69	0.55	0.32	0.66		
7	0.63	0.82	0.75	0.56	0.52	0.57		
8	0.59	0.77	0.67	0.55	0.78	0.65		
9	0.57	0.76	0.63	0.62	0.68	0.59		
10	0.61	0.80	0.43	0.50	0.69	0.40		
11	0.64	0.79	0.74	0.56	0.79	0.52		
12	0.60	0.74	0.69	0.75	0.54	0.69		
13	0.55	0.71	0.56	0.69	0.68	0.62		
14	0.54	0.71	0.66	0.62	0.26	0.70		
15	0.57	0.70	0.57	0.53	0.28	0.69		
16	0.47	0.62	0.62	0.47	0.39	0.49		
17	0.46	0.52	0.56	0.67	0.38	0.59		
18	0.55	0.73	0.42	0.21	0.64	0.43		
19	0.43	0.61	0.48	0.43	0.64	0.46		
20	0.57	0.70	0.48	0.58	0.45	0.67		
21	0.46	0.63	0.56	0.63	0.60	0.47		
22	0.36	0.54	0.64	0.44	0.81	0.43		
23	0.72	0.58	0.56	0.56	0.49	0.55		
24	0.64	0.50	0.45	0.16	0.55	0.57		
25	0.46	0.47	0.67	0.52	0.56	0.42		
26	0.79	0.52	0.76	0.63	0.49	0.52		
27		0.79	0.46	0.38	0.45	0.61		
28		0.73	0.54	0.28	0.26	0.65		
29		0.62	0.51	0.51	0.56	0.61		
30		0.84	0.75	0.10		0.55		

Table F.7 Form D Reading Item Difficulty

	Grade Span								
Item	K	1	2-3	4-5	6-8	9-12			
1	0.93	0.98	0.76	0.82	0.86	0.85			
2	0.92	0.99	0.64	0.91	0.80	0.88			
3	0.64	0.82	0.88	0.86	0.74	0.82			
4	0.86	0.96	0.55	0.65	0.76	0.83			
5	0.70	0.92	0.32	0.85	0.71	0.28			
6	0.58	0.89	0.86	0.75	0.74	0.23			
7	0.31	0.68	0.75	0.70	0.80	0.72			
8	0.41	0.81	0.71	0.67	0.67	0.79			
9	0.29	0.66	0.58	0.65 0.70		0.66			
10	0.25	0.65	0.54	0.80	0.76	0.44			
11	0.61	0.71	0.74	0.50	0.61	0.46			
12	0.44	0.61	0.68	0.48	0.44	0.59			
13	0.59	0.62	0.61	0.47	0.43	0.50			
14	0.64	0.66	0.80	0.50	0.57	0.57			
15	0.55	0.75	0.82	0.65	0.43	0.52			
16	0.52	0.57	0.76	0.50	0.41	0.58			
17		0.84	0.57	0.66	0.68	0.73			
18		0.83							
19		0.77							
20		0.71							

 Table F.8 Form D Writing Item Difficulty

# **Appendix G Inter-Rater Statistics**

### Form C

		Pe	ercentage Ab						
	Maximum					Intraclass	Weighted		
Item	Score	Perfect	Adjacent	Discrepant	Codes	Correlation	Kappa	Mean	Ν
1	1	0.85	0.01	0.00	0.14	0.98	0.96	0.81	156
2	1	0.74	0.00	0.00	0.26	1.01	1.00	0.72	98
3	3	0.73	0.19	0.03	0.06	0.94	0.88	2.07	135
4	1	0.79	0.01	0.01	0.19	0.98	0.95	0.73	156
5	1	0.66	0.03	0.00	0.31	0.98	0.94	0.55	98
6	1	0.86	0.06	0.00	0.08	0.94	0.88	0.60	135
7	1	0.82	0.06	0.02	0.10	0.94	0.88	0.48	135
8	1	0.82	0.09	0.00	0.09	0.91	0.82	0.59	135
9	1	0.65	0.02	0.01	0.32	0.98	0.96	0.52	98
10	3	0.44	0.20	0.13	0.23	0.95	0.90	1.05	135
11	3	0.39	0.12	0.04	0.45	0.98	0.95	1.06	135
12	3	0.43	0.07	0.03	0.47	0.98	0.96	1.09	135
13	3	0.28	0.12	0.01	0.59	0.98	0.94	0.77	98
14	3	0.27	0.04	0.04	0.65	0.98	0.95	0.61	98

 Table G.1 Form C Writing Grades K–1 Inter-Rater Reliability

		Pe	ercentage Ab	solute Differen	ce				
	Maximum					Intraclass	Weighted		
Item	Score	Perfect	Adjacent	Discrepant	Codes	Correlation	Kappa	Mean	Ν
11	3	0.70	0.19	0.05	0.06	0.92	0.83	2.08	131
12	3	0.72	0.21	0.02	0.06	0.93	0.86	2.10	131
13	3	0.67	0.21	0.03	0.08	0.94	0.88	2.02	131
14	3	0.83	0.07	0.02	0.07	0.96	0.91	2.31	211
15	3	0.62	0.23	0.08	0.07	0.86	0.71	1.98	103
16	3	0.68	0.18	0.04	0.10	0.93	0.85	1.79	103
17	4	0.72	0.18	0.03	0.06	0.96	0.91	2.74	211

		Pe	ercentage Ab						
	Maximum			Intraclass	Weighted				
Item	Score	Perfect	Adjacent	Discrepant	Codes	Correlation	Kappa	Mean	Ν
23	1	0.91	0.04	0.00	0.04	0.96	0.91	0.58	112
24	1	0.95	0.01	0.00	0.04	1.00	0.98	0.45	112
29	1	0.87	0.01	0.01	0.11	1.00	0.98	0.28	157
30	1	0.87	0.01	0.01	0.11	1.00	0.99	0.45	157

Table G.3 Form C Reading Grades 4–5 Inter-Rater Reliability

### Table G.4 Form C Writing Grades 4–5 Inter-Rater Reliability

		Pe	ercentage Ab	solute Differen	ce				
	Maximum					Intraclass	Weighted		
Item	Score	Perfect	Adjacent	Discrepant	Codes	Correlation	Kappa	Mean	Ν
11	3	0.57	0.27	0.04	0.12	0.86	0.71	1.23	157
12	3	0.68	0.15	0.06	0.11	0.92	0.84	1.71	157
13	3	0.64	0.18	0.06	0.12	0.91	0.81	1.26	157
14	3	0.50	0.41	0.06	0.03	0.82	0.64	1.60	112
15	3	0.81	0.13	0.03	0.03	0.91	0.81	1.63	112
16	3	0.61	0.33	0.02	0.04	0.84	0.67	1.47	112
17	4	0.54	0.29	0.12	0.05	0.88	0.76	2.39	112

#### Table G.5 Form C Reading Grades 6–8 Inter-Rater Reliability

		Pe	ercentage Ab						
	Maximum					Intraclass	Weighted		
Item	Score	Perfect	Adjacent	Discrepant	Codes	Correlation	Kappa	Mean	Ν
23	1	0.76	0.02	0.00	0.22	0.99	0.96	0.43	50
24	1	0.72	0.04	0.00	0.24	0.97	0.92	0.52	50
29	1	0.87	0.01	0.01	0.12	1.00	0.98	0.37	130
30	1	0.85	0.02	0.01	0.12	0.99	0.97	0.57	130

#### Table G.6 Form C Writing Grades 6–8 Inter-Rater Reliability

		Pe	ercentage Ab	solute Differen	ce				
	Maximum					Intraclass	Weighted		
Item	Score	Perfect	Adjacent	Discrepant	Codes	Correlation	Kappa	Mean	Ν
11	3	0.70	0.16	0.00	0.14	0.95	0.89	1.52	50
12	3	0.66	0.10	0.08	0.16	0.96	0.90	1.11	50
13	3	0.70	0.06	0.02	0.22	0.99	0.95	0.89	50
14	3	0.48	0.25	0.03	0.23	0.91	0.81	1.28	130
15	3	0.52	0.28	0.01	0.19	0.94	0.87	1.52	130
16	3	0.58	0.18	0.01	0.23	0.93	0.85	1.04	130
17	4	0.57	0.16	0.02	0.25	0.98	0.95	2.09	56

		Pe	ercentage Ab						
-	Maximum			-	<i>c</i> .	Intraclass	Weighted		
Item	Score	Perfect	Adjacent	Discrepant	Codes	Correlation	Kappa	Mean	Ν
23	1	0.88	0.00	0.00	0.13	1.01	1.00	0.66	64
24	1	0.86	0.00	0.00	0.14	1.01	1.00	0.73	64
29	1	0.70	0.00	0.00	0.30	1.01	1.00	0.59	61
30	1	0.72	0.00	0.00	0.28	1.01	1.00	0.57	61

 Table G.7 Form C Reading Grades 9–12 Inter-Rater Reliability

### Table G.8 Form C Writing Grades 9–12 Inter-Rater Reliability

		Pe	ercentage Ab						
	Maximum					Intraclass	Weighted		
Item	Score	Perfect	Adjacent	Discrepant	Codes	Correlation	Kappa	Mean	Ν
11	3	0.59	0.17	0.08	0.16	0.88	0.74	1.16	64
12	3	0.63	0.20	0.02	0.16	0.95	0.89	1.61	64
13	3	0.53	0.25	0.03	0.19	0.91	0.81	1.36	64
14	3	0.51	0.15	0.07	0.28	0.92	0.83	1.23	61
15	3	0.64	0.08	0.03	0.25	0.97	0.92	1.33	61
16	3	0.34	0.33	0.03	0.30	0.92	0.82	1.16	61
17	4	0.40	0.19	0.00	0.40	0.99	0.97	1.84	47

## Form D

		Pe	ercentage Ab	solute Differen	ce				
	Maximum					Intraclass	Weighted		
Item	Score	Perfect	Adjacent	Discrepant	Codes	Correlation	Kappa	Mean	Ν
1	1	0.92	0.01	0.00	0.07	0.97	0.93	0.89	135
2	1	0.72	0.02	0.00	0.26	0.98	0.95	0.71	98
3	3	0.62	0.11	0.00	0.27	0.99	0.96	1.59	98
4	1	0.82	0.02	0.01	0.15	0.97	0.94	0.80	156
5	1	0.67	0.03	0.01	0.29	0.96	0.91	0.61	98
6	1	0.79	0.06	0.01	0.14	0.93	0.86	0.67	156
7	1	0.77	0.06	0.01	0.16	0.94	0.87	0.48	156
8	1	0.64	0.03	0.01	0.32	0.97	0.94	0.47	98
9	1	0.76	0.13	0.01	0.10	0.87	0.73	0.44	135
10	3	0.41	0.07	0.05	0.47	0.99	0.97	1.02	98
11	3	0.44	0.05	0.04	0.47	0.97	0.93	1.23	135
12	3	0.41	0.06	0.05	0.48	0.97	0.93	1.02	135
13	3	0.33	0.05	0.03	0.59	0.98	0.95	0.71	98
14	3	0.31	0.02	0.02	0.65	1.00	0.99	0.72	98

Table G.9 Form D Writing Grades K–1 Inter-Rater Reliability

#### Table G.10 Form D Writing Grades 2–3 Inter-Rater Reliability

		Pe	ercentage Ab						
	Maximum					Intraclass	Weighted		
Item	Score	Perfect	Adjacent	Discrepant	Codes	Correlation	Kappa	Mean	Ν
11	3	0.82	0.11	0.01	0.06	0.97	0.93	2.22	211
12	3	0.73	0.15	0.02	0.11	0.95	0.90	1.95	103
13	3	0.68	0.18	0.03	0.11	0.94	0.87	1.74	103
14	3	0.75	0.19	0.01	0.05	0.94	0.88	2.23	131
15	3	0.83	0.10	0.00	0.07	0.97	0.94	2.41	211
16	3	0.82	0.10	0.00	0.08	0.97	0.94	2.22	211
17	4	0.58	0.26	0.08	0.08	0.92	0.83	2.18	103

### Table G.11 Form D Reading Grades 4–5 Inter-Rater Reliability

		Pe	ercentage Ab	solute Differen	ce				
	Maximum					Intraclass	Weighted		
Item	Score	Perfect	Adjacent	Discrepant	Codes	Correlation	Kappa	Mean	Ν
23	1	0.91	0.04	0.00	0.04	0.96	0.91	0.57	112
24	1	0.93	0.00	0.01	0.06	1.01	1.00	0.14	112
29	1	0.90	0.00	0.00	0.10	1.00	1.00	0.52	157
30	1	0.89	0.01	0.01	0.10	0.98	0.96	0.09	157
		Pe	ercentage Ab						
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	Maximum					Intraclass	Weighted		
Item	Score	Perfect	Adjacent	Discrepant	Codes	Correlation	Kappa	Mean	Ν
11	3	0.55	0.29	0.08	0.08	0.86	0.72	1.49	112
12	3	0.77	0.16	0.02	0.05	0.95	0.89	1.45	112
13	3	0.60	0.27	0.06	0.07	0.86	0.71	1.42	112
14	3	0.55	0.27	0.06	0.13	0.85	0.70	1.25	157
15	3	0.63	0.24	0.03	0.10	0.91	0.82	1.73	157
16	3	0.62	0.24	0.04	0.10	0.91	0.81	1.30	157
17	4	0.68	0.17	0.01	0.14	0.97	0.93	2.40	106

 Table G.12 Form D Writing Grades 4–5 Inter-Rater Reliability

## Table G.13 Form D Reading Grades 6–8 Inter-Rater Reliability

		Pe	ercentage Ab						
	Maximum					Intraclass	Weighted		
Item	Score	Perfect	Adjacent	Discrepant	Codes	Correlation	Kappa	Mean	Ν
23	1	0.88	0.02	0.00	0.10	0.98	0.96	0.76	130
24	1	0.87	0.03	0.00	0.10	0.97	0.94	0.45	130
29	1	0.70	0.00	0.00	0.30	1.01	1.00	0.20	50
30	1	0.68	0.02	0.00	0.30	0.99	0.96	0.39	50

## Table G.14 Form D Writing Grades 6–8 Inter-Rater Reliability

		Pe	ercentage Ab						
	Maximum					Intraclass	Weighted		
Item	Score	Perfect	Adjacent	Discrepant	Codes	Correlation	Kappa	Mean	Ν
11	3	0.58	0.20	0.03	0.19	0.94	0.86	1.62	130
12	3	0.58	0.21	0.02	0.19	0.91	0.80	1.17	130
13	3	0.45	0.36	0.00	0.19	0.89	0.77	1.21	130
14	3	0.70	0.12	0.04	0.14	0.94	0.87	1.62	50
15	3	0.64	0.12	0.04	0.20	0.94	0.87	1.09	50
16	3	0.56	0.22	0.04	0.18	0.94	0.85	1.11	50
17	4	0.60	0.14	0.02	0.25	0.99	0.97	2.29	130

## Table G.15 Form D Reading Grades 9–12 Inter-Rater Reliability

		Pe	ercentage Ab						
	Maximum					Intraclass	Weighted		
Item	Score	Perfect	Adjacent	Discrepant	Codes	Correlation	Kappa	Mean	Ν
23	1	0.74	0.04	0.02	0.19	0.95	0.87	0.48	47
24	1	0.79	0.02	0.02	0.17	0.99	0.96	0.61	47
29	1	0.75	0.06	0.00	0.19	0.94	0.87	0.59	64
30	1	0.80	0.00	0.00	0.20	1.01	1.00	0.47	64

		Pe	ercentage Ab						
	Maximum					Intraclass	Weighted		
Item	Score	Perfect	Adjacent	Discrepant	Codes	Correlation	Kappa	Mean	Ν
11	3	0.47	0.15	0.02	0.36	0.97	0.91	0.98	47
12	3	0.43	0.23	0.04	0.30	0.92	0.83	1.25	47
13	3	0.53	0.09	0.02	0.36	0.97	0.91	0.92	47
14	3	0.53	0.23	0.06	0.17	0.91	0.82	1.39	64
15	3	0.61	0.16	0.03	0.20	0.93	0.85	1.23	64
16	3	0.47	0.23	0.00	0.30	0.96	0.91	1.27	64
17	4	0.48	0.17	0.02	0.33	0.98	0.94	2.00	64

Table G.16 Form D Writing Grades 9–12 Inter-Rater Reliability

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## Technical Manual





LAS Links® Language Assessments

